An Archeological Overview and Assessment of Fort Smith National Historic Site

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Making the report available meets the criteria of 43CFR Part 7, Subpart A, Section 7.18 (a) (1).

Management Summary

This overview and assessment revises the 1990 parkwide assessment of archeological resources at Fort Smith National Historic Site. An archeological assessment is a document that describes the extent of previous archeological investigations in a park and provides substantive data for park planning needs. The document serves as a source of information for production of cultural resource management proposals, land acquisition, and park development, interpretation, and maintenance activities.

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Contents

Management Summary i

Acknowledgments ii

List of Tables iv

List of Figures iv

Chapter 1: Introduction 1-1

Chapter 2: Environmental Background 2-1
- Location and Topographic Setting 2-1
- Climate 2-1
- Vegetation 2-1
- Geology and Pedology 2-2

Chapter 3: Cultural Background 3-1
- Prehistoric Occupation 3-1
  - Paleoindian Period: 12,000–10,000 BC 3-1
  - Dalton Period: 10,000–7000 BC 3-2
  - Archaic Period: 8000–500 BC 3-2
  - Woodland Period: 500 BC–AD 1100 3-2
  - Mississippi Period: AD 1100–1541 3-2
- Historic Occupation 3-3

Chapter 4: Significance of Archeological Resources 4-1

Chapter 5: Previous Investigations 5-1

Chapter 6: Archeological Resource Assessment and Potential by Fort Areas 6-1
- First Fort Smith, Belle Point, and Fort Garden 6-1
- River Frontage 6-1
- Fort Cemetery and Sawmill 6-2
- Second Fort Smith and Federal Courthouse 6-2
  - Commissary 6-2
  - Officers Quarters and Cistern 6-2
  - Barracks/Courthouse/Jail 6-3
  - Flagstaff and Lawn Area 6-3
  - Bastion 2 and Laundress Row 6-4
  - Bastion 3 and Gallows 6-4
  - Bastion 4 6-4
  - Bastion 5 6-5
  - Maintenance Building and Parker Avenue 6-5
  - Parking Lot 6-5
  - Railroad Rights-of-Way 6-6

Chapter 7: Archeological Resource Recommendations 7-1
- Resource Protection 7-1
- Interpretive Potential and Research Priorities 7-2
- Fort Smith Parkwide Archeological Inventory Package 7-3
  - Prehistoric Native American Occupation of Fort Smith 7-3
  - Belle Point First Fort Smith Reinvestigation and Analysis 7-3
  - United State Forgecraft Corporation Parcel 7-4
- Conclusions 7-4

References Cited RC-1

Figures F-1
Appendix A: Archeological Resource Assessment by Land Tract A-1

Tables

1. Representative profile of Muskogee silt loam 2-2
2. Prehistoric cultural chronology of the Ozarks 3-2
3. Summary of archeological projects 5-2

Figures

1. U.S. Army forts of the early and middle 1800s in the western drainage of the Missippippi River valley F-1
2. Three periods of Federal Government use superimposed on a modern orthophotograph F-2
3. Plan view of the second Fort Smith, ca. 1840, after Coleman 1990. Designations for bastions, gates, and curtain wall segments F-3
4. Post-military historic features taken from Sanborn insurance maps superimposed on a modern orthophotograph F-4
5. Belle Point features and “Coke Hill” squatter sites superimposed on a modern orthophotograph F-5
6. Locations of archeological excavations and test units superimposed on a modern orthophotograph F-6
7. Geophysical survey areas and historic feature locations superimposed on a modern orthophotograph F-7
8. Archeological sensitivity zones within Fort Smith National Historic Site superimposed on a modern orthophotograph F-8

Chapter 1: Introduction

This archeological overview and assessment of Fort Smith National Historic Site, Arkansas, revises the 1990 parkwide assessment of archeological resources developed by then Park Archeologist Roger Coleman. An archeological overview and assessment describes the extent of previous archeological investigations in a park and assesses the quality and quantity of the information as it applies to park management and planning needs. The document serves as a source of information for production of cultural resource management proposals, land acquisition, park development, interpretation, maintenance activities, and potential research issues that may be relevant to park interpretation or management issues by serving as baseline data for compliance with historic preservation law, policy, and guidance as set forth in Director's Order 28. The loose-leaf format of this overview and assessment is designed, at the Superintendent's request, to allow for updating by replacing outdated sections with revised pages without the expense of major revisions or reprinting the entire volume.

Fort Smith National Historic Site commemorates the guardian role the military played on what was intended to be the permanent Indian Frontier in the first half of the nineteenth century (Figure 1). The site also commemorates the role the defunct army post played in bringing law and order to Indian Territory in the late nineteenth century. In 1871, at its height as a military post, Fort Smith contained 72 buildings; today, only two of these documented structures remain standing. As a result, Fort Smith National Historic Site may be realistically described as an archeological park where a large number of cultural resources are located below the ground surface.

The site is officially designated 3SE79 by the Arkansas Archeological Survey. The archeological nature of most of the park's resources presents unique problems for park development, maintenance, and interpretation. The effect of management actions on the archeological remains must be properly evaluated and taken into account in management decisions. Former Park Archeologist Roger Coleman developed the first parkwide assessment in 1990. His assessment has been a valuable management tool for cultural resource management at the park. However, over a decade has passed since Coleman's assessment, and several additional archeological projects and some geophyiscal remote sensing work has been done in the park. This revised archeological overview and assessment for Fort Smith National Historic Site maintains the majority of Coleman's work and adds information on the scope and extent of archeological investigations since 1990. In addition, this revision addresses and updates several management issues by:

(1) defining the park archeological resource base;
(2) predicting resource distribution;
(3) determining resource significance;
(4) offering recommendations to mitigate impacts to significant archeological resources;
(5) suggesting and recommending archeological research priorities; and
(6) evaluating each park area with respect to the likelihood that archeological resources are intact and/or have maintained integrity.

Park records were consulted to assess archeological resources at Fort Smith National Historic Site. These consist of field notes and completion reports collected from 1958 to the present that are currently housed in the field-generated data file in the curatorial facility at Fort Smith National Historic Site. Other relevant information, mostly project-specific memoranda, are contained in the park administrative files under file codes H-22, cultural resource studies and research, and H-24, archeological and historical data recovery programs. Often, for early investigations or for small, routine monitoring projects, this is the only source of information available. A file search was also conducted at the Arkansas Archeological Survey offices in Fayetteville and of the Fort Smith files at the Midwest Archeological Center.

This document assesses the significance of archeological resources in terms of major park themes and by the criteria of the National Register of Historic Places. It also lists and briefly describes previous archeological investigations. Discussions are organized chronologically by project and correspond to the

format for record storage used in the Fort Smith field-generated data file. Whenever possible, test units are shown on the maps accompanying this report. Unfortunately, locations of some test units were not accurately recorded in some early projects and are not displayed in the accompanying figures.

Coleman (1990) originally synthesized the archeological work by tract corresponding to former land owner boundaries. The use-histories of these areas vary markedly and, as a result, each area is characterized by major differences in age of deposits, artifact density, stratification, and subsurface integrity. The variation among them demanded that each tract be considered separately in Coleman's original work. Since 1990, the tract concept has fallen into disuse. The information contained in his original assessment is still valuable, but it has been reformatted and integrated into the body of this overview and assessment. Coleman's original tract summaries are included here as Appendix A.

Following the summaries of significant archeological remains, specific recommendations are made for archeological resource management of the various surviving fort elements. This document explores issues in cultural resource management at Fort Smith National Historic Site by considering potential impacts to the park resource base and recommending parkwide management options to protect significant cultural resources. Interpretive potentials of archeological remains and park research priorities are defined. To enhance park management efficiency and to implement park landscape development, a program of additional archeological work is recommended. Finally, recommendations are made to improve the quality of research in future cultural resource management projects.

Chapter 2: Environmental Background

Location and Topographic Setting

Fort Smith National Historic Site is located at the confluence of the Poteau and Arkansas Rivers in the northwestern corner of Sebastian County, Arkansas (Figure 1). The park is a three-sided, 69.83-acre tract bounded on the west by the Poteau and Arkansas Rivers and on the remaining two sides by the city of Fort Smith. The Union Pacific and Missouri and North Arkansas Railroads cross the park and divide it into three geographic sections: the second fort site, a narrow median strip between the railroads, and the first fort site on Belle Point.

The second fort site is the easternmost division of the park (Figure 2) and occurs between elevations 444.4 and 438.0 ft above mean sea level (AMSL). The area is a relatively high, level surface broken only by streets and now partially filled road beds. In places, streets are cut over 4 ft deep. The Missouri and North Arkansas Railroad, on the west edge of the second fort site, cuts below grade some 10 ft and separates this area from the railroad median strip.

The median strip is an elongated section of land created by divergence of the Union Pacific and Missouri and North Arkansas Railroads. The railroad median is aligned on a north-south axis, is over 1,000 ft long, and is only 60 ft wide at the widest point. The total area of the median strip is 0.79 acres. Cutting for construction of the at-grade railroad tracks has pedestalled the median strip. At the greatest depth, cuts are 10 ft and 13 ft deep on the east and west sides of the median, respectively. Thus, the area displays much topographic variation. Maximum and minimum elevations are 441.5 ft AMSL and 426.3 ft AMSL. The highest point on the median occurs roughly in the center, at the site of the former Quartermaster Building. From this location, the median strip slopes gradually to the north and south.

West of the Union Pacific Railroad lies Belle Point, a prominent bluff that overlooks the Poteau and Arkansas Rivers. At 442.3 ft AMSL, Belle Point juts some 59 ft above the river. A partially filled borrow pit between the riverbank and bluff edge creates an artificially steep slope. Elsewhere, the ground surface recedes gradually. To the north and south of Belle Point at 420 ft AMSL are remnants of a river terrace (T1), that are small areas within the park boundary.

Climate

According to the Koppen-Geiger system of climate classification, Arkansas is characterized by a warm temperate climate (Cfa) where precipitation is sufficient in all months and the mean temperature for the warmest month is over 71.6°F (Strahler and Strahler 1978:148). Meteorological data summarized over a 29-year period (USDA 1975:3) indicate that in Fort Smith, the highest average monthly temperature occurs in July (93.6°F). Winters in Fort Smith are relatively mild. January is the coldest month, with an average monthly temperature of 49.7°F. Monthly precipitation is greatest in May (4.74 inches), while January receives the least (2.38 inches).

Vegetation

Fort Smith occurs in the Oak–Hickory Region of the Eastern Deciduous Forest (Braun 1950). The typical climax community of the Arkansas Valley is the “Post Oak–Blackjack Oak–Winged Elm–Black Hickory Forest” (Foti 1974:25). On the most favorable sites, black oak, red oak and black hickory predominate. In rugged areas or when frequently burned, shortleaf pine is prevalent. With recurrent burning, forest is replaced by prairie. In Sebastian County, prairies are commonly small and widely dispersed. Dominant prairie grass species include big bluestem, Indian grass, switchgrass, and little bluestem.

Today, ground cover within the park is primarily mown lawn composed of several grass species. These include Bermuda, Johnson, rye, crab, wild oat, wild wheat, nut, and sandbur grasses (Gaines 1986:19). Fifty-one tree species are known to exist within the park boundary, a number of which are post-historic introductions (Gaines 1986:22).

Trees and shrubs are found as border plantings along former streets in the second fort area and as open woodland at Belle Point. A narrow strip of forested land that has reverted to a quasi-natural condition borders the Arkansas River.

Geology and Pedology

Fort Smith is located on a soil member of the Leadvale–Taft Association: Muskogee Silt Loam (United States Department of Agriguculture 1975:5). Soils of the Muskogee series are formed in stratified loamy and clayey sediments on old stream terraces bordering the Arkansas River. Muskogee Silt Loam reflects a relatively well-developed solum with distinctive A and B horizons. A representative soil profile is described in detail in Table 1. Below these upper-level soils, a relatively unaltered parent material, or C horizon, is found. At Fort Smith National Historic Site, the C horizon is composed of fine sands that vary in thickness from 11 to 19 ft (Arkansas Laboratories n.d.:1). Sands are encountered at about 435 ft AMSL, where they exhibit a yellowish-red coloration caused by water percolating through the overlying B3 horizon. With increasing depth, sands assume a tan or blond color. Below the sand lies bedrock of Pennsylvanian age.

Lithology of the Arkansas River Valley consists of intervening layers of shale and sandstone. The uppermost layer is the McAlester Formation, a stratum of shale and weathered shale that varies in thickness from 3 to 5 ft. Underlying this shale is the Hartshorne Formation, a hard, gray, micaceous sandstone that outcrops (at Belle Point) between 410 and 404 ft AMSL. Underlying these is the Atoka Formation, a red sandstone that outcrops north of the Arkansas River and Fort Smith National Historic Site (Arkansas Laboratories n.d.:l; Haley and Hendricks 1972:A24–A25).

Table 1. Representative profile of Muskogee silt loam.

Level	Depth[1]	Color	Texture	Structure
Ap	0–4	Dark Brown	Silt Loam	Granular
A2	4–9	Brown	Silt Loam	Fine Blocky
B1	9–17	Yellowish Brown	Silt Loam	Medium Blocky
B21t	17–27	Yellowish Brown	Silty Clay Loam	Medium Blocky
B22t	27–40	Light Brownish	Silty Clay	Medium Blocky
B23t	40–55	Yellowish Red	Silty Clay	Medium Blocky
B3	55–72	Reddish Yellow	Silty Clay	Medium Blocky

[1] inches

Chapter 3: Cultural Background

Fort Smith National Historic Site is historically and archeologically complex. The park contains a multicomponent prehistoric site and two historic military forts (Figures 2–4). The second fort also served as a jail and courthouse for the United States District Court for the Western District of Arkansas. Federal use of the site spannned some 79 years, a length of time that, for conceptual purposes, is commonly divided into three periods (e.g., Kyral 1980:4): First Fort (1817–1824), Second Fort (1838–1871), and Judicial (1878–1896).

Prehistoric Occupation

Research into the prehistory of the Arkansas River Valley began in the nineteenth century, although most studies concentrated on sites south of Little Rock (Thomas 1894; Moore 1908; Palmer 1917). Initial archeological investigation of the river valley upstream from Little Rock in the first quarter of the twentieth century focused on the Spiro site near Fort Smith and other sites in the Oklahoma area of the Arkansas River (Rogers et al. 1980). It was not until Moorehead's (1931) survey of the entire length of the Arkansas River Valley that the variety and richness of the archeological record along the river was recognized. It was also during this period that commercial looting of mounds and cemeteries stimulated archeologists in Arkansas and Oklahoma to develop research programs to investigate these important sites. Work by Samuel Dellinger (Dickinson and Dellinger 1942) of the University of Arkansas Museum and Kenneth G. Orr of the University of Oklahoma (Orr 1946) resulted in the acquisition of data that have served as the basis for identifying regional prehistoric development in the Arkansas River Valley (Brown and Bell 1964; Hoffman et al. 1977; Hoffman 1977a, 1977b).

Following a hiatus due to World War II, research in the Arkansas River Valley resumed. However, the work was largely salvage of sites and data as driven by the construction of large reservoirs by the U.S. Army Corps of Engineers. Investigations in the Dardanelle and Ozark Reservoirs and archeological studies for the Arkansas River Navigational Project (Greengo 1957; Caldwell 1958; Hoffman 1977a; Myer 1969) identified a wide range of archeological sites and helped to fill the gaps in the culture history of the Arkansas River Valley. Investigation of the Dardanelle and Ozark Reservoirs continued into the 1980s with additional surveys of public use areas, fee-owned lands, and segments of the shoreline of Lake Dardanelle.

The most recent research in this area has been conducted in response to federal environmental and historic preservation legislation requiring cultural resource investigations before the commencement of activities that might damage or destroy archeological sites (e.g., Harcourt 1987; Hinkle 1988; Williams 1986, 1987; Zahn 1985, 1986)

The cultural sequence of the Arkansas River Valley spans a wide range of time, extending from the earliest known prehistoric time period, the Paleoindian period (ca. 12,000–10,500 BP), up to the time of Euroamerican settlement in the early nineteenth century (Table 2). The prehistory of the region is described in a number of reports (Bell 1984; Hoffman et al. 1977; Sabo et al. 1982; Trubowitz and Jeter 1982). Most recently, the Arkansas Archeological Survey has completed a synthesis of the archeological literature for the entire region (Sabo et al. 1988).

The cultural sequence can be divided into two broad occupational eras, prehistoric and historic. The prehistoric occupation, in turn, can be divided into five periods: Paleoindian, Dalton, Archaic, Woodland, and Mississippi (Table 2).

Paleoindian Period: 12,000–10,000 BC

Human occupation in Arkansas began with the Paleoindian period whose inhabitants gathered plant foods and hunted large game mammals such as mastodon, as well as smaller species. Although Paleoindian settlement patterns can only be hypothesized from the limited data for western Arkansas, sites from this period in other areas of North America reflect a settlement pattern composed of base camps and special

Table 2. Prehistoric cultural chronology of the Ozarks.

Period	Phase	Date Range, BP
Paleoindian	Paleoindian	12,000–10,500
Transitional	Dalton	10,500–9500
Archaic	Early Archaic	9500–8000
	Middle Archaic	8000–5000
	Late Archaic	5000–2500
Woodland	Early Woodland	2500–1800
	Middle Woodland	1800–1350
	Late Woodland	1350–1100
Mississippi	Caddo	1100–450
	Neosho	450–300

purpose sites, such as animal-processing stations and tool manufacturing sites. Artifacts indicative of this period are a variety of distinctive lanceolate projectile point types.

Dalton Period: 10,000–7000 BC

The Dalton period is considered to be contemporary with either a late Paleoindian or Early Archaic occupation, in which there was a continuation of hunting and gathering strategies with an increased dependence on deer, following the extinction of large Pleistocene mammals. Nuts, such as walnut and hickory, may also have formed an important part of the Dalton period diet. The artifacts associated with the Dalton culture include specific types of projectile points and a variety of woodworking tools. Dalton period sites are found in both the hilly uplands and terraces or natural levees in the alluvial bottomlands.

Archaic Period: 8000–500 BC

In general, the Archaic period displays some trends toward a broader subsistence base with the addition of more floral resources, a more sedentary settlement pattern, and possibly an increase in population. This period coincides with the Hypsithermal, a time of relatively warmer and/or drier climatic conditions. Possibly as a result of this climatic regime, populations were more likely to occupy riverine environments and to exploit the mosaic of microenvironments that appear to have developed during this period.

Woodland Period: 500 BC – AD 1100

By the beginning of the Woodland period, climatic conditions had reached an approximation of the modern climate. The Woodland period is marked by the manufacture of ceramic vessels, construction of mounds, an unequal distribution of exotic raw materials and finished goods, and horticultural activity. In the Arkansas River Valley region, however, very little is known of Woodland period patterns of prehistoric life. However, during this period regionally distinct patterns of cultural activity began to develop, patterns that reached their florescence in the following period. Fourche Maline and Evans phase sites have been identified, as well as sites of the Gober complex and the Plum Bayou culture (Sabo et al. 1988). In the northern Ouachita Mountains, the Fourche Maline phase continued the adaptational pattern of the previous period with the addition of ceramics and changes in artifact type frequencies (Sabo et al. 1988).

The Gober complex type site, Spinach Patch (3FR1), is located at the confluence of the Mulberry and Arkansas Rivers (Hoffman 1977b). One of the primary artifact types associated with this complex is the argillite spade. The Plum Bayou culture is located further downstream near Little Rock and is best illustrated by the mounds at Toltec. The Evans phase is defined at the Spiro and Harlan sites, upstream from the project area. The Evans phase is based on stylistic changes in ceramic decoration (Sabo et al. 1988).

Mississippi Period: AD 1100–1541

The Mississippi period represents several major changes in prehistoric lifeways. Among the many technological innovations were the introduction of small projectile points, indicative of the use of the bow, and the use of new manufacturing techniques in ceramics. There was also a change in subsistence with the shift from incipient horticulture to an economy focused on tropical cultigen (maize) agriculture. Conse-

quently, a corresponding change occurred in the settlement pattern with a shift from small villages to a dispersed pattern of small farmsteads and hamlets around a central ceremonial center.

In the area of Fort Smith, the Arkansas Valley Caddoan tradition is encompassed by three sequential phases: Harlan, Spiro, and Fort Coffee. The Harlan phase is marked by the appearance of regional mortuary mound centers located in the alluvial valleys of the major rivers, around which are sedentary habitation sites (Sabo et al. 1988:108). The Spiro phase marks the florescence of the Mississippi period. During this phase, elaborate iconography and evidence of a hierarchical society are quite marked. The Fort Coffee phase is the terminal Mississippian phase. Around AD 1400, the elaborate ceremonial centers of the preceding phases were no longer used for mortuary practices. In addition, changes in artifact assemblages and suggestions of change in residential patterns indicate other alterations in the cultural adaptations of this period (Sabo et al. 1988:113).

During the 1958–1963 archeological investigations at the site of the first Fort Smith, evidence of a substantial prehistoric occupation was brought to light. Beyond a brief description and interpretation of recovered remains (Dollar 1966), the prehistoric occupation of the Fort Smith site has never been investigated or formally recorded. The underlying prehistoric site is not listed in the files of the Arkansas Archeological Survey.

Collections generated from this site reflect a probable extensive multicomponent occupation—at least within the circumscribed area of the first fort. The prehistoric occupations indicated by diagnostic artifacts in the park collection are Early to Late Archaic and Woodland to Mississippian.

Historic Occupation

The historic era begins with the entry of the first Europeans into Arkansas. During the winter of 1541–1542, members of the De Soto expedition entered Arkansas. These first Europeans brought with them distinctive artifacts (i.e., glass beads and bells) and possibly diseases that adversely affected the aboriginal population. There followed a period of exploration and exploitation that brought traders and trappers, primarily French, into Arkansas.

It was not until after the Louisiana Purchase in 1803 that Euroamericans began exploring and settling this area. The early settlers were predominately “hunter–herders” (Sabo et al. 1988), who divided their time between minimal agricultural activities, tending livestock, and hunting the abundant wildlife.

Following the purchase of Louisiana in 1803, federal officials promoted the removal of southeastern Indians to a “permanent Indian frontier” in the new western possession. In 1809, Osage Indians forfeited their traditional hunting territory for resettlement of their eastern neighbors. In a few years, thousands of displaced Cherokees occupied land on the White and Arkansas Rivers. Friction developed along the new Cherokee-Osage boundary, and clashes between the two nations occurred frequently. To deter further hostilities, the United States Government established Fort Smith on the disputed boundary.

The site of the new fort was Belle Point, a prominent bluff overlooking the Poteau and Arkansas Rivers. On December 25, 1817, Major William Bradford and 64 men of the Rifle Regiment, Company A, landed at Belle Point. In eight days, temporary shelters had been hastily erected and work initiated on a permanent fortification. Construction progressed slowly. Upon completion, the fort was a simple log stockade with four sides of 132 ft each and two blockhouses at opposite angles. Barracks, storehouses, shops, a magazine, and a hospital were located within the walls.

In February 1822, Colonel Matthew Arbuckle and five companies of Seventh United States Infantry garrisoned the post. Quarters for the additional troops were erected outside the original fort. Increased hostilities between the Osage and Cherokee prompted the additional troop strength. The location of the post on the eastern border of the newly redefined Indian Territory, however, was too far removed from the arena of hostilities. Consequently, the military departed from Fort Smith in 1824 and established Fort Gibson some 60 miles up the Arkansas River (Bearss 1963; Bearss and Gibson 1979:8–42).

Fort Smith was not forgotten. According to the terms of the treaty of 1825, the Choctaw Indians were to settle on lands set aside in Indian Territory, and Fort Smith was to serve as the agency for the western Choctaw. In February 1827, Choctaw agent William McClellan found the post buildings in ruinous condition. Four years passed, however, before the government could repair the structures. On April 26, 1831, Lieutenant Gabriel Rains and a detail of Seventh United States Infantry arrived at the post. Over the next few months, Rains labored to repair the public buildings. By August, Choctaw Indians began trickling into the area (Haskett 1966:213–228).

Just east of Fort Smith and adjacent to the Choctaw boundary line, a sizeable civilian community had emerged on lands owned by John Rogers. Six taverns dominated the community, the closest only a "few paces" from the Choctaw line. Enterprising merchants supplied the emigrating Choctaws with cheap whiskey. Many of the displaced tribesmen settled nearby and became a source of sustained exploitation. Lieutenant Rains positioned his men on the line to keep peddlers and Choctaws separated. The situation worsened so that in March 1833, Captain John Stuart and a company of Seventh Infantry garrisoned the post. Stuart's efforts to control the contraband trade, known as the "Arkansas whiskey war," met with little success. The merchants operated under Stuart's very nose. Whiskey smugglers could slip across the Indian Territory line almost at will. As a result, Stuart abandoned Fort Smith in June 1834 and established Fort Coffee at a more suitable location in Indian Territory (Haskett 1966:213–218; Bearss 1968:143–172).

As additional tribes were relocated in Indian Territory, fearful residents of the new State of Arkansas requested that a permanent military garrison be placed on their western border. Fort Smithites launched a successful campaign to regarrison Fort Smith. In 1838, Congress authorized construction of a new fort and purchased from John Rogers a 296-acre reservation adjacent to the old fort on Belle Point.

In the spring of 1839, construction of the new fort began. The design called for a pentagonal-shaped fort of stone with a bastion at each angle and enclosing seven acres. Inside the wall, several buildings were to be situated around a parade ground including two enlisted mens barracks, two officer's quarters, the commandant's quarters, a hospital, the quartermaster store, and other buildings. This ambitious plan, however, would never be fully realized.

Because of events of the next six years, the army completed Fort Smith along much different lines. It had become apparent to the military that armed warriors would not descend on Arkansas from Indian Territory. Yet, hostilities threatened another frontier, and war with Mexico loomed on the horizon. Fort Smith was ideally situated to equip military units marching to the Rio Grande and to supply frontier posts in Indian Territory. Therefore, in 1845, the half-finished post was formally designated as a supply depot. Without a need for defensive capabilities, portions of the fort curtain wall were never raised to the intended height of 12 ft. To accommodate the vastly increased supply load, foundations of the incomplete Commandant's Quarters and one of the enlisted mens barracks (Barracks B) were dismantled and used to convert two bastions into commissary and quartermaster storehouses. A third bastion was transformed into a magazine. Upon completion, only two officers quarters and one enlisted mens barracks fronted the parade ground. Several other structures including maintenance buildings, stables, laundress quarters, hospital, storehouse, and bakehouse were located beyond the fort walls.

Fort Smith was formally garrisoned in May 1846 and functioned as a supply depot throughout its 25-year-long occupation by the military. In the pre-Civil War years, national interests focused on westward expansion. New posts were established in Indian Territory, including Fort Towson and Fort Washita, which were supplied by the depot at Fort Smith.

On April 23, 1861, Arkansas State Troops occupied Fort Smith. Until September 1, 1863, when Federal soldiers regarrisoned the post, Fort Smith served the Confederate Army of the Trans-Mississippi West as a major supply base and defensive bastion protecting Southern interests in Arkansas and Indian Territory. During the post-war years, the army again focused efforts on renewed westward expansion. The line of frontier posts had moved so far to the west, however, that supply lines from Fort Smith were stretched to capacity. The days of Fort Smith as a supply depot were numbered.

Other problems plagued the post and eventually caused its abandonment. Housing for the troops had always been in short supply and on November 24, 1865, Officers Quarters A burned to the ground. Five years later on December 20, 1870, Officers Quarters B suffered the same fate. To the military, the role of Fort Smith as a supply depot was no longer tenable. On July 19, 1871, the Sixth Infantry marched out of the post, the last unit to garrison Fort Smith. Once again, however, the winds of fortune shifted and prolonged the life of the fort.

In 1872, the United States District Court of the Western District of Arkansas occupied Fort Smith. A valuation of property indicated that 27 buildings stood on the former military reserve. Nearly all of these were relegated to civilian or federal use.

The former enlisted mens barracks became the Federal Courthouse and also housed attendant offices. A permanent gallows was constructed along the inward side of Bastion 3, or the old Magazine, and the Federal Courthouse basement served as a jail. When overcrowding in this makeshift prison, known as "hell-on-the-border," received adverse public attention, a modern prison wing was added to the south end of the courthouse. This structure was completed in February 1888.

The jurisdiction of the United States District Court of the Western District of Arkansas was a vast area encompassing western Arkansas and the entire Indian Territory of present-day Oklahoma. Here, tribal courts had no jurisdiction over non-Indian settlers. This legal detail gave an advantage to the most desperate breed of outlaw, who found refuge beyond the pale of justice and could murder and steal with little fear of retribution. To bring offenders to justice, a federal marshal and a number of deputies, never more than 200 strong, combed this wilderness. When fugitives were apprehended, they were taken to Fort Smith for trial.

Fort Smith is best known for Federal Judge Isaac C. Parker, whom President Ulysses S. Grant appointed to the bench in 1875. During Parker's 21 years presiding, over 13,000 cases came to trial and 79 offenders were hanged for their crimes. Parker proved to be a tireless defender of Indian rights and through his efforts brought law and order to Indian Territory. As the non-Indian population increased, new courts emerged in Indian Territory, gradually reducing Parker's authority. On March 1, 1895, Congress enacted legislation that limited Parker's jurisdiction to several counties in western Arkansas. This legislation became effective on September 1, 1896.

Beginning during the time of the Federal Courthouse and continuing into the late nineteenth and early twentieth centuries, a series of events occurred that changed the appearance of the historic fort (Figure 4). By the act of February 17, 1883, Congress granted rights-of-way through the former military reservation to the St. Louis and San Francisco Railroad. Sometime between May 1886 and February 1889, the railroad company removed a portion of the garrison wall to accommodate trackage, effectively separating the Quartermaster Building from the rest of the fort. The Missouri Pacific Railroad soon paralleled the St. Louis and San Francisco and also cut through the reservation.

A May 29, 1896, bill called for lands inside the garrison to be granted to the city of Fort Smith. Although use of the Federal Jail continued as late as 1914, the government transferred the remainder of the military reserve to the city. On February 26, 1897, Congress enacted legislation to extend Parker and Rogers Avenues, and Third and Second Streets through this property. The Old Fort Reserve Addition was surveyed in June and sold to private concerns. The stone wall of the fort was dismantled between July 1, 1897, and July 1, 1898, after which time streets were extended. By 1900, several large multi-storied brick buildings had been built or were under construction, and the Old Fort Reserve Addition emerged as the light industrial and warehouse district of Fort Smith. The Courtroom/Jail complex became a civic center and housed a variety of city offices and community organizations. Sometime around the turn of the century, Belle Point was densely populated and acquired the name "Coke Hill." Coke Hill was a squatter settlement and the individual plots of lands were randomly oriented, ignoring the city of Fort Smith's platted lot system (Figure 5).

Public interest in the old fort increased during the early twentieth century. In 1910, the Old Fort Museum Association occupied the Commissary and used the building as a museum. In 1957, Public Histori-

cal Restorations Incorporated restored the courthouse to its original condition. Local businessmen donated funds to purchase private interests on Coke Hill and in 1958 sponsored the first archeological excavation at the site. In 1961, the city of Fort Smith donated 11 acres of land containing the site of the first fort, the Courtroom/Jail complex, and the Commissary Building to the National Park Service. Since the creation of Fort Smith National Historic Site, land holdings of up to 75 acres have been authorized and several intrusive streets and post-historic buildings have been removed (Paige 1981:46–66).

Chapter 4: Significance of Archeological Resources

Because Fort Smith National Historic Site is listed on the National Register of Historic Places, contributing cultural resources are generally regarded as significant. Contributing resources are those falling within the historic period of the park, from 1817 to 1896, and that relate to the park interpretive themes (Fort Smith National Historic Site Revised Park Themes, November 1999, <www.nps.gov/fosm/park/foia/interpthemes.htm>). The resource management plan (National Park Service 1988) defines known significant resources at Fort Smith National Historic Site as the historic grounds and remaining archeological and structural features including the first fort foundation, second fort building foundations, Commissary, Courthouse/Jail complex, Cistern, reconstructed Gallows, reconstructed Flagstaff, and a partially reconstructed second fort bastion and curtain wall. This list is expanded here to include all archeological structures and features, known and undiscovered, from the park historic period. All undisturbed historic ground levels and their contents are significant for the information they contain. Isolated artifacts in disturbed contexts, however, are considered significant only when they are diagnostic of the historic period and occupation (e.g., military accouterments, coins, weapons). Many archeological resources at Fort Smith National Historic Site are unrelated to the park theme, but in broader regional contexts, are nonetheless significant. Federal legislation and National Park Service policies provide general guidelines for assessing resource significance.

The concept of archeological significance varies considerably in definition and application. Common criteria for establishing significance include rarity, age, public appreciation, and integrity. It is incumbent upon archeologists to specify the frame of reference used in making determinations of significance (McGimsey and Davis 1977:31). When legal compliance is involved, the National Historic Preservation Act specifies that the criteria used for evaluating significance are those of the National Register of Historic Places (36 CFR 60.4, a–d). To be significant, a site or resource must display:

(a) an association with events that have made a significant contribution to history;

(b) an association with a person significant to history;

(c) the reflection of the distinctive characteristics of a type, period, method of construction, master, or high artistic values; or

(d) the ability to yield information important in prehistory or history.

Criterion *d* is most applicable for evaluating archeological remains. Nearly all resources, however, can yield important information and this general guideline offers no direction for establishing relative significance. Therefore, specific criteria for assessing resource significance are developed at the state level in historic preservation plans. In Arkansas, significance is defined in *A State Plan for the Conservation of Archeological Resources in Arkansas* (Raab et al. 1982). Evaluations of significance are based on the potential of a specific site or resource to address salient research questions.

For prehistoric cultural resources, Fort Smith National Historic Site is included in the Middle Arkansas River Valley study unit. The Arkansas River Valley is the least known archeological region in Arkansas (Davis 1982, 1994). In fact, so little is known of this area that no attempt was made to formulate research questions in the original *State Plan* or its revision. Until significance criteria are established for the Arkansas River Valley, all prehistoric remains should be considered significant. Undisturbed sites and deposits and even artifact assemblages in disturbed contexts can yield important information on this poorly understood area of the state.

For historic cultural resources, significance criteria in the *State Plan* may also be consulted (Stewart-Abernathy and Watkins 1982:OP51–54). This inclusive plan establishes three major study units: the Contact period (1500–1840), the European period (1500–1825,) and the Anglo-American period (1780–2000). For the Contact period, the *State Plan* recognizes Indian sites with European associations, even in disturbed contexts, as significant and worthy of protection. Because of their rarity, Spanish and French colonial sites of the European period are considered significant regardless of resource integrity. Anglo-American sites, abundantly represented, are considered potentially significant when they display intact structures, features, or undisturbed subsurface deposits. Significance criteria will undoubtedly change, however, as knowledge progresses with an increase in the statewide archeological database.

Chapter 5: Previous Investigations

This chapter describes and evaluates previous archeological work at Fort Smith National Historic Site by identifying principal investigators, project numbers, dates, and locations; by summarizing the methods used and records produced; and by assessing the contributions and reliability of research.

Archeological investigation at Fort Smith National Historic Site was initiated in 1958 at the site of the first Fort Smith (Moore 1963). In 1963, these operations were expanded into a full-scale archeological excavation to document surviving structural remains (Dollar 1966). Exploration elsewhere in the park, however, has been sporadic and less intensive than at Belle Point. Beyond excavations to document the second fort defensive works, most of this later activity consists almost entirely of small-scale test excavations and monitoring efforts for archeological clearance projects. Although geographic coverage within the park has been sporadic and large areas remain to be systematically sampled, nearly all land tracts within the park have been tested (Figure 6; Appendix A). These projects provide important data for evaluating the park archeological resource base. Thirty-three projects conducted at Fort Smith National Historic Site are described in this chapter in chronological order as listed in Table 3.

Many of the following discussions refer to the archeological work conducted on various portions of the second fort's walls and bastions. For simplicity, the park has numbered the wall segments and bastions beginning with the north bastion and sequentially as one moves around the fort to the west. For clarity, Figure 3 depicts the wall and bastion numbers. All references to work on or near the walls and bastions follow this sequence.

The fort's soil depositional sequence is also referrred to throughout the following discussions of the archeological investigations. For general discussion purposes the fort's archeological stratigraphy is divided into vertical zones or layers. In Chapter 7 archeological sensitivity zones are also defined. The sensitivity zones are horizontal in nature and should not be confused with the vertical archeological and soil stratigraphic zones discussed in Chapter 5.

Table 3. Summary of archeological projects.

Year	Principal Investigator	Project Number	Investigation Method	Report Author, Date, Title	Summary of Results
1959	Dollar	1A	Testing	Dollar, Clyde D., 1960, Interim Report, Old Fort Smith Project.	Locating the first Fort Smith: three exterior walls, a blockhouse, and two interior walls.
1963	Moore and Dollar	1B	Excavation	Moore, Jackson W., 1963, The Archeology of Fort Smith 1; Dollar, Clyde D., 1966, The First Fort Smith Report. On file, Fort Smith National Historic Site.	Delineating first Fort Smith walls, room functions, and construction details.
1963	Dollar	1B	Monitoring	Dollar, Clyde D. 1966 The First Fort Smith Report.	Second Fort Smith Wall Section 5 and Bastion 4 (probably cut away).
1966	Dollar	2	Research	Notes	First Fort Smith construction and use history, artifact analysis of 1A and 1B.
1978	Anderson	3	Testing	Anderson, Bruce, 1979, Archeological Test Excavations for Portions of the Walls of the 2nd Fort, Fort Smith National Historic Site, Fort Smith, Arkansas.	Second Fort Smith Wall Section 6 and Bastion 4 testing.
1980	Anderson	4	Testing	Anderson, Bruce, 1981, Continuing Archeological Test Excavations for Portions of the Walls of the 2nd Fort, Fort Smith National Historic Site, Arkansas.	Testing of Wall Section 10 at Bastion 1. Did not find Bastion 3 or associated wall segments.
1981	Traylor	5	Testing	Traylor, Diane, 1981, Test Excavations for Bastion and Wall Foundations of the Second Fort at Fort Smith, Arkansas.	Testing Bastion 2 and Wall Sections 2 and 3. Explored Bastion 4 and 5 and Wall Section 8. Did not find Bastion 3.
1982	Dollar	6	Testing	Dollar, Clyde D. 1983, Archeological Investigation and Historical Documentation in the Vicinity of the Old Commissary Building, Fort Smith National Historic Site, Fort Smith,	Testing of north, east, and south sides of Commissary. Found several external features and evidence of porches. Done in conjunction with the historic structures report.
1983	Dollar	7	Monitoring	Coleman, Roger E., 1984, Results of Archeological Monitoring for Demolition of the Meek Bottling Plant, Fort Smith National Historic Site, Fort Smith, Arkansas.	Monitoring of demolition of Meek Bottling Plant.
1983	Coleman	8	Excavation	Coleman, Roger E., 1983, Excavation of the Flagpole Base at the Second Fort, Fort Smith, Arkansas.	Documentation of second fort Flagstaff details for reconstruction.
1984	Coleman	9	Monitoring	Notes	Located a well east of the visitor center during sidewalk replacement
1984	Coleman	10	Testing and Monitoring	Coleman, Roger E. 1984, Archeological Monitoring at the Old Commissary Building, Fort Smith National Historic Site, Fort Smith, Arkansas.	Discovered wall section 1 and exposed Wall Sections 1 and 10 for capping.

Year	Principal Investigator	Project Number	Investigation Method	Report Author, Date, Title	Summary of Results
1985	Coleman	11	Testing and Monitoring	Coleman, Roger E. 1986, Archeological Testing and Monitoring for Parking Lot Construction, Fort Smith National Historic Site, Fort Smith, Arkansas.	Delineated and dated fill south of the second fort.
1986	Coleman	12	Monitoring	Coleman, Roger E.1987, Archeological Monitoring for Burial of Overhead Telephone Lines and Identification of an Historic Midden, Fort Smith National Historic Site, Fort Smith, Arkansas.	Identified historic ground level dating 1821–1838 during telephone line work.
1987		13	Monitoring	Notes	Monitored railroad excavation of pits to bury ties, found disturbed and sterile soils.
1987-88	Coleman	14	Testing and Monitoring	Coleman, Roger E. 1989, History and Appearance of the Second Fort Cistern, Fort Smith National Historic Site, Arkansas.	Testing to find design details of fort cistern and overflow drain.
1985	Coleman	15A	Testing	Notes	Additional examination of Bastion 5 and construction details for capping work.
1985	Coleman	15B	Testing	Notes	Additional examination of Bastion 4 and construction details for capping work.
1986	Coleman	15C	Testing	Notes	Located and delineated Bastion 2 and adjacent Wall Sections 1, 2, and 3 and construction information for capping work.
1985-88	Coleman	16	Testing, Mitigation, and Monitoring	Coleman, Roger E., 1989, Archeological Investigation for Construction of a Pedestrian Trail and Identification of Laundress Row, Fort Smith National Historic Site, Arkansas.	Identified 67 features and buried ground surface on railroad median strip.
1988	Coleman	17	Monitoring	Coleman, Roger E., August 24, 1988, memorandum.	Identified buried ground level and thick AP horizon.
1989	Parrish	18	Testing and Monitoring	Parrish, Jody S., 1989, Archeological Testing and Monitoring for Storm Drain Construction, Fort Smith National Historic Site.	Identified fill with depth from 1.5 to 3.5 ft.
1989	Parrish	19	Monitoring	Notes	Recorded a portion of the stratigraphy under the east lawn during removal of a non-historic flagpole.
1989	Parrish	20	Monitoring	Parrish, Jody S., July 10, 1989, memorandum.	Monitored placement of fiber optic cable along railroad tracks. Idenitifed railroad weigh station.
1989	Parrish	21	Monitoring	Parrish, Jody S., September 22, 1989, memorandum.	Monitored placement of electrical lines to Gallows.
1990	Parrish	22	Monitoring	Parrish, Jody S., 1990, Video Monitor Installation to Commissary.	Monitored placement of cable to Commissary for video monitor, artifact sample collection.

Year	Principal Investigator	Project Number	Investigation Method	Report Author, Date, Title	Summary of Results
1990	Parrish	23	Recording	Notes	Recorded location of circular brick feature on Belle Point.
1992	Unknown	24	Monitoring	Notes	Monitored telephone line replacement to Frisco Station. Found only previously disturbed soils.
1993	Barnes	25	Testing	Barnes, James E., 1993, An Archeological Survey of a Proposed Pedestrian Trail, Fort Smith National Historic Site.	Shovel testing and inventory for trail. Found the first foot of deposits on Belle Point to be disturbed.
1994	Phelps	26	Recording	NA	Recording of concrete post mold near the Courthouse.
?	Hayes and Lovick	27	Collecting	NA	A tornado blew down hundreds of trees on Belle Point. The tree throws and root balls were searched and artifacts collected.
1997–98	Hunt	28	Mitigation	Scott, Douglas D. and William J. Hunt, Jr,. 2000, Archeological Investigations Conducted in Support of the Fort Smith Barracks/Courthouse/Jail Rehabilitation.	Mitigation by excavation of the galleries around the barracks; trenching and shovel testing around the Courthouse/Jail in support of reconstruction work. Features in the basement of the barracks were recorded including fireplace hearths and a boiler room.
1999	Hunt	29	Testing and Monitoring	Hunt, William J., Jr., 1999, Trip Report Investigation of Archeological Discovery, Commissary Building, Fort Smith National Historic Site.	Recorded features, probably porch foundations outside the Commissary during fire suppression system installation. Test and recorded an unknown cellar or basement in the Commissary.
1999	Hunt	30	Monitoring	Hunt, William J., Jr., 1999, Trip Report: Archeological Monitoring, Fort Smith National Historic Site (FOSM), Sebastian County, Arkansas.	Monitoring of trenching in association with installation of security system. Several Judical period features were recorded. Also recorded parts of Wall Section 6 and a foundation to a possible ordnance building. Several urban-era features were also recorded.
1999	Nickel and Hunt	31	Geophysical Remote Sensing	Nickel, Robert K. and William J. Hunt, Jr., 2002, Geophysical Surveys of the Perimeter Fortification System at the Site of the Second Fort Smith.	Geophyiscal work on the walls and bastions. Recorded anomalies associated with suviving elements of the walls and bastions. Also noted anamolies consistent with building foundations near Bastion 2, along Wall Section 9, and outside of Wall Section 8.
2000	Lovick	32	Monitoring	NA	Monitoring of work on the parking lot. Found only previously disturbed soils.
2000	Hunt	33	Testing and Monitoring	Hunt, William J., Jr., 2000, Planning and Testing Tree Planting Locations, Fort Smith National Historic Site (FOSM).	Monitored and tested tree planting areas in and around the fort. No historic features were found.

Project Number 1A

Dollar, Clyde D., 1960. Interim Report, Old Fort Smith Project. On file, Fort Smith National Historic Site, File Number IV-56.

Dates:	December 8, 1958 – February 1, 1959
Location:	Tract 01-116
Principal Investigator:	Clyde D. Dollar
Type of Investigation:	Test Excavation

Discussion: Clyde Dollar conducted a test excavation at Belle Point to identify remains of the first Fort Smith. To locate the first fort site, Dollar reversed the steps taken by the survey party of 1852, which had used the east corner of the fort to establish the initial point of the Choctaw Boundary. During a search for the stockade walls, 2-ft-wide test trenches were hand excavated. Ultimately, Dollar located and identified three exterior and two interior fort walls and minimally traced the foundation of the north blockhouse. Trenches were plotted for Dollar by city engineers. Regarding Dollar's activities, National Park Service Archeologist Jackson W. Moore (1963:3) noted that although "he lacked formal archeological training, had no engineering equipment, and used disinterested prisoners whose sentences were usually up in a few days … Lt. Dollar's performance was creditable indeed." Dollar's discovery of the first Fort Smith was instrumental in the establishment of Fort Smith National Historic Site.

Project Number 1B

Moore, Jackson W., 1963. *The Archeology of Fort Smith 1*. National Park Service, Southeast Regional Office, Richmond, Virginia.

Dollar, Clyde D., 1966. The First Fort Smith Report. On file, Fort Smith National Historic Site.

Dates:	August 22, 1962 – May 1, 1963
Location:	Tract 01-116
Principal Investigator:	Jackson W. Moore
Type of Investigation:	Excavation

Discussion: Jackson W. Moore, National Park Service Archeologist, conducted additional investigations at the site of the first Fort Smith to reveal construction details and to determine the appearance of fort walls and cabins. Clyde Dollar was hired by the National Park Service to serve as a field assistant for the project. Excavators began at the east corner of the fort, identified during the first investigation, and delineated all surviving fort walls by trenching. Interiors of room blocks and of the south bastion were completely excavated. These activities confirmed the general configuration and dimensions of the fort and resulted in the acquisition of artifacts to aid in determining room functions. Excavators identified the post Well, situated 100 ft from the northeast corner of the stockade.

Archeologists gained some construction detail concerning exterior and interior walls, the south blockhouse, and the post magazine. Outer stockade walls formed the backs of cabins. Moore identified the sally port and the locations and dimensions of many individual room units, except for the northwest row of quarters where conflicting evidence resulted in three possible room configurations. Physical evidence indicated that, unlike original plans, the fort had no glacis, no central flagstaff, and no vacant corners. Although artifacts were unprocessed at the time Moore prepared his report, he was able to present a brief discussion of recovered objects.

From March 2, 1964, to June 1966, the National Park Service contracted Clyde D. Dollar to conduct historical research, to process artifacts, and to prepare a narrative report describing the results of investigations at Belle Point. According to Dollar (1966:I-1), the purpose of the report was to "arrive at conclusions regarding the physical history of the fort." Dollar examined the vertical and horizontal distribution of artifacts from the first Fort Smith. Perhaps because of post-historic disturbances or the method of data

retrieval used, meaningful stratigraphic patterning was not apparent to Dollar. The horizontal position of artifacts, however, did shed some light on the construction and use-history of the post. Dollar concluded that the south blockhouse and rooms on the northeast and southeast walls of the stockade had housed the troops. These areas contained the greatest frequency of window pane fragments—adequate lighting and ventilation being requisite for healthy living conditions. Conversely, the northwest and southwest walls of the fort displayed fewer buttons, personal objects, and window pane fragments and probably contained shops and storerooms. Most buildings within the fort, at least at one point in time, seem to have supported slate roofs, and an abundance of brick from the vicinity indicates that it may have been used for construction, perhaps in chimney shafts (Dollar 1966:V28–36).

The methodology guiding the Belle Point excavations of 1958 to 1963 was typical of the archeology of that era. The excavations employed arbitrary levels, but the excavators maintained only rudimentary vertical control, measured by trowel and shovel depths below surface. Archeologists only selectively collected artifacts. The sample was processed and culled, and only diagnostic artifacts thought to be historic were retained for study. Entire artifact categories, including bone, brick, and lithic debris were summarily omitted from the analysis and discarded. Objects culled from the sample, estimated to have been 96 percent of the original field collection, were reburied in trash barrels somewhere on Belle Point (Dollar 1966:7). Dollar notes that lists of all artifacts were prepared before culling. Comprehensive lists or tables, however, were not included in his report and they have not been located since. It is likely that natural stratigraphic levels existed and could be used in any future excavations that may be undertaken on this site.

From 1963 to 1983, the collection was neglected, resulting in the irretrievable loss of nearly all associated provenience information as well as the disappearance of several diagnostic artifacts. In 1983, the National Park Service accessioned the Belle Point collection to then-current museum collection standards.

The field records and Dollar's (1966) completion report document the Belle Point excavation. The report should be used cautiously by researchers. Test units are not numbered on excavation plans and the specific site of the post Well was never recorded. A July 1, 1966, review of the document by park historian James N. Haskett (File D2621) makes several relevant criticisms that are reproduced here: "Dollar did not utilize available research findings in his study … many of his archeological findings … would thereby have been much more meaningful. Mr. Dollar occasionally makes assumptions which … are inaccurate." Hasket recommended that use of Dollar's report be limited to the park staff use.

Project Number 2

Dollar, Clyde D., unpublished field notes and photographs, Fort Smith File Number IV-55 and Project Number 2 in the field-generated data file.

Date:	October 15, 1963
Location:	Tract 01-125
Principal Investigator:	Clyde D. Dollar
Type of Investigation:	Monitoring

Discussion: At the time of this investigation, Tract 01-125, a vacant lot, was owned by the RC Cola Bottling Plant. Then housed in the building at the corner of Parker Avenue and Third Street (the present park maintenance facility), the bottling company intended to develop the adjacent lot (Tract 01-125) as a parking area. On October 15, 1963, cutting for parking lot construction disturbed structural debris in the vicinity of the second fort wall. The company manager notified Superintendent Tom Norris of the discovery, and Norris arranged for Clyde Dollar to inspect the area.

Dollar visited the site and observed that a linear rubble mound varying from 1 to 15 ft wide and from 2 to 3 ft high, ran diagonally across Tract 01-125. Apparently, this was the remains of Wall Section 6 and Bastion 4. Notes and photographs document quantities of construction stone in the area, but no mention of an *in situ* foundation was made. Dollar's field notes were entered by tape recorder. The tape, on file at Fort Smith National Historic Site, has not been transcribed. There are no field maps for this project on file.

Project Number 3

Anderson, Bruce, 1979. *Archeological Test Excavations for Portions of the Walls of the Second Fort, Fort Smith National Historic Site, Fort Smith, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Dates:	September 1–2, 1978
Location:	Tract 01-125
Principal Investigator:	Bruce Anderson
Type of Investigation:	Test Excavation

Discussion: Bruce Anderson, a National Park Service Archeologist from the Southwest Regional Office, conducted a two-day test excavation on Tract 01-125 to locate structural remains of Bastion 4 and adjoining Wall Sections 6 and 7. Anderson monitored the excavation of two 2-ft-wide backhoe trenches, placed to intersect the hypothesized location of structural remains. This work revealed four archeological features: Feature 1, believed by Anderson to be the remains of Wall Section 6; Feature 2, a stone concentration thought to be a prepared house floor; and Features 3 and 4, possible disturbed wall foundations.

Anderson's work constitutes the first problem-oriented investigation on Tract 01-125 and the entire second fort site, yet, his work was limited in scope. It was clear at that time that additional work would be needed to verify his tentative findings. Anderson's activities, however, positively identified surviving structural remains, and the questions raised by his work prompted additional investigations at the site.

Project Number 4

Anderson, Bruce, 1981. *Continuing Archeological Test Excavations for Portions of the Walls of the Second Fort, Fort Smith National Historic Site, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Dates:	March 19–21, 1980
Location:	Tracts 01-104, 01-105, 01-111, 01-138
Principal Investigator:	Bruce Anderson
Type of Investigation:	Test Excavation

Discussion: Bruce Anderson conducted additional investigations at Fort Smith National Historic Site to locate remnants of the second fort defensive works. Anderson devoted three days to this project and concentrated his efforts in the vicinity of Bastions 1 and 3. Seven test trenches, excavated with a backhoe using a 2-ft-wide bucket, were strategically placed to intersect structural remains. In the vicinity of the Commissary (Bastion 1), Anderson identified two features: Feature 1, a 13-ft-long segment of Wall Section 10 at its juncture with the Commissary; and Feature 2, a linear rubble concentration marking the former location of Wall Section 10 on the east edge of Tract 01-105. Testing exposed a portion of flagstone paving that parallels the right flank of Bastion 1. Efforts to locate Bastion 3 and adjacent Wall Sections 3 and 4, however, failed to reveal structural remains. Likewise, evidence of the Gallows, once situated at the site of Bastion 3, was not encountered.

Anderson's work yielded important information regarding the identification and location of the second fort defensive works. He established that at least 13 ft of Wall Section 10 remained intact in Tract 01-104 and that elsewhere, rubble in a stone remover's trench marked the former wall location. Past cutting activity in Tracts 01-111 and 01-138 appears to have removed all evidence of Bastion 3, adjacent Wall Sections 3, 4, and 5, and the Gallows. A flagstone pavement associated with the Commissary was not explored further, and a positive identification of the feature could not be established.

Project Number 5

Traylor, Diane, 1981. *Test Excavations for Bastion and Wall Foundations of the Second Fort at Fort Smith, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Dates:	February 13 – March 31, 1981
Location:	Tracts 01-108, 01-111, 01-114, 01-125, 01-127, 01-138
Principal Investigator:	Diane Traylor
Type of Investigation:	Test Excavation

Discussion: Diane Traylor, a National Park Service Archeologist from the Southwest Regional Office, conducted additional investigations at Fort Smith National Historic Site. Her stated purpose, to locate walls and bastions and determine "what remained of foundations," compliments Anderson's previous investigations. Using a backhoe with a 2-ft-wide bucket, Traylor dug trenches in areas suspected to contain the foundations of second fort defensive works. Ultimately, 20 trenches were excavated in six land tracts.

Traylor identified the remains of Bastion 2 and adjoining Wall Sections 2 and 3, and further explored the sites of Bastions 3 and 4. Test trenches in the vicinity of Bastion 3 failed to produce remains of that structure or the Gallows, thus confirming Anderson's previous assessment. One trench excavated along the east edge of Tract 01-118 to encounter Wall Section 5 revealed instead a previously undocumented building foundation, 54 cm below surface. This feature, obviously not remains of second fort defensive works, was not explored further. In an attempt to address unresolved issues regarding the location of Bastion 4, Traylor excavated 12 trenches in that area (Tract 01-125). Feature 1, identified by Anderson as remains of Wall Section 6, was re-excavated by Diane Traylor. She observed that stones in Feature 1 were not *in situ* and that the rubble alignment did not represent a fort curtain wall. Traylor's reanalysis of Feature 2 seemed to confirm Anderson's original assessment that it was, indeed, the remains of Bastion 4. Traylor found a mortared stone alignment conforming to the shape of Bastion 4 with a possible juncture point for Wall Section 6. Regarding Features 3 and 4, as defined by Anderson, Traylor found no compelling evidence to associate them with fort wall foundations, but offered no other explanations of their function.

Testing at the site of Bastion 5 was accomplished with difficulty. Demolition of the Speer Hardware Building was underway, and construction materials were stockpiled in the adjacent lot (Tract 01-127) over the Bastion 5 site. Test units placed between debris piles, however, were sufficient to identify Bastion 5 at its juncture with Wall Section 8. Stone at this point appeared at the surface and was exposed by brushing.

Traylor's investigation revealed new information concerning the location and integrity of the second fort defensive works. She identified intact foundations at Bastion 2 and adjoining Wall Sections 2 and 3, and at Bastion 5 and adjoining Wall Section 8. Her efforts resulted in the identification of a previously unknown building foundation and clarified the relationship of Feature 1 to Wall Section 6. The project concluded without the foundations being completely delineated, and the project methodology made it difficult to assess the remains encountered. Stratigraphic information comparable to more current research was not recorded; artifacts were collected, but not interpreted in the report; and an accurate base map with trench and feature locations was never prepared.

Project Number 6

Dollar, Clyde D., 1983. *Archeological Investigation and Historical Documentation in the Vicinity of the Old Commissary Building, Fort Smith National Historic Site, Fort Smith, Arkansas*. Historic Preservation Associates, Fayetteville, Arkansas.

Dates:	August 1, 1982 – September 12, 1982
Location:	Tract 01-104
Principal Investigator:	Clyde D. Dollar
Type of Investigation:	Test Excavation

Discussion: Archeological investigation in the vicinity of the second fort Commissary was undertaken to provide information on external features of the building for an updated historic structure report. To accomplish the archeological research, a contract was awarded to Historic Preservation Associates of Fayetteville, Arkansas. This agency subcontracted to Tri-Arch Research Associates, also of Fayetteville, for the services of Clyde D. Dollar as project director. Dollar, director of Tri-Arch Research Associates and history instructor at the University of Arkansas, had previously conducted fieldwork at Fort Smith National Historic Site. As stated by Dollar, the specific goals of his work were: to archeologically explore the area on each side of the Commissary; to search for structural features associated with the building; to recover, study, and preserve all artifacts found in the excavated area; and to expose the footing at the southeast corner of the building and determine the cause of settling there.

Under Dollar's guidance, a grid system was established on the site and 20 test units were hand excavated within a 30-ft radius of the north, east, and south sides of the Commissary. Soil was removed by arbitrary six-inch levels and screened. All artifacts were retained for analysis.

The investigation revealed evidence for three of four historically documented porches, the locations where two curtain walls of the fortification once intersected the building, and a flagstone walk that parallels the east side of the Commissary. Wall Section 10 and the flagstone walk were previously identified by Bruce Anderson during Project 4, and they were relocated by Dollar for mapping purposes. Wall Section 1, on the south side or left flank of the Commissary, was marked by a linear trench feature, apparently without *in situ* construction stone. Two surviving stone piers and one possible post mold from the south side of the Commissary are from an 8-x-48-ft porch. A porch of identical dimensions on the north side of the building is represented by a stone retaining wall, visible at the surface. This archeological investigation discloses that a set of stone steps once serviced the east end of the porch. Historically, two porches existed on the east side of the Commissary. Two post molds identified there relate to the second porch, an 8-x-23-ft structure that accessed the second floor of the building. Based on the presence of two additional post molds at the southeast corner of the Commissary, Dollar contends that the south and east porches may have been connected in a "wrap-around" porch configuration.

Dollar's work at the Commissary was a model excavation that employed current methods and standards of research. Data control was excellent. Artifacts were tabulated and presented in the report along with a base map of appropriate scale. However, the method of data collection used by Dollar, sadly, skews his results and interpretation. By collecting artifacts from arbitrary six-inch levels and crosscutting natural stratification present on the site, Dollar ignored culturally relevant information. Thus, the dates he places on historic ground levels and associated external features of the Commissary are grossly errant. Dollar's interpretation of the archeological evidence contrasts with the physical history of the Commissary as described by James Ivey, a National Park Service historical archeologist. According to Ivey, "by … discarding his [Dollar's] conclusions … a coherent physical history resulted (Frazier et al. 1987:16). After the untimely death of the author, Dollar's report was finished posthumously. Expectedly, the report contains numerous typographical mistakes as well as errors of fact and should be limited to use by the park staff. For general research purposes, the archeological section prepared for the 1987 Commissary historic structure report (Frazier et al. 1987) should be used.

Project Number 7

Coleman, Roger E., 1984b. Results of Archeological Monitoring for Demolition of the Meek Bottling Plant, Fort Smith National Historic Site, Fort Smith, Arkansas. Report on file, Fort Smith National Historic Site.

Dollar, Clyde D., 1982. *The Search for Officers' Row at Fort Smith, Phase One: Physical and Documentary Evidence*. Tri-Arch Research Associates, Fayetteville, Arkansas.

Dates:	October 17, 1982 – April 15, 1983
Location:	Tracts 01-107, 01-110, 01-139
Principal Investigator:	Clyde D. Dollar

Type of Investigation: Monitoring

Discussion: Archeological monitoring was conducted by Clyde D. Dollar during demolition of the Meek Bottling Plant. This building complex, recently acquired by the National Park Service, overlay portions of the nineteenth-century military fort including part of the parade ground, the Cistern, and Officers Row. Although the primary objective of the project was protection of these underlying remains, enough information was gathered to approximate the location of Officers Row. Thirty-five features were discovered. Among these are flagstone pavements, segments of Wall Section 1, the garrison Flagstaff, possible well and privy locations, and linear rubble concentrations believed to represent former wall lines of Officers Row. Evidence suggests that 1.7 to 1.8 ft and 0.5 ft of fill remain in the basements of Officers Quarters A and B, respectively. Monitoring failed to reveal remains of the Commandant's Quarters.

Because of the untimely death of Clyde Dollar, the report was finished by another researcher. Archeologist Roger E. Coleman was contracted to do the work. Using Dollar's field notes, Coleman produced a substantial report of investigations that contained feature descriptions, artifact tables, and a base map. Because of a gap in continuity between the investigators, as Coleman notes, the results must be used with caution.

Project Number 8

Coleman, Roger E., 1983. Excavation of the Flagpole Base at the Second Fort, Fort Smith, Arkansas. Report on file, Fort Smith National Historic Site.

Dates: July 12 – August 19, 1983
Location: Tract 01-139
Principal Investigator: Roger E. Coleman
Type of Investigation: Excavation

Discussion: Clyde D. Dollar discovered the historic Flagstaff shortly before his death. The National Park Service decided to reconstruct the Flagstaff as a memorial to Dollar. To obtain necessary construction details, Roger E. Coleman, an anthropology graduate student of Texas A&M University, was contracted by the National Park Service to excavate the Flagstaff base.

According to Coleman, the purpose of the investigation was to document construction detail, recover associated hardware, determine episodes of repair, and reveal the date of construction of the Flagstaff. First, Coleman delineated the Flagstaff base and then hand-excavated two opposing quarters of the feature. Clay and brick rubble fill in the feature was not screened, but all artifacts encountered were piece-plotted and retained.

Excavation revealed a well-preserved subterranean wooden structure designed to support the Flagstaff. All components of the support system are constructed of oak and include four massive 1-ft-square, 18-ft-long beams and eight 4-x-6-inch square, 10-ft-long angled braces. The beams, arranged in two parallel sets joined at the center by half-notching, comprise the Flagstaff base. A 1-ft-square opening occurs between the beams, within which the Flagstaff was undoubtedly set. An angled brace is attached to the end of each crossbeam by two or three 5-inch spikes. Braces are set at a 45 degree angle and once projected from the ground and attached to the Flagstaff approximately 3 ft above ground surface. The data collected during Coleman's investigation assisted in constructing the accurate reconstruction of the Flagstaff. Associated hardware and diagnostic artifacts were not recovered, making it difficult to determine age of the structure. Likewise, an attempt to dendrochronologically date the Flagstaff failed. It is believed, however, that the structure was in place by 1846, when the fort was formally garrisoned.

Project Number 9

Coleman, Roger E., unpublished notes on file as Project Number 9 in the field-collected data file at Fort Smith National Historic Site.

Date:	July 18, 1984
Location:	Tract 01-108
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Monitoring

Discussion: On July 18, 1984, sidewalk replacement at the east visitor center entrance exposed a circular soil discoloration that probably marks the site of a former post Well, documented on the 1870 Army survey map. The location of the Well was triangulated.

Following removal of concrete sidewalk at the base of the visitor center steps, two additional steps, 1.7 ft below extant ground level, were identified. Thus, 1.7 ft of fill has been deposited on the visitor center lawn, probably after 1898, when the configuration of the Courthouse steps are known to have been altered.

Significant historic resources were not adversely affected by sidewalk replacement. Observations made during archeological monitoring indicate the presence of extensive fill on Tract 01-108, and the likelihood of historic subsurface remains, including a post Well underlying that fill.

Project Number 10

Coleman, Roger E., 1984a. Archeological Investigations in the Vicinity of the Old Commissary Building, Fort Smith National Historic Site, Fort Smith, Arkansas. Report on file, Fort Smith National Historic Site.

Dates:	September 4–11, 1984
Location:	Tracts 01-104 and 01-105
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Test Excavation and Monitoring

Discussion: This investigation occurred in conjunction with rehabilitation of the Commissary. Archeologist Roger E. Coleman, contracted by Fort Smith National Historic Site, monitored the insertion of subsurface utility lines from Second Street to the Commissary and exposed portions of the adjacent Wall Sections 1 and 10 to facilitate capping the foundations with stone. To accomplish these objectives, eight test trenches were excavated or monitored during the project. Information concerning fort wall construction and site stratigraphy were collected that compliment and refine Clyde D. Dollar's 1983 investigation (Project Number 6).

In situ stone exists for both Wall Sections 1 and 10 and is encountered 4 and 9 inches below surface, respectively. Some construction techniques vary at different points along the wall, including the width of the builder's trench and the position of the wall within the trench. The original bastion gorge survives intact beneath the flagstone floor of the Commissary.

Stratigraphic history in the vicinity of the Commissary is complex with 11 distinct soil zones present, including two historic ground levels. These buried occupational surfaces occur 22 inches and 29 inches below surface. The lowest historic ground level, beyond the fort curtain wall, covers an extensive rubble lens that accumulated during fort construction.

The investigation resulted in the discovery of Wall Sections 1 and 10, making it possible to accurately delineate and cap both wall sections. Monitoring during the insertion of utility lines to the Commissary prevented adverse impacts to significant cultural resources and resulted in new information that resolved issues in interpretation stemming from Dollar's (1983) investigation (Frazier et al. 1987).

Project Number 11

Coleman, Roger E., 1986. *Archeological Testing and Monitoring for Parking Lot Construction, Fort Smith National Historic Site, Fort Smith, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Dates:	June 12–13, 1985
Location:	Tracts 01-111, 01-134, 01-138, 01-139
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Test Excavation and Monitoring

Discussion: Coleman conducted archeological testing for construction of a new parking lot in a 2.45-acre tract at the southwest end of the park. This area, known to have contained an extensive ravine during the historic occupation of the site, was expected to harbor deep fill deposits. Field methods were appropriately designed to sample these deposits.

A baseline established on the north boundary of the project area was used to lay out test trenches. These were oriented perpendicular to the baseline and placed at even 20-ft intervals. A backhoe with a 2-ft-wide bucket was used to excavate the trenches. Profiles were recorded and, for dating purposes, artifacts were collected by soil zone.

Eleven test trenches, totaling 600 linear ft, were excavated at the proposed parking lot site. Numerous fill episodes, some containing quantities of rubble, were identified. The fill dates anywhere from the late 1870s to ca. 1947 but is predominantly twentieth century in age. Testing was sufficient to delineate the former ravine. It is estimated to have been 285 ft wide and 23 ft deep.

Two building foundations were identified and delineated in Tract 01-111. A Sanborn insurance map reveals that these two building foundations are remnants of the Webber-Ayere's warehouse complex, constructed ca. 1900 (Figure 4).

Coleman determined that significant cultural resources would not be adversely affected by proposed parking lot construction. Yet, important information concerning park history and development was acquired through the investigation.

Project Number 12

Coleman, Roger E., 1987b. *Archeological Monitoring for Burial of Overhead Telephone Lines and Identification of an Historic Midden, Fort Smith National Historic Site, Fort Smith, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Date:	1986
Location:	Tracts 01-108, 01-111, 01-124, 01-134, 01-138, 01-144, 01-145
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Monitoring

Discussion: To protect undiscovered cultural resources, Coleman monitored the burial of overhead telephone lines at Fort Smith National Historic Site. The AT&T Company used a front-end loader with a 1-ft-wide bucket to excavate over 986 ft of trench along Third Street and Parker Avenue. Monitoring of this potentially destructive activity averted impact to a buried historic midden and resulted in increased information on the stratigraphic history of the park.

Most of the trench occurred within sterile fill deposited by the military prior to second fort construction in 1839. In two areas, however, the excavation exposed significant underlying deposits. Area 1 contains a portion of historic ground level over a cinder deposit. Area 1 is located on Forgecraft property immediately south of the national historic site. Area 2, located at the corner of Third Street and Parker Avenue, contained a 1.4-ft-thick historic midden deposit, at a depth of 2.9 ft below surface. To document

contents and assess significance of the midden, a single 1-x-6-ft test unit was excavated to the base of the deposit. This activity resulted in the recovery of 1,681 artifacts.

Artifact analysis indicates that the midden is from the early civilian community of Fort Smith that originally occupied the second fort site from the fall of 1821 until August 1838. The midden is the only known resource from this early civilian hamlet and is a significant, contributing resource. Since additional work in the area, however, would have impacted remains in overlying ground levels, the deposit was not further delineated. To assess the extent of the midden and to protect this resource in the future, Coleman recommended that a program of small-bore coring should be implemented.

Project Number 13

Coleman, Roger E., unpublished maps and field notes filed as Project Number 13 in the field-generated data file at Fort Smith National Historic Site.

Date:	July 13, 1987
Location:	Tract 01-151
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Monitoring

Discussion: Coleman provided archeological monitoring for excavations conducted by the Missouri Pacific Railroad Company. Their purpose, to clean up the railroad right-of-way within the park boundary, required the excavation of pits to bury railroad ties and other debris. To prevent historic resources on the adjacent railroad median strip from being impacted, Coleman requested that all pits be placed in the ditch between the track bed and median strip. Five pits were excavated in this area, all in sterile subsoils. Significant cultural resources were not adversely affected.

Project Number 14

Coleman, Roger E., 1989a. *History and Appearance of the Second Fort Cistern, Fort Smith National Historic Site, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Dates:	December 1–5, 16–18, 1987; May 7–10, 1988
Location:	Tracts 01-107 and 01-149
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Test Excavation and Monitoring

Discussion: As recommended by the resources management plan (National Park Service 1988) for Fort Smith National Historic Site and by Dollar (1982), an excavation was undertaken at the historic second fort Cistern to collect essential planning data. Coleman conducted the investigation and tested the site of an associated overflow drain. Key issues to be addressed by the investigation included: construction and original appearance of the Cistern, local stratigraphy and historic ground level, the age of the Cistern, and the Cistern's relationship to Officers Row.

Cumulatively, 11 days were devoted to the project. Four test units were excavated at the site of the Cistern and the overflow drain. Tests were hand excavated. Soil was screened and all artifacts were retained for analysis. A fuel tank adjacent to the Cistern was removed by backhoe. This work was closely monitored and formally recorded as a test unit. Ample information was acquired to accurately display and interpret the Cistern.

Physical evidence indicates that the Cistern never had a platform. The crown of the structure jutted above the ground surface like an inverted bowl and rose at least 2.6 ft above historic grade. The exterior crown surface may have been finished with a durable stucco coating. The Cistern manhole cover probably once supported a hand-operated pump or rope and bucket. Investigation of the Cistern drain revealed a 38-ft-long stone-lined trough. Visible at ground surface, this feature contained only 0.2 ft of fill. Pro-

jected alignment of the drain indicates that the structure is an overflow drain from the second fort Cistern. The precise relationship of the Cistern to Officers Row could not be established, but the absence of a drain inlet for Officers Quarters A suggests that the cistern and overflow drain postdate 1865, when Officers Quarters A burned to the ground. Apparently, there is no surviving evidence of the Commandant's Quarters, and the relationship of the Cistern to Officers Row cannot be determined.

Coleman recommended that the modern, obtrusive brick platform should be removed and that the Cistern crown should be stabilized and displayed.

Project Number 15A

Coleman, Roger E., unpublished field records on file at Fort Smith National Historic Site as Project Number 15A in the field-generated data file.

Dates:	May 21 – August 2, 1985
Location:	Tract 01-127
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Test Excavation

Discussion: Coleman conducted an investigation at the site of Bastion 5 to supplement previous work undertaken there and to acquire essential planning data for capping and outlining the second fort defensive works. Specific project goals included the location and delineation of Bastion 5 and adjacent Wall Sections 8 and 9. To accomplish these objectives, 2-ft-wide, hand-excavated trenches were placed to intersect foundations. Eight test units were excavated to locate and delineate wall and bastion remains. After locating Bastion 5, this structure was exposed with two block units separated by a balk wall and appropriately designated E1/2 and W1/2.

Archeological investigation indicates that Bastion 5 is approximately 95 percent complete. Only a portion of the gorge and left flank are disturbed, and a short break in the foundation occurs from a city storm sewer that crosses through the right and left faces of the structure. Stone is encountered 1.0 ft below surface at the gorge and 2.5 ft below surface at the salient angle of the bastion. The excavation revealed an unanticipated foundation within the bastion interior. This pentagonal alignment of dry-laid sandstone slabs is a footing for the *parados*, an internal wall to support a second story gun platform or terreplein.

Evidence of both adjoining wall sections exists in Tract 01-127. Wall Section 8, a 70-ft-long foundation scarcely 1.0 ft below surface, occurs with the tract. On the east end of the tract, a builder's trench for the footing was not apparent, suggesting that this area contains military embankment and holds potential for significant buried deposits. Unfortunately for this investigation, almost all of Wall Section 9 had been destroyed by construction of the Speer Hardware Building. Only a 2-ft-long segment of Wall Section 9 survives 3.0 ft below surface, but it is enough to determine its point of juncture with Bastion 5. Although historic foundations survive in Tract 01-127, no historic ground level was found, and few historic artifacts were recovered during this investigation.

Project Number 15B

Coleman, Roger E., unpublished field records on file at Fort Smith National Historic Site as Project Number 15B in the field-generated data file.

Dates:	September 7 – October 21, 1985
Location:	Tract 01-125
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Test Excavation

Discussion: Coleman conducted additional investigations of the second fort defensive works, this time at the site of Bastion 4 and adjacent Wall Sections 6 and 7. Two previous investigations at this site identified structural remains thought to represent elements of the defensive works. Bruce Anderson dis-

covered two rubble concentrations that he identified as Wall Section 6 (Feature 4) and a possible house floor (Feature 2). A second investigation conducted by Diane Traylor yielded conflicting results. She determined that Feature 4 was not Wall Section 6, but offered no alternative identification. Feature 2 was redefined and is considered by Traylor to be the foundation of Bastion 4. Coleman's objectives were to clarify these unresolved issues resulting from prior investigations, to positively identify Feature 4, and to locate and accurately delineate the remains of Bastion 4 and adjacent fort curtain walls.

Coleman employed cross-trenching in areas suspected to contain structural remains. The 2-ft-wide trenches were excavated by hand. A deep cross-trench was used to examine Feature 4 in profile, and grid units were opened over the hypothesized remains of Bastion 4. Thirteen test units were excavated and enough information was obtained to clarify issues of feature identification. Feature 2 as identified by Anderson and Traylor is a 0.5-ft-deep, dry-laid, linear stone arrangement forming an obtuse angle or corner and resembling a bastion foundation. In 1981 Traylor reported that the foundation was mortared. This investigation found no evidence of mortar and suggests that the original investigators were in error. The "probable wall juncture" identified by Traylor in 1981 was found to be rubble in disturbed topsoil and her Feature 2 "bastion foundation" was found to be the remains of the *parados* or bastion interior wall (supporting the second story terreplein). Nearly all of the bastion scarp wall had been completely removed. This investigation identified only a 3-ft-long portion of the bastion gorge, 0.55 ft below surface. A complex arrangement of features, however, occurs within Bastion 4. At least three superimposed features that might have abutted the bastion scarp wall are evident. At least two of these features produced nineteenth-century artifacts and are possibly historic-era privys.

Feature 4, examined in cross section, is a sandstone rubble concentration between two levels of military embankment. Twenty-three soil zones, all fill episodes, were identified here to a depth greater than 3.5 ft below surface. The stone rubble follows a sloping contour toward the fort interior. Stone is jumbled without mortar and, as Traylor concluded, is unquestionably not the foundation of Wall Section 6. Feature 4 is, however, a by-product of fort wall construction. This linear debris concentration accumulated from spot dressing stone during wall construction and its position in profile marks a former construction surface. Additional embankment was then placed to fill the fort interior and to strengthen Wall Section 6, thus covering Feature 4. Unfortunately for this investigation, the stratigraphic sequence also indicates that Wall Section 6 and the historic ground level in Tract 01-125 have been completely removed.

Project Number 15C

Coleman, Roger E., unpublished field records on file at Fort Smith National Historic Site as Project Number 15C in the field-generated data file.

Dates:	September 8 – December 5, 1986
Location:	Tracts 01-107 and 01-114
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Test Excavation

Discussion: Further investigation of the second fort defensive works was undertaken by Coleman. To supplement previous investigations and to acquire information for park planning and management needs, efforts were concentrated on Bastion 2 and adjacent Wall Sections 1, 2, and 3, and the identification of historic ground levels at these locations.

Coleman employed a combination of trenching with grid square and block unit excavation to identify and expose structural remains, and to sample soil deposits. Four 5-x-5-ft square units were excavated to encounter Wall Section 1 and to reveal site deposits on Tract 01-107. At Bastion 2, block units were opened over Wall Sections 2 and 3, and over each bastion wall. To maintain stratigraphic control, balk walls were left in each block unit. For sampling deposits beyond the fort and bastion walls, a grid system was established and seven 5-x-5-ft square units were excavated or partially excavated. A total of 16 test units were excavated, providing a wealth of data for planning purposes.

Testing on Tract 01-107 indicates that 180 ft of Wall Section 1 survives intact. While the historic ground level is cut away on the fort interior, successive historic ground levels and fill episodes are evident on the fort exterior. Historically, exterior fort areas were lower than the fort interior and received more fill over time. Test 1 revealed an historic ground level and a substantial trash midden from 2.0 to 3.5 ft below surface. Sterile military embankment and possibly unidentified historic resources exist below this. In Test 2, ten soil zones were identified including two historic ground levels, wall construction and demolition surfaces, and at least two episodes of military embankment. Previously undocumented structural remains were encountered in this embankment. A dry-laid sandstone wall, set as embankment progressed, provides a stabilizing scarp or toe for Wall Section 1.

Testing on Tract 01-114, the railroad median strip, revealed intact foundation from all sides of Bastion 2. Approximately 134 ft or 67 percent of the structure has survived. The investigation identified remains of both adjoining curtain walls, 27.5 ft of Wall Section 2 and 10.5 ft of Wall Section 3. Construction stone is encountered from 1.1 to 4.4 ft below surface. The bastion interior contains military embankment over construction rubble and marks the former floor level of the building.

Historic ground levels are present on both interior and exterior fort areas. On the fort interior, historic ground level occurs 0.8 ft below surface. Beyond the fort and bastion walls, four historic ground levels separated by fill episodes are apparent. Historic ground levels are 0.4, 1.4, 2.8, and 3.2 ft below surface, respectively.

Evidence of external building features were identified. Porch foundations from the 1866–1867 renovation of the Quartermaster Building are evident on both the right face and left flank of the structure (opposite sides). Because of time and funding limitations, however, porches were not delineated.

Coleman located and delineated Bastion 2 and adjacent Wall Sections 1, 2, and 3, acquiring information for park planning and management needs. Work revealed new insights into construction and use of the second Fort Smith. Unfortunately, funding for a final report to synthesize and interpret this information was unavailable and has not been forthcoming. It is essential that all wall and bastion excavations be properly reported.

Project Number 16

Coleman, Roger E., 1987a. *Interim Report: Archeological Investigation for Construction of a Pedestrian Trail at Fort Smith National Historic Site, Fort Smith, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Coleman, Roger E., 1989b. *Archeological Investigation for Construction of a Pedestrian Trail and Identification of Laundress Row, Fort Smith National Historic Site, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Dates:	October 21, 1985 – October 28, 1988
Locations:	Tracts 01-108, 01-114, 01-115, 01-116
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Excavation, Mitigation, Monitoring

Discussion: Archeological investigations were undertaken by Coleman for construction of a pedestrian trail at Fort Smith National Historic Site. The pedestrian trail is a 1,070-ft-long, paved walk that crosses three park areas to connect the visitor center and the first fort site: the visitor center lawn, the median strip, and Belle Point. Work occurred sporadically over a four-year period. Cumulatively, from October 21, 1985, to October 28, 1988, seven months were devoted to the field investigation. A five-phase excavation procedure that ranged from systematic sampling to controlled excavation of significant remains was used to sample, identify, and assess cultural resources, and to mitigate construction impacts. Fieldwork resulted in the excavation of 145 test units accounting for a total excavated area of 3,728 ft^2 (346.3 m^2). Sixty-seven archeological features were identified. Buried historic ground levels were encoun-

tered in two locations. To mitigate construction impacts, a 3,775-ft² area of historic ground level and four features were excavated or partially excavated, resulting in the acquisition of 43,906 artifacts.

Significant archeological remains are present on the visitor center lawn (Tract 01-107). These include the filled basement of Soldier's Barracks B (Feature 78), which is an unfinished building of the second Fort Smith that was razed in 1846 to provide construction stone for the Quartermaster Building. Fill and construction rubble in the former basement is encountered 2.0 ft below surface and one surviving course of foundation stone occurs 4.7 ft below surface. Two buried historic ground levels were identified in Tract 01-107. The lowest ground level, associated with Barracks B, is encountered 1.4 ft below surface and dates from ca. 1846–1888. The second ground surface, associated with the 1888 Jail Wing addition, occurs 0.8 ft below surface. Both levels contain significant artifacts and possible unidentified structural remains.

Several archeological features are associated with a buried historic ground level on the railroad median strip. This former occupational surface averages 0.4 ft thick and is coextensive with the entire median strip area. It is encountered from 0.6 to 3.5 ft below surface and contains abundant artifacts, features, and structural remains. Archeological testing revealed eight features associated with the buried historic ground level including the fireplace foundation from a barracks of Laundress Row, a prepared drive for the Quartermaster Building, and a dumpsite for the post Blacksmith Shop.

Cultural deposits on Belle Point are mixed in a disturbed topsoil or Ap horizon that varies from 0.5 to 1.0 ft thick. Artifacts are abundant here, but most are twentieth century—only 5 percent of all artifacts collected are potentially historic. Likewise, most of the 45 subsurface features encountered there are twentieth century in age. Archeological monitoring during construction, however, resulted in the identification of a single historic feature associated with the first Fort Smith. Designated Feature 77, this deposit is probably a privy or cellar from the first Fort Smith. Encountered 1.4 ft below surface, the feature is greater than 3.1 ft deep and contains artifact-bearing fill.

Investigation for construction of the pedestrian trail sampled previously untested areas of the park and defined new archeological resources. Impacts to significant resources were mitigated through a combination of avoidance, excavation, and construction monitoring. Coleman summarized his findings in a report of investigation (1989b). Much of the document is devoted to the description of artifacts from the buried historic ground level that Coleman believes is an important source of analysis for Fort Smith and other nineteenth-century sites. Additionally, the raw data is tabulated with provenience information and included with the document in microfiche form. The report outlines eleven research questions to address three topics: differences between use of interior fort and exterior fort areas, the identification of Laundress Row, and the definition and delineation of the prehistoric Belle Point site. These research topics are addressed with varying degrees of success. Arguments for the identification of Laundress Row are persuasive. The array of analytical techniques used to verify the documented laundering function are convincing but suffer from the absence of tests of significance.

Project Number 17

Coleman, Roger E., 1988. Memorandum to Regional Director, Southwest Region. File Code D30, dated August 24. On file at Fort Smith National Historic Site and in the field-generated data file as Project Number 17.

Date:	August 23, 1988
Location:	Tract 01-113
Principal Investigator:	Roger E. Coleman
Type of Investigation:	Monitoring

Discussion: On August 23, workers of the Fort Smith City Sewer Department closed an active storm sewer at Fort Smith National Historic Site. This operation, preliminary to constructing a pedestrian trail from the visitor center to Belle Point, occurred at the northernmost manhole on National Park Service

property in Tract 01-113. To prevent impact to significant archeological resources, Roger E. Coleman monitored the work. A backhoe with a 27-inch-wide bucket was used to excavate an 8-ft-long trench adjacent to the manhole. The storm sewer, exposed at 6.4 ft below surface, was broken and plugged with concrete to complete the operation.

Coleman identified a buried historic ground level in the excavation profile. From 2.5 to 3.8 ft below surface, an undifferentiated Ap horizon was encountered. Artifacts were not observed in this level, but brick and charcoal mottles were evident. Tract 01-113 is the former site of the post garden (Coleman and Dollar 1984), an activity or land use that can account for the abnormal thickness (1.3 ft) of the Ap horizon as well as the paucity of artifacts.

Project Number 18

Parrish, Jody S., 1989. *Archeological Testing and Monitoring for Storm Drain Construction, Fort Smith National Historic Site, Fort Smith, Arkansas*. National Park Service, Southwest Regional Office, Southwest Cultural Resource Center, Santa Fe.

Dates:	April 3–4, 1989
Location:	Tract 01-116
Principal Investigator:	Jody S. Parrish
Type of Investigation:	Test Excavation and Monitoring

Discussion: Parrish conducted an archeological investigation to assess the impact of constructing a new storm drain on the south end of Belle Point in Tract 01-116. The storm drain required a 340-ft-long trench that ranged from 7 to 12.5 ft deep. Historically, the proposed construction site was occupied by a deep ravine that is now partially filled. Parrish's objectives as outlined in the scope of work were to identify subsurface deposits in the construction right-of-way, define and interpret these deposits, offer recommendations for future park management, assess the significance of deposits encountered, and, if significant, provide a plan for impact mitigation.

To accomplish her goals, Parrish placed six test trenches at 50-ft intervals perpendicular to the proposed storm drain centerline and excavated them by backhoe. Tests measured 2 ft by 10 ft and were excavated as deep as required to encounter sterile subsoil. Depth of fill encountered by Parrish varied from 1.5 to 3.5 ft deep. Although mixtures of historic and post-historic artifacts were encountered, most are clearly twentieth century in age and signify recent deposition at this location. Parrish recommended that archeological clearance be provided for construction providing that an archeologist monitor all cutting during storm drain construction.

Project Number 19

Parrish, Jody S., unpublished field notes, slides, and photographs on file at Fort Smith National Historic Site in the field-generated data file as Project Number 19.

Dates:	April 3–5, 1989
Location:	Tract 01-108
Principal Investigator:	Jody S. Parrish
Type of Investigation:	Monitoring

Discussion: On April 3, 1989, Parrish monitored the removal of a non-historic flagpole on the east lawn of the visitor center in Tract 01-108 (note that the historic second fort Flagstaff is on the other side of the Barracks/Courthouse/Jail complex; see Project Number 8). The cavity created by removing the square concrete flagpole base measured five feet to a side and four feet deep. Parrish triangulated the location of this disturbance and profiled pit walls to record stratigraphic details.

Eight soil zones, including a buried historic ground level, were identified. The first four levels are identical to those described in an earlier investigation in Tract 01-108 (Project Number 16) with one ex-

ception, the absence of a rubble lens overlying the historic ground level (Zone 3). Since this lens was created by throw-out from the Barracks B basement during construction of the Jail Wing in 1888, its absence in the more distant flagpole site is explicable. The deep flagpole footing hole also revealed four previously unidentified soil zones. Three of these zones, occurring successively in profile, contain construction rubble and might be a former construction surface for the soldiers barracks or possibly fill in an unidentified feature. Rubble occurs between 2 and 3.5 ft below surface. In Zone 5, Parrish observed five mortared bricks arranged in a linear configuration. Apparently, the lowest soil encountered by Parrish, a mottled sandy clay, is another fill episode. Therefore, fill on the courthouse lawn exceeds four feet in depth.

Project Number 20

Parrish, Jody S., 1989. Memorandum to Regional Director, Southwest Region. File Code H24 (FOSM), dated July 10. Field notes and photographs filed as Project Number 20 in the field-generated data file.

Dates:	May 19–31 and July 7, 1989
Location:	Tract 01-151
Principal Investigator:	Jody S. Parrish
Type of Investigation:	Monitoring

Discussion: Fiber optic cable was placed through Fort Smith National Historic Site on Tract 01-151, in the Missouri Pacific Railroad right-of-way. This activity required excavation of a 1-ft-wide, 5-ft-deep trench to house the cable. To prevent impact to unidentified cultural resources, Archeologist Jody S. Parrish monitored this potentially destructive operation. Parrish observed that the cable trench exposed only railroad bedding, modern fill, and sterile subsoil. Historic remains were not encountered.

Project Number 21

Parrish, Jody S., 1989. Memorandum to Regional Director, Southwest Region. File Code H-24, dated September 22. Field notes and photographs filed as Project Number 21.

Date:	September 19, 1989
Location:	Tracts 01-111 and 01-138
Principal Investigator:	Jody S. Parrish
Type of Investigation:	Monitoring

Discussion: On September 19, Parrish monitored the insertion of an electrical line to an audio box in the Gallows enclosure. A 0.5-ft-wide, 1-ft-deep trench was excavated by ditchwitch to house the electrical line. Parrish encountered only sandy fill deposited by the National Park Service following removal of Parker Avenue. Thus, at least one foot of this recent fill covers Tract 01-111. Significant historic resources were not adversely effected by this project.

Project Number 22

Parrish, Jody S., 1990. Video Monitor Installation to Commissary. Memorandum to Regional Archeologist, Southwest Region, Santa Fe. From Archeologist, Fort Smith NHS. File Code H24 (FOSM), dated April 13. On file, Fort Smith National Historic Site.

Dates:	April 2–10, 1990
Location:	Tracts 01-104, 01-107, 01-108, 01-139, 01-140
Principal Investigator:	Jody S. Parrish
Type of Investigation:	Monitoring

Discussion: A video monitor was installed in the Commissary that required installing a cable from the Courthouse/Jail to the Commissary. Parrish monitored the cable trenching work. The trenching was done with a ditchwitch that opened a very narrow exposure. Parrish noted the trenching crossed only one

area where distinct cultural layering occurred. This area is about six feet from the west wall of the Jail Wing. She was unable to determine if the levels were related to the Jail Wing construction or to some other cultural deposition. She noted the site of Officers Quarters A was also the locale where the Meek bottling plant once stood. The trenching passed through this area. Parrish noted modern brick and glass in the trench fill in this area. Some isolated artifacts were noted and collected, but no features were encountered.

Project Number 23

No reference—an unsigned handwritten note is in the park files that describes a recent feature.

Date:	May 29, 1990
Location:	Tract 01-116
Principal Investigator:	Jody S. Parrish
Type of Investigation:	Documentation of Brick Feature

Discussion: This work is documented by only a handwritten, unsigned note in the park file folder describing the unintentional finding of a brick feature along the trail on Belle Point. The feature was exposed by horse traffic during Memorial Day events. The note indicates that the feature is constructed of brick and is about 2 ft in diameter with a concrete collar. At a depth of 1.5 ft from the top of the opening an iron step was found protruding from the brick. The feature, constructed of soft orange brick, is believed to be a manhole access to a Fort Smith town storm drain. The maintenance staff filled the hole and tamped it to ensure there would be no further slumping.

Project Number 24

No reference—only unsigned notes, dated 1992, are in the file.

Dates:	August 3–6, 1992
Location:	Tract 01-105
Principal Investigator:	Unknown
Type of Investigation:	Monitoring

Discussion: The telephone system for the Frisco Station was interrupted on August 3, 1992. A telephone line technician dug a hole in what was believed to be a previously disturbed site in the railroad right-of-way north of the Commissary to the street. Due to intermittent rains, the trench slumped and formed a large pit. The pit fill removal was monitored and was found to be in disturbed fill.

Project Number 25

Barnes, James E., 1993. *An Archeological Survey of a Proposed Pedestrian Trail, Fort Smith National Historic Site*. Sponsored Research Program, Arkansas Archeological Survey, Fayetteville, Arkansas.

Date:	October 1, 1993
Location:	Tracts 01-116, 01-131, 01-133, 01-136, 01-148
Principal Investigator:	James E. Barnes
Type of Investigation:	Shovel Testing

Discussion: The Arkansas Archeological Survey undertook a pedestrian inventory and shovel testing program along the proposed route of a trail from Highway 64 across Belle Point and joining with another trail from the fort. Shovel testing revealed that the top one foot or more of the area had been disturbed by early-twentieth-century residences and utility lines. The area had also been bulldozed in 1962 to remove the surface remains of these late intrusions. Barnes noted that the portion of the trail along the river was in an old floodplain, and recent soil deposition there may be deep enough to bury historic features. Regardless, the potential impact of the trail was determined to be negligible on any nearby historic resources.

Project Number 26

No reference—an unsigned typewritten note and three photographs are included in the file folder.

Date:	October 10, 1994
Location:	Tract 01-108
Principal Investigator:	Unknown, reported by Acting Chief Ranger James Phelps
Type of Investigation:	Monitoring

Discussion: Trenching for upgrading the telephone line from the Courthouse/Jail to the maintenance facility exposed a concrete post mold. The mold is for an approximately 8-inch-square post and was found about 12 ft southeast of the Jail Wing addition. No other artifacts or features were noted. The concrete appears, in the photographs, to be twentieth century in origin.

Project Number 27

No reference, no notes—only oral information from Emily Lovick.

Date:	April 21, 1996
Location:	Tract 01-116
Principal Investigator:	David Hayes
Type of Investigation:	Tornado Damage Clean-Up

Discussion: Buffalo National River Archeologist David Hayes and Fort Smith Curator Emily Lovick worked at Fort Smith collecting artifacts from tree throws and root balls after a tornado struck Fort Smith on April 21, 1996. Over 200 trees were blown down on Belle Point. The collected material was left in the park where it has been subsequently cataloged and curated. The storm inflicted significant damage to buildings, trees, and the general infrastructure of the city of Fort Smith. The city Action Center created a CAD drawing of the storm damage (City of Fort Smith Action Center, storm96.dwg) that identifies the extent of damage to the city's buildings. The storm and the damage was also extensively reported in the Fort Smith *Times Record* for April 24, May 4, and August 8, 1996. Fort Smith National Historic Site also documented the storm damage on video tape (copy on file at Fort Smith National Historic Site) and via aerial photography on April 23, 1996 (a series of 12 overlapping 9-x-9-inch images were taken and are on file in the park).

Project Number 28

Scott, Douglas D. and William J. Hunt, Jr., 2000. *Archeological Investigations Conducted in Support of the Fort Smith Barracks/Courthouse/Jail Rehabilitation*. Technical Report 68. Midwest Archeological Center, National Park Service, Lincoln, Nebraska.

Dates:	April 3–May 2; October 20–November 4, 1997; August 31–September 3, 1998
Location:	Tract 01-108
Principal Investigator:	William J. Hunt, Jr.
Type of Investigation:	Mitigation by Excavation and Testing

Discussion: Archeological investigations were conducted at Fort Smith National Historic Site as part of mitigation measures for site development. Initially Buffalo National River Archeologist David Hayes proposed an extensive data recovery effort (Hayes 1996). Hayes later withdrew from the project (email from David Hayes to Fort Smith Superintendent Bill Black dated June 6, 1996, copy on file at the Midwest Archeological Center). Subsequently, Midwest Archeological Center archeologists were asked to conduct the data recovery efforts, and William Hunt and Douglas Scott were assigned to the project. Hunt directed the fieldwork and Scott supervised the artifact processing and cataloging and report writing.

Excavations were undertaken around the exterior of the Courthouse/Jail complex and in the vicinity of the Guardhouse site. The Guardhouse site was found to have been destroyed by later Fort Smith town building activities. The excavations around the Courthouse/Jail complex recovered evidence of the original galleries and porches that once existed on either side of the original Army-era barracks that was converted to the Federal Courthouse in the late nineteenth century.

The excavations yielded some interesting architectural details relating to the porches and galleries that once existed on the barracks. The years of modification to the structural elements were also documented in the archeological record and were visible as the ditches, drains, trenches, floors, and other alterations to the gallery walls. The artifacts recovered during the excavations also reflect the changes in the building's use and occupation through time. The layers of fill in the gallery yielded a mixed variety of artifacts. Most of the ceramics and non-architectural artifacts reflect the utilitarian nature of the building's occupation. Table service fragments as well as mundane ink bottles demonstrate that the types of artifacts discarded by the residents and present in the gallery fill are inexpensive and represent common household and institutional assemblages.

The excavations revealed that the gallery wall openings were filled in and windows and doors added to the structure. In subsequent years the porches were removed, and the exterior stairway replaced with one of an entirely new design. All of these modifications were reflected in the archeological record. The original gallery is represented by remnants of brick flooring, the gallery walls, and porch support columns. The pre-1875 gallery modifications were clearly seen in the remains of the stone flooring and some evidence of the gallery wall modifications. Subsequent changes are seen in the fact the entire gallery was filled with debris and other fill materials and forgotten. In addition, many alterations to the original gallery floor and wall fabric occurred as water, sewer, and other utility lines breached the walls in many places. These modifications to the original configuration might not be documented in the historic record or on maps, but they are clearly seen and are part of the building's archeological record.

Shovel testing around the building and on the surrounding grounds revealed there is a sheet midden or light scatter of trash surrounding the building. The artifacts found in the shovel tests have a wide date range, but the majority appear to be associated with the military and early judicial periods. Later occupation of the structure appears to have deposited less material in the surrounding lawns than the earlier eras.

The 1997 excavations did reconfirm the existence and location of the Well site and a demolished barracks. The excavations corrected some measurement details related to the location of the barracks foundations relative to the Courthouse/Jail complex.

Additional recordation was done on the interior of the Courthouse/Jail when modern fill was removed during the rehabilitation efforts. The locations of two large fireplaces dating to the original building construction were recorded, as was a later furnace and boileroom feature.

Project Number 29

Hunt, William J., Jr., 1999a. Trip Report Investigation of Archeological Discovery, Commissary Building, Fort Smith National Historic Site. Memorandum on file, Midwest Archeological Center, National Park Service, Lincoln.

Dates:	February 24–26, 1999
Location:	Tract 01-104
Principal Investigator:	William J. Hunt, Jr.
Type of Investigation:	Discovery Excavation

Discussion: During the installation of a park fire suppression system in the Commissary several features were noted in the exterior trench leading to the building and the finding of a basement in the structure itself. The new water line trench for the fire suppression system runs from the existing water line on Second Street, then down the railroad grade, and curves gently until intersecting with the northeast corner of the Commissary. No historic-era cultural features were identified within the trench, although several

early-twentieth-century utility lines, railroad ties, and displaced stone slabs and fragments were seen in the trench. Some of the underlying slabs appeared to be *in situ*. They were located 7 ft 9 inches and 5 ft 10 inches respectively from the Commissary wall and are believed to be remains of the Commissary porch footers. A Dickinson Contracting Stemmed projectile point was found at the bottom the 4-ft-deep trench.

Inside the Commissary's northeast corner, the flagstone floor had been removed and a hole was dug in preparation for placing the fire suppression system lines in the building. Instead of a shallow building foundation as was anticipated, a well-constructed stone-walled cellar or basement was discovered. The dressed stone wall continued to a depth of 59½ inches below the foundation sill. A 20-inch-wide builder's trench was found below the basement's flagstone floor. This work confirmed the accuracy of the historic record regarding the presence of a basement in the building. Earlier architectural histories assumed the term "basement" referred to the building's first floor. The basement or cellar had been filled in and covered with flagstone at some point in the past as revealed by the construction work and archeological discovery.

Project Number 30

Hunt, William J., Jr., 1999b. Trip Report: Archeological Monitoring, Fort Smith National Historic Site (FOSM), Sebastian County, Arkansas. Memorandum on file, Midwest Archeological Center, National Park Service, Lincoln.

Date:	July 11–26, 1999
Location:	Tracts 01-104, 105, 108, 124
Principal Investigator:	William J. Hunt, Jr.
Type of Investigation:	Monitoring

Discussion: This archeological project was undertaken to monitor trenching associated with the installation of a park security system and the construction of a geothermal heating and cooling system. Hunt located and recorded nine features in the course of the work. The trenching work cut though the core of the second Fort Smith area thus exposing significant areas where no other archeological work had been done. Features 4 and 9 were associated with the Judicial period and probably related to the Jail wing construction. The late-nineteenth- and twentieth-century urban construction episode was well represented by concrete remains designated Features 7 and 8. Features 1–3 were stone rubble piles associated with the destroyed segment of Wall Section 6 near Bastion 4. Similar rubble piles were found by Anderson (1979), Traylor (1981), and Coleman (1984a). Feature 5 is located near the Commissary and was probably a porch foundation footer. Other similar features have been recorded by Anderson (1981) and Hunt (1999a). Feature 6 was a stone foundation located in the vicinity of Bastion 2, but well inside the curtain walls. The foundation is thought to be the partial remains of an 1846-era ordnance building.

Project Number 31

Nickel, Robert K. and William J. Hunt, Jr., 2002. *Geophysical Surveys of the Perimeter Fortification System at the Site of the Second Fort Smith, Fort Smith National Historic Site, Fort Smith, Arkansas*. Technical Report No. 85. Midwest Archeological Center, National Park Service, Lincoln, Nebraska.

Dates:	September 13–22, 1999
Location:	Tracts 01-104, 01-105, 01-107, 01-111, 01-114, 01-125–128, 01-140, 01-141
Principal Investigators:	Robert K. Nickel and William J. Hunt, Jr.
Type of Investigation:	Geophysical Remote Sensing Inventory

Discussion: A geophysical remote sensing inventory was undertaken by Nickel and Hunt in all accessible areas of the second fort bastions and curtain or perimeter walls (Figure 7). A multi-instrument inventory, using a fluxgate magnetometer, resistivity meter, and ground-penetrating radar was done over 12 blocks or survey units that encompassed all accessible areas. The inventory effort was highly successful with the identification or confirmation of substantial portions of Bastions 1, 2, and 5 determined to remain.

Substantial sections of perimeter Wall Sections 1 and 8 are in place, with portions of Wall Section 2 near Bastion 2, a small segment of Wall Section 3 also near the same bastion, a small portion of Wall Section 7 and a small portion of Bastion 4 were determined to be present, and a small portion of Wall Section 10 was found. In addition, a building foundation was found near Bastion 2 that is likely to be the remains of an 1846-era ordnance storehouse. A fairly complete stone foundation was found along and outside perimeter Wall Section 9. This feature may be related to the fort Guardhouse. Another foundation was also located outside Wall Section 8. This is believed to be a post-fort structure. A radar transect was also done informally across the area east of the Courthouse/Jail believed to be the location of the fort Well. An anomaly consistent with this identification was found in that locale.

Project Number 32

Documentation consists of email correspondence between William Hunt, Bill Black, and Emily Lovick in the Midwest Archeological Center Fort Smith Archeology 2000 files.

Dates:	February 4, 8, 9, 23, 2000
Location:	Tract 01-111
Principal Investigator:	Emily Lovick
Type of Investigation:	Monitoring

Discussion: Construction and regrading of the visitors parking lot raised some concerns that historic features might be affected by the work. Emily Lovick monitored the effort and found previously disturbed soil zones in the construction area.

Project Number 33

Hunt, William J., Jr., 2000. Planning and Testing Tree Planting Locations, Fort Smith National Historic Site (FOSM). Memorandum on file, Midwest Archeological Center, National Park Service, Lincoln.

Date:	September 5–8, 2000
Location:	Tracts 01-104, 01-105, 01-108, 01-127, 01-128, 01-139, 01-140.
Principal Investigator:	William J. Hunt, Jr.
Type of Investigation:	Testing

Discussion: The park planned to plant trees in various areas of the park that conformed to known historic species. Many of the proposed tree planting locations were in areas determined to contain no significant archeological resources. These include areas between the Jail Wing and Gallows (Bastion 3), in former street rights-of-way, and on the site of twentieth-century buildings. Sixteen other areas had not been previously tested and were thought to have the potential to contain archeological resources. These locales were tested using backhoe trenching and hand excavation methods. No Fort or Judicial period features were identified. Some concrete foundations and artifactual material associated with the twentieth-century urban occupation of the area were noted.

Chapter 6: Archeological Resource Assessment and Potential by Fort Areas

First Fort Smith, Belle Point, and Fort Garden

Some of the first archeological investigations of Fort Smith were conducted at the site of the 1817-era fort. Substantial archeological deposits were recovered. Investigations here have encountered the foundations of the first Fort Smith—now capped and outlined, the post Well, and a privy or cellar from an extrafort structure.

Only one inventory has been conducted through Belle Point since the 1960s. This inventory was undertaken in conjunction with the development of a new pedestrian trail. The shovel testing effort found twentieth-century materials in the upper foot of fill. The area was significantly impacted by bulldozing in the early 1960s. Numerous features are present on Belle Point, but most are from the twentieth century Coke Hill occupation of the site. Artifacts are quite abundant on Belle Point, but like the features, most are recent. Tree throws resulting from the tornado of 1996 reinforced this assumption. Artifacts collected from the root balls demonstrated a mix of early-nineteenth-century materials with late-nineteenth- and early-twentieth-century items. Artifacts are contained in a 1-ft-thick disturbed topsoil—a product of early National Park Service landscaping activity. Thus, no historic ground level is likely to exist on Belle Point.

Low-lying areas on the north edge of the area, however, do have potential for a buried historic ground level. Such a deposit was identified 2.5 ft below surface on the fort garden area. The south edge of Belle Point is also a naturally low area. In fact, a ravine identified across the railroad tracks also crosses the south end of Belle Point. In this area, however, the ravine received substantially less fill. Deposits here are only 1.5 to 3.5 ft deep and contain a mix of historic and post-historic artifacts, signifying recent deposition.

Recommendations: All ground-disturbing activities conducted at Belle Point must account for the presence of significant cultural resources. A multi-instrument geophysical survey of the entire Belle Point area is recommended as a means to identify buried archeological features. The area enclosed by the fort walls has not been completely excavated, and since foundations were only selectively capped, other subsurface structural remains are present. All earth alteration on the interior of the first Fort Smith should be avoided.

The discovery of the post Well and a first fort cellar or privy establishes the presence of significant historic features beyond the walls of the first Fort Smith. The north end of Belle Point may contain a buried historic ground level. To prevent adverse impacts to significant resources, construction activities on Belle Point should be restricted to the upper one foot of soil. If this is not possible, an archeological investigation should be conducted to identify and assess adverse impacts on significant cultural resources. If avoidance is not possible, a 100-percent excavation of all endangered significant remains should be undertaken. Since fill deposits on the south end are recent, mitigation of construction impacts in this area should not be necessary.

River Frontage

One archeological investigation associated with a pedestrian trail revealed disturbed soils to a depth of at least a foot and twentieth-century deposits. A brief survey of the area also indicates that late-nineteenth and early-twentieth-century artifacts are eroding from exposures along the Arkansas River. Boat mooring rings mark landing sites at the river's edge, and one stone monument marking the Choctaw Boundary exists in the tract. Therefore, the potential for significant cultural remains exists.

Recommendations: An archeological investigation should be undertaken on the riverfront to document cultural resources for future management needs. Until cultural resources in this area can be assessed, all earth-altering activity should be preceded by archeological testing to determine adverse impacts to significant cultural resources.

Fort Cemetery and Sawmill

Although archeological investigation has not been undertaken on these lands, which are owned by Forgecraft and the city of Fort Smith, the area is suspected to contain the first fort cemetery and the second fort sawmill (Coleman and Dollar 1984:51–52). The site has been significantly altered by building construction, but the extent of cutting and filling cannot be determined without an investigation.

Recommendations: If the National Park Service acquires this property, an archeological investigation should be conducted to determine if the first fort cemetery and second fort sawmill are present. These remains should be identified, delineated, and protected from destruction or impairment.

Second Fort Smith and Federal Courthouse

Commissary

The Commissary lot contains numerous structural remains and significant buried deposits. Intact foundations for Wall Sections 1 and 10 occur and are encountered 4 and 9 inches below surface, respectively. Structural remains associated with exterior features of the Commissary include a flagstone walk that parallels the right flank of the building (ca. 1.5 ft below surface); two stone piers and a possible post mold from the left flank porch (0.73–2.8 ft below surface); buried steps that once serviced the porch on the right face of the Commissary (2.6 ft below surface); and two post molds on the right flank that mark a former porch at this location (2.0 ft below surface).

Eleven distinct soil zones, including two historic ground levels, have been identified in the area around the Commissary. Within the boundaries of the fort curtain wall, a buried historic ground level is encountered 2.0 ft below surface. In extrafort areas where more fill accumulated, two former occupational surfaces are evident. The first historic ground level occurs at 1.8 ft below surface, postdates 1898/9, and is associated with the late historic period of the site. The second historic ground level occurs at 2.4 ft below surface, overlies the fort wall construction surface, and dates from ca. 1839–1898/9. This historic ground level contains significant artifacts and holds potential for the discovery of features and structural remains. The interior of the Commissary contains a previously unknown cellar or basement. The cellar fill appears to be relatively sterile as far as artifacts are concerned, but its size as well as wall and floor features are relatively unknown.

Recommendations: Construction activities in the vicinity of the Commissary should be carefully planned to avoid known structural remains. To prevent impacts to porches and other external features of the Commissary, destructive activity within a 10-ft radius of the building should be avoided whenever possible. Because of shallow structural remains, some only 4 inches deep, even superficial work should be monitored by an archeologist. Significant buried ground levels, 2.0 ft below surface should be avoided. If avoidance is not possible and historic deposits must be disturbed, a 100-percent excavation of the affected area should be conducted.

Officers Quarters and Cistern

The area containing the Officers Quarters, the Cistern, and Wall Sections 1 and 2 have some significant cultural resources present. The second fort Cistern and 35 subsurface features identified in this area relate to possible well and privy locations, and wall lines from Officers Row. Investigations suggest that less than 1.7 and 0.5 ft of fill remains in the basements of Officers Quarters A and B, respectively. Evidence for the former Commandant's Quarters no longer exists, or at least has not been identified by previous investigations. A 100-ft-long segment of Wall Section 1 occurs from 1.5 to 1.8 ft below surface on Tract 01-107.

Although the historic ground level is cut away on the fort interior, significant buried deposits exist in extrafort areas including a stone foundation that may be associated with the 1846 ordnance building. Test 15C-1 yielded a buried historic ground level and historic trash midden from 2.0 to 3.5 ft below surface. At 3.5 ft below surface, sterile military embankment occurs that might overly significant pre-1839 cultural deposits. In Test 15C-2, ten distinct soil zones were recognized. These include two historic ground levels

and wall construction and demolition surfaces separated by two episodes of military embankment. Historic ground levels in Test 2 are encountered at 0.5 ft and 2.7 ft below surface, respectively. Military embankment at this location is greater than 3.0 ft deep, and pre-1839 remains may occur below it.

Recommendations: To prevent disturbance to subsurface portions of the second fort Cistern, potentially destructive activity within a 5-ft radius of the Cistern should be avoided. To avoid impacting significant features, structures, and buried historic ground levels, construction should be limited to the upper 0.5 ft of soil. Activity that extends 0.5 ft or more below surface should be monitored by an archeologist. Significant cultural remains identified at this level should be avoided. If avoidance is not possible, a 100-percent excavation of the affected area is necessary.

Barracks/Courthouse/Jail

Landscaping for the Barracks/Courthouse/Jail and visitor center lawn removed between 12 and 18 inches of soil matrix. Known structures and features include a filled well east of the visitor center entrance and the filled basement of Soldiers Barracks B. Bisected by the 1888 Jail Wing addition, only the east and west ends of the former barracks basement survive and are encountered at 1.0 ft or less below surface. A sandstone foundation identified near Wall Section 5, about 18 inches below surface, is probably the remains of an ordnance shed depicted on an 1870 Army survey map. Additional unidentified features may exist in buried historic ground levels.

Prior to landscaping, the fill on the visitor center lawn exceeded 4 ft in depth, but it is now less than 30 inches deep. At least eight soil zones are found including two buried historic ground levels. The uppermost ground level is 0.8 ft deep, but is expected to be closer to the surface near the tract edge. The lowest historic ground level, dating to ca. 1846–1888, is encountered 1.4 ft below surface. Both levels contain historic artifacts and possibly unidentified structural remains. Sterile military embankment underlying the second historic ground level covers the entire east half of the area. In at least one location this fill overlies a well-preserved historic trash midden located 3.25 ft below street level. The deposit is believed to have accumulated between the fall of 1821 and August 1838, when the civilian community of Fort Smith occupied the site. Potentially, deposits such as this could underlay military embankment elsewhere within the park.

Recommendations: The potential for significant cultural remains on the visitor center lawn exists at any level. A multi-instrument geophysical survey of the entire lawn area is recommended as a means to identify buried archeological features. Late prison-related features may occur in Zone 2, a buried historic ground level 0.8 ft below surface. Remains of the second fort and early Courthouse undoubtedly occur in the buried historic ground level 1.4 ft below surface. Evidence of the early civilian community of Fort Smith and possible prehistoric remains will be encountered at an unspecified depth below second fort fill (Zone 6). If future earth-altering activities on the visitor center lawn cannot be avoided, impacts should be mitigated through data collection. Proposed construction projects should be archeologically investigated to prevent impact to structures, features, and historic artifacts. Structural remains should be avoided. All impacted areas of historic ground level and features that cannot be avoided should be systematically excavated.

Flagstaff and Lawn Area

Archeological monitoring and testing in an abandoned section of Second Street has identified significant cultural remains. The second fort Flagstaff, long covered by street pavement, was found through a 20-x-20-ft square excavation. The feature is 1.5 ft below surface and consists of a well-preserved wooden base for the Flagstaff. Elsewhere, sterile subsurface clays are evident. The presence of other historic features, such as the rubble of the bottling plant, on this former section of parade ground is possible.

Recommendations: Because of the potential for significant buried features, all work that is conducted 1.5 ft below surface or deeper should be monitored by an archeologist.

Bastion 2 and Laundress Row

The railroad median strip has been the subject of intensive investigation for construction of the pedestrian trail, for the capping and outlining of Bastion 2, and for geophysical remote sensing. The area contains a buried historic ground level predating ca. 1898/9 that is coextensive with the entire median strip area. It is encountered between 0.6 and 3.5 ft below surface and contains abundant artifacts and structural remains. These include a fireplace foundation from one building of Laundress Row, the foundation of Bastion 2, and adjoining fort Wall Sections 2 and 3.

Perhaps more than 75 percent of Bastion 2 is intact and foundation exists on all five sides of the structure. Wall Section 2 is represented by a 27.5-ft-long foundation and Wall Section 3 by a 10.5-ft-long foundation. Construction stone is encountered from 0.4 to 4.3 ft below surface. Stratification in the vicinity of Bastion 2 is more complex than elsewhere on the median strip. On the bastion interior, extant ground surface marks former floor level. Thus, internal features may survive here. The small area of fort interior, between Wall Sections 2 and 3, contains numerous levels of military embankment and a single historic ground level, ca. 1839–1930, at 0.8 ft below surface. Over time, extrafort areas in the immediate vicinity of Bastion 2 received successive layers of fill.

Four historic ground levels occur here at 0.4, 1.4, 2.8, and 3.2 ft below surface, respectively. Artifacts and structural remains are associated with each level. External building features constructed during the 1866–1867 renovations when the structure was converted to a barracks are encountered at the lowest ground level. These include stone piers for full-length porches on the right face and left flank (opposite sides) of the structure.

Recommendations: The railroad median strip contains significant artifact-bearing deposits and structural remains. Bastion 2 and adjacent, related foundations should be avoided. Sensitive archeological deposits occur close to the surface near Bastion 2 (at 0.4 ft below surface) and should not be disturbed. Elsewhere, a buried historic ground level occupies the median strip, sloping from 0.6 to 3.5 ft below surface to the south. Earth alteration that would disrupt this level and disturb its contents must be avoided. If avoidance is not possible, impacts should be mitigated through data collection.

Bastion 3 and Gallows

This former section of Parker Avenue has been intensively investigated for evidence of Bastion 3 and the Gallows. Testing encountered sterile subsoil and revealed no evidence of historic structures. Apparently, Parker Avenue had been cut considerably lower than historic grade. A potential exists for the military embankment and pre-1839 cultural deposits to be present on the eastern end of this area. Midden deposits might be encountered here at approximately 3.25 ft below street level.

Recommendations: Fill placed by the National Park Service has raised the elevation at least a foot above former grade. Construction in the first foot of soil will not impact significant cultural resources. Because of the potential presence of significant buried deposits, all ground-disturbing work extending deeper than one foot should be monitored by an archeologist.

Bastion 4

Although disturbed by parking lot construction in 1963, the Bastion 4 area contains significant structural remains. A small portion of the bastion is intact. A 6-ft-long section of the bastion gorge was encountered at 0.55 ft below surface. Intensive testing failed to identify surviving foundations from the flanks and faces of Bastion 4 and from adjoining Wall Sections 6 and 7. Significant features, however, do occur on the bastion interior. A 17-ft-long section of the *parados*, an internal foundation to support the terreplein, survives. It is a fragile, dry-laid foundation of sandstone slabs. A complex arrangement of pit features, possibly privies, also occurs within the former bastion walls. At least three superimposed features exist. They contain historic artifacts and are encountered 0.6 ft below surface.

Complex stratigraphy is evident in this area. Twenty-three soil zones have been identified. The uppermost deposits are disturbed to 1 ft below surface and a buried historic ground level does not exist. Be-

low this topsoil, sterile military embankment is encountered. Seven distinct levels of this historic fill were identified to a depth of 3.5 ft below surface where testing was discontinued. The potential exists for encountering significant prehistoric and historic cultural deposits below this military embankment. A 1-ft-thick cinder zone occurs within the embankment as does a linear concentration of sandstone rubble. Sandwiched between two layers of embankment, the rubble follows a sloping contour toward the interior of the fort, from 0.2 to 2.2 ft below surface. The stone concentration parallels the site of Wall Section 6 and is probably a former wall construction surface.

Recommendations: Significant, although incomplete, structural remains and features are present in the vicinity of Bastion 4. All activity in this area should be monitored by an archeologist.

Bastion 5

Significant structural remains of Bastion 5 were confirmed by archeological and geophysical investigations. Approximately 95 percent complete, only a portion of the gorge and left flank are disturbed, and a city storm sewer creates a short break in the right and left faces of the structure. Construction stone in the bastion is encountered from 1.0 to 2.5 ft below surface. The *parados*, on the bastion interior, occurs at 0.3 ft below surface. This pentagonal arrangement of dry-laid sandstone slabs was intended to support the terreplein and might mark the historic ground level at this location.

Both adjoining fort walls are represented. Wall Section 8, in places only 0.3 ft deep, is completely intact. Only a 2-ft-long segment of Wall Section 9 exists at the juncture of Bastion 5. It is 3.0 ft below surface. The remainder was destroyed by basement construction for the former Speer Building. The implication also holds for other cultural remains between Bastion 5 and Second Street (e.g., the Guardhouse) that appear to have been destroyed by basement excavation. However, geophysical investigations suggest there is a foundation present that is exterior to the wall. The ground-penetrating radar footprint indicates it may be the same size as the Guardhouse. It is possible the feature is the Guardhouse, and if so, it was constructed outside the fort wall rather than inside as shown on the historic maps. It is also possible that the feature as well as one northeast of Wall Section 8 are twentieth-century constructions and unrelated to the second Fort Smith.

Historic ground level apparently does not exist in this area and few historic artifacts were recovered there. The southeast portion of the wall area, however, does contain sterile military embankment. Significant buried deposits might occur at an unknown depth below this fill episode.

Recommendations: Construction activity should avoid known bastion and wall foundations. Since the potential for subsurface features and buried deposits exists on the area, all activity in this area should be monitored by an archeologist.

Maintenance Building and Parker Avenue

Utility excavations between the park maintenance building and Parker Avenue revealed subsurface deposits. Although no historic ground level is known to exist here, an extensive military embankment is present and extends deeper than 7 ft below surface—at least on the south edge of the tract. The potential exists for significant buried deposits below this sterile fill.

Recommendations: Earth-altering activities may be safely conducted on in this area to a depth of 2 ft. If construction will disturb deposits greater than 2 ft below surface, archeological monitoring to identify significant remains should be conducted.

Parking Lot

The area of the parking lot has been tested and monitored on several occassions. The only structural remains encountered include two ca.-1900 building foundations, remnants of the Webber-Ayere's warehouse complex that occupied the western portion of this area. The northwest corner of this tract had been cut for construction of the warehouses, exposing sterile subsurface clays. Elsewhere in the tract, substantial fill deposits occur that date from the late 1870s to ca. 1947 and are predominantly twentieth century in

age. These deposits are contained in a former ravine, depicted in the 1870 Army survey map. This former erosional feature is estimated to have been 285 ft wide and 23 ft deep at this location.

Recommendations: The building foundations and fill deposits located between Parker and Garland Avenues are not deemed significant to the park, but might have significance to the city of Fort Smith. Significant archeological remains are not expected to occur on the surface and potentially significant, older deposits are thin, discontinuous, and deeply buried. Mitigation of future construction impacts in this area is unnecessary.

Railroad Rights-of-Way

The railroad rights-of-way crossing Fort Smith National Historic Site are cut below historic grade. The entire length has been investigated, indicating that the railroads are on sterile, subsurface deposits. Significant historic resources are very unlikely to be present.

Recommendations: Mitigative action is not required for construction within the railroad cuts. Any potentially destructive activity on the median strip between the railroad cuts, however, should be avoided. If avoidance is not possible, excavation or monitoring of the affected deposits should be undertaken as appropriate to the project.

Chapter 7: Archeological Resource Recommendations

Forty years of archeological research and cultural resource management studies within the park have yielded a large amount of data about the presence and absence of archeological resources at Fort Smith. Excavations on Belle Point at the first Fort Smith site have yielded an impressive number and variety of artifacts as well as delineating the remains of the 1817 fort. Archeological work in and around the second Fort Smith has defined remains of bastions, walls, and various structures and features. The various projects also found that post-fort urban development has destroyed some parts of the walls, bastions, and other features. While not every archeological element of the fort has been studied in detail, the variety of excavation work coupled with utility trench and other project testing and monitoring efforts have allowed a significant sample of the subsurface to be examined for the presence and absence of archeological elements of the fort's past.

This overview has relied on Coleman's (1990) earlier assessment and compiled new information to assess the current state of knowledge of the park's archeological resource base. This compiled data set has allowed the development of a series of recommendations that reflect this current state of archeological knowledge about the park's subsurface resource condition. Recommendations are presented that identify archeological protection zones, zones where some disturbance is present but archeological features may be or are present in deeply buried strata, and zones where there is no likelihood of archeological resources remaining intact.

Recommendations are also presented regarding the interpretive and research potential the archeological resources have relative to the park's overall management strategies and development plans. Finally, recommendations are provided for long-term archeological studies that will assist the program management decision-making process.

Resource Protection

Most potential impacts to archeological resources at Fort Smith National Historic Site are likely to occur as part of park development efforts. Definable impacts to archeological resources can be predicted based on parkwide development plans as outlined in the landscape management plan (Gaines 1986) and cultural landscape report (Black et al. 1998). Actions defined by these plans that could potentially impact archeological resources include development of park facilities (trails, buildings, etc.), burying overhead utility lines, street removal, tree removal and planting, and landscaping (cutting and filling).

The lands within the park have various information potential as described in the recommendations for each park area in Chapter 6. Figure 8 was developed to assist management decision-making on potential impacts to archeological resources. Figure 8 illustrates the Fort Smith park lands divided into three zones. These zones were developed using the available archeological data to define those areas having intact subsurface resources, those areas having the upper levels previously disturbed but having the potential for more deeply buried archeological features, and those areas with so much previous disturbance as to have destroyed any archeological remains.

Zone 1 (high sensitivity) is considered to have the greatest potential to yield archeological information. This area includes all of Belle Point, Bastions 2 and 5, selected wall segments, and the internal fort areas containing the Officers Quarters, Cistern, Well, Flagstaff, the Courthouse/Jail, and associated lawn.

Zone 2 (moderate sensitivity) is considered to have had some previous disturbance. Ground-disturbing actions within Zone 2 that are not deeper than one foot below present ground surface do not require any archeological work. Ground disturbance below the one-foot level should be monitored by an archeologist.

Zone 3 (low or no sensitivity) is considered to be so disturbed by previous ground-disturbing actions that no archeological work is required up to a depth of 7 ft below present ground surface. Should unexpected archeological deposits or features be found during ground disturbing work in Zones 2 and 3, work should cease until the discovery can be evaluated by a qualified archeologist.

Avoiding impacts to the archeological resources by project design or redesign is always the preferred action as stated in National Park Service policy and federal regulations. By way of example, where possible, new utilities should be placed in previously existing utility line corridors or routed along former road beds, previously disturbed areas, and locations containing recent fill deposits as defined on the archeological zone map (Figure 8). When ground-disturbing activities are implemented in areas that contain intact buried archeological deposits, then appropriate measures should be undertaken to mitigate the project's impacts to the archeological resource. Mitigation efforts could range from monitoring such work as utility trenching, shovel testing as was done for the pedestrian trail on Belle Point, to more comprehensive excavation and documentation. The type of archeological investigation required should be developed as part of the project planning process and at the earliest possible stage so that compliance with Section 106 of the National Historic Preservation Act, as amended, can proceed in a timely and cost-efficient manner.

Interpretive Potential and Research Priorities

Archeological data offer significant research potential and can enhance park interpretation. The purpose of this section is to identify potential research opportunities and interpretive potential of the archeological resource base at Fort Smith National Historic Site. One example is the work of Holly Hampton in using the Fort Smith historic base maps as a model developing comparative data layers or themes using a Geographic Information System (Hampton and Vawser 2000).

According to the park management plans and guidance, Fort Smith National Historic Site was established to preserve and interpret the first and second Fort Smith and the United States Court for the Western District of Arkansas (National Park Service 1981:17). The management plans call for an integrated action plan and recommend specific actions to enhance visitor understanding of park history and to compliment historic resource integrity. These actions include removal of noncontributing features (streets, buildings, overhead utility lines), site regrading, planting vegetation, historic structure delineation, and the development of walkways and related features in historically accurate locations. Compliance projects conducted at Fort Smith National Historic Site have provided a good deal of information about the archeological resource base in many park areas. A comprehensive parkwide survey, however, has never been undertaken. Such an investigation is recommended to provide supplemental information for making informed management decisions and for implementing development actions.

Archeological research should focus on areas most relevant to these overall park management objectives by:

(1) locating and delineating structural remains;

(2) acquiring structural data to permit accurate delineation of foundations;

(3) establishing elevations of former historic grade throughout the park; and

(4) identifying paths and vegetation.

A comprehensive parkwide inventory should include:

(1) multi-instrument geophysical remote sensing inventories to locate and delineate archeological features as well as determine where no features remain intact throughout the park, specifically within the Belle Point and the second Fort Smith areas;

(2) limited testing for verification of remote sensing information and for data recovery;

(3) a program of auger testing or small-bore coring in areas known to contain historic fill deposits to identify and measure buried deposits and former historic ground levels—this work could be undertaken as part of a parkwide inventory effort;

(4) limited testing to recover data from buried deposits and historic ground levels for dating purposes;

(5) a reanalysis of the earlier archeological investigations of the second fort defensive works to provide a comprehensive view the nature of the archeological resources in the second fort (after geophysical remote sensing and limited testing is completed); and

(6) further investigations within Officers Row to collect information on the delineation of Officers Quarters A and B—previous work has produced inconclusive results.

The Systemwide Archeological Inventory Program (SAIP) provides the mechanism through which funding can be secured to implement such a parkwide inventory and testing effort. The program allows for mulityear investigations and reporting to be accomplished for such diverse projects. Project statements and justifications need to be placed and prioritized in the park's Project Management Information System (PMIS) project statements. The following statement can be used as the basis for developing a Fort Smith SAIP inventory project package. This statement could replace the current PMIS Package 21156 entitled *Conduct Geophysical Survey*.

Fort Smith Parkwide Archeological Inventory Package

A four-year parkwide inventory using multi-instrument geophysical remote sensing devices, ground-truthing by test excavation and soil coring, and a reanalysis of unreported data will be undertaken to locate and identify subsurface archeological components of Fort Smith. The work will include Belle Point, the site of the first Fort Smith, as well as the second Fort Smith and later Federal Courthouse site. The goal of the work is to provide a comprehensive knowledge of the park's archeological resources that will assist in the preservation and interpretation of the Belle Point area and the second Fort Smith complex.

Knowledge gained from this parkwide inventory will alleviate discrepancies and omissions in the record of the forts' historic occupation. This, in turn, will provide an accurate picture for park management actions and a basis for improved public interpretation and enhancement of visitor experiences. The knowledge gained will also contribute to the development of historic contexts for Fort Smith, the mitigation of impacts of resource development, and simplification of archeological compliance with historic preservation laws and regulations. The project is identified in the park's resource management plan.

Prehistoric Native American Occupation of Fort Smith

The park currently has a PMIS statement entitled *Investigate Prehistoric Native American Occupations* scheduled for three phases (PMIS Package 50507). The following statement should be retained in the PMIS system.

The park has scant information on its prehistoric Native American occupations. National Park Service archeologists from the Midwest Archeological Center should conduct archeological investigations on the prehistoric Native American occupations of Fort Smith. A multi-year program of research, fieldwork, data analysis, and report preparation could be built upon the results of the recent geophysical survey and prior archeological investigations. The fairly large prehistoric collection recovered in the 1960s has never been analyzed. Since that time there has been sporadic recovery of additional prehistoric artifacts throughout the park. The proposed project would allow a thorough investigation of these prehistoric resources and add a significant amount of knowledge for use by park management, interpreters, and visitors. It would also be possible to involve the public in field and laboratory work through a Volunteers-In-Parks program.

An improved understanding of these resources is vital as Fort Smith National Historic Site completes a new general management plan and a long-range interpretive plan in the next few years. Knowledge gained would also contribute to National Park Service cultural resources inventories, the development of historic context at Fort Smith, the mitigation of impacts to resources, and the simplification of the archeological clearance process. At the conclusion of the analysis, a pamphlet or small publication would be produced to described the work and its results. This should be suitable for public distribution and will assist in interpretation and public outreach. Also, technical knowledge will be gained and results professionally published on prehistoric Native American occupations of the park.

Belle Point First Fort Smith Reinvestigation and Analysis

The first Fort Smith archeological investigations were conducted during the late 1950s and early 1960s. A full analysis of the artifacts recovered has never been accomplished. Despite problems with provenience of some of the artifactual material the artifacts have the potential to yield significant information on the lifestyle of the first fort's occupants. A project to analyze and reinterpret the first Fort Smith

collection and archeological data is recommended. Such a project would require that limited testing be undertaken at the site of first Fort Smith to re-establish the natural and cultural stratigraphic sequence at the site. The testing could be undertaken as a separate project or as part of the parkwide archeological inventory. Such a limited testing program could establish not only the natural and cultural stratigraphy at the site, but could also be used to determine the full nature and extent of the earlier excavations. It may be possible to determine if any of the first Fort Smith still retains archeological integrity. The reanalysis and reinterpretation would allow the park management and interpretation proscriptions for Belle Point and the first Fort Smith to be re-evaluated accordingly. The following statement may be used in developing a PMIS statement for the project.

A three-year study of the first Fort Smith will be undertaken using data gathered from multi-instrument geophysical remote sensing devices, ground-truthing by test excavation, and reanalysis of artifacts collected in the 1950s and 1960s. The site of the first Fort Smith is a major interpretive theme of the park and the goal of the work is to provide a comprehensive knowledge of the site's archeological condition and potential that will assist the park in future preservation and interpretation of the Belle Point area.

Knowledge gained from Belle Point and the first Fort Smith will alleviate discrepancies and omissions in the record of the forts' historic occupation and provide an accurate picture for park management actions and a basis for improved public interpretation and enhancement of visitor experiences. The knowledge gained will also contribute to the development of historic contexts for Fort Smith, aid in the mitigation of impacts of resource development, and simplification of archeological compliance with historic preservation laws and regulations.

United State Forgecraft Corporation Parcel

The park's cultural landscape report (Black et al. 1998:67–68) identified the site of the United State Forgecraft plant as an intrusion on the cultural landscape that disrupts the visitors' view and contemplation of Fort Smith. The parcel is recognized as a potential toxic-waste clean-up site by the State of Arkansas. The Forgecraft parcel is also the possible site of the first Fort Smith Cemetery, a sawmill, and potentially other outbuildings related to both the first and second Fort Smith occupations. Before the toxic-waste issue is abated, consideration should be given to the potential for the site to contain significant cultural features related to the military occupation of Fort Smith. There is also the real possibility that the cemetery area may still hold burials from the first Fort Smith era. Any toxic-waste abatement procedure should take into account the effect of the clean-up process on the potential archeological resources. It is recommended that before any toxic waste abatement begins, a geophysical remote sensing multi-instrument survey be undertaken on the Forgecraft site.

Conclusions

Collecting and analyzing the above information is essential to the determination of each individual feature as a contributing or non-contributing resource to the significance of Fort Smith. Knowledge of feature significance is in turn critical to making informed management decisions when even small-scale construction and development activities must be undertaken to provide improved visitor services such as new trails, enhancement of the viewshed through vegetative manipulation, and other similar activities. Given the extent of the known features, such as the Officers Quarters, the first Fort Smith, and the presence of many structural elements and features across the entire landscape comprising Fort Smith, almost any ground-disturbing activity in any location in the park will technically constitute an undertaking. Some areas, as delineated in Figure 8, are zones in which previous disturbance has essentially destroyed all archeological features. Park staff should routinely engage the Section 106 compliance process in order to seek concurrence from the Arkansas State Historic Preservation Officer or develop a park-specific programatic memorandum of agreement to define categorical exclusions for routine work.

Many of the visitors from the immediate area are interested in archeology. One outcome of a parkwide inventory would be a more complete understanding of the prehistory and history of land use in the park through time. That history could be told in a variety of means to the visiting public. The artifacts re-

sulting from the inventory may very well aid in presenting a more complete picture of the history to the visitor by presenting the physical evidence to them. In turn the data generated by the inventory can be used by park interpreters to enhance interpretation through a number of different methods (i.e., exhibits, personal presentations, brochures, and publications).

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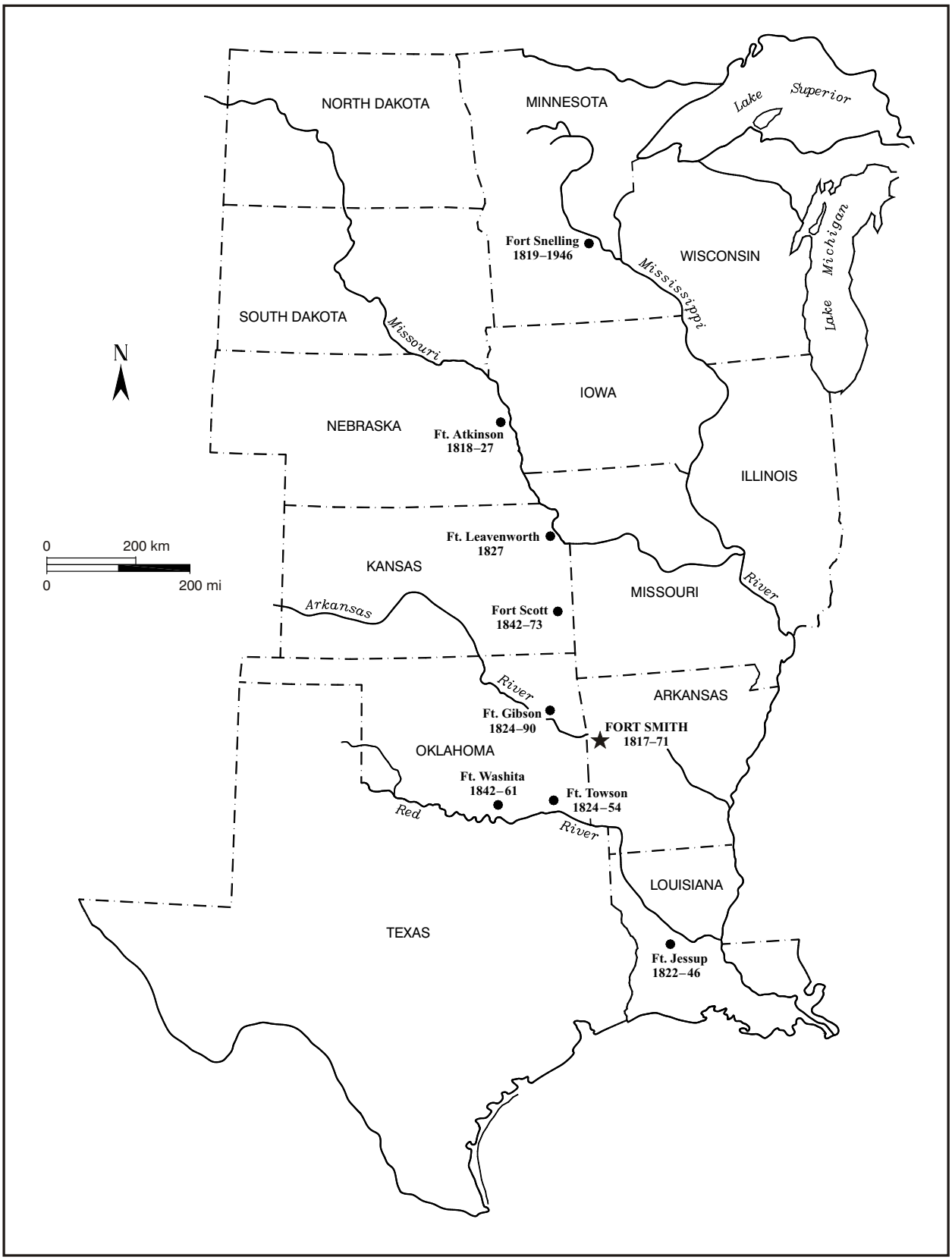

Figure 1. U.S. Army forts of the early and middle 1800s in the western drainage of the Mississippi River valley.

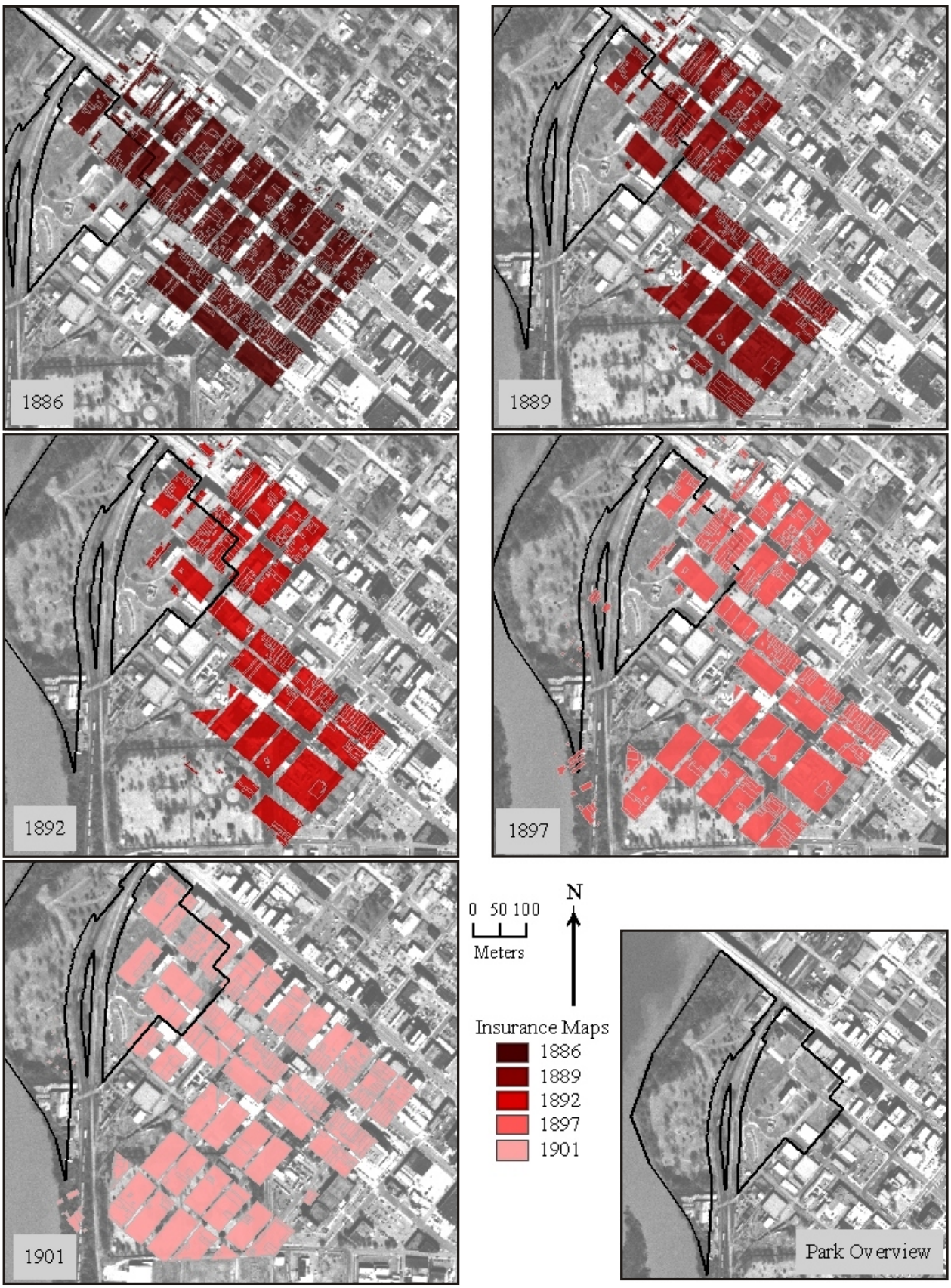

Figure 2. Post military historic features taken from Sanborn insurance maps superimposed on a modern ortho-photograph.

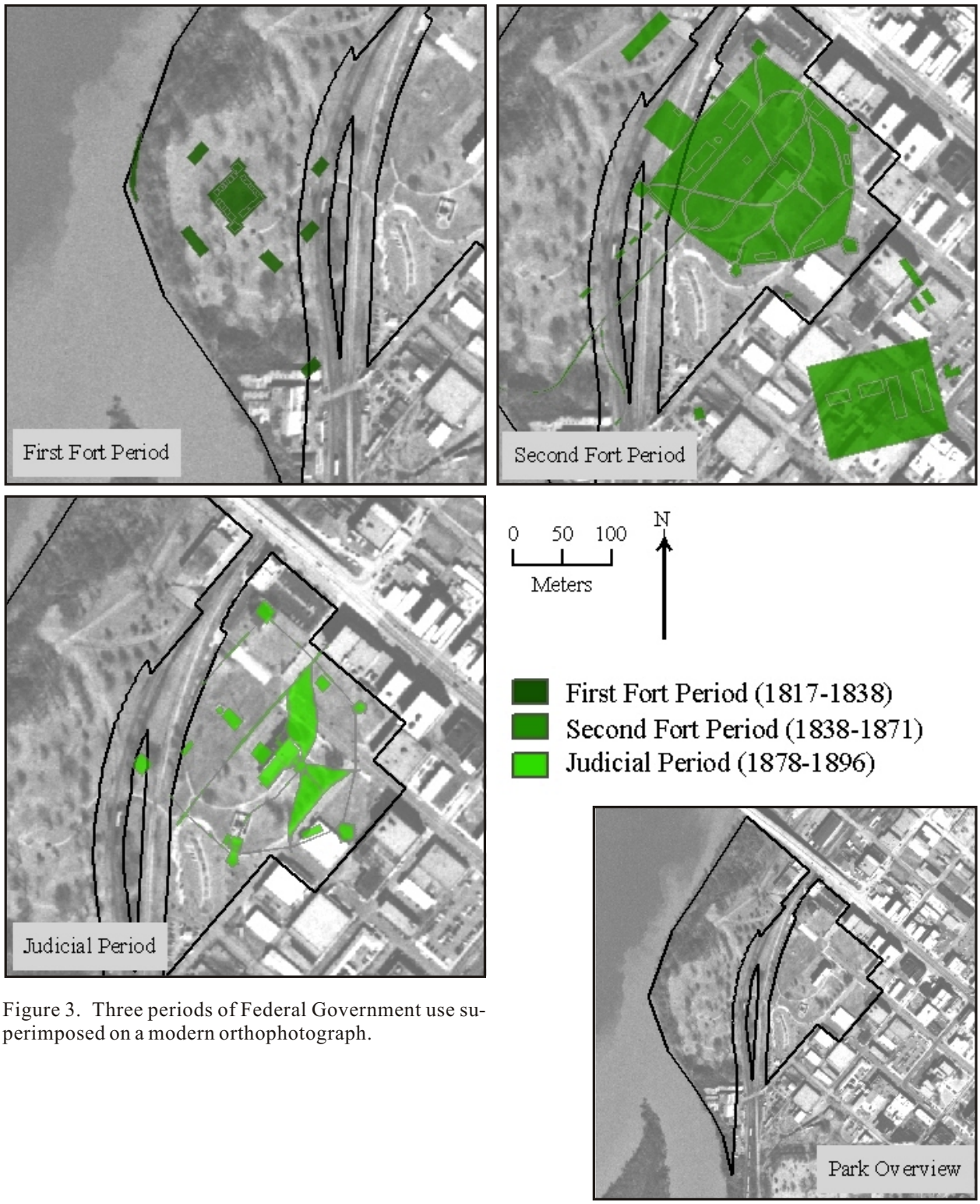

Figure 3. Three periods of Federal Government use superimposed on a modern orthophotograph.

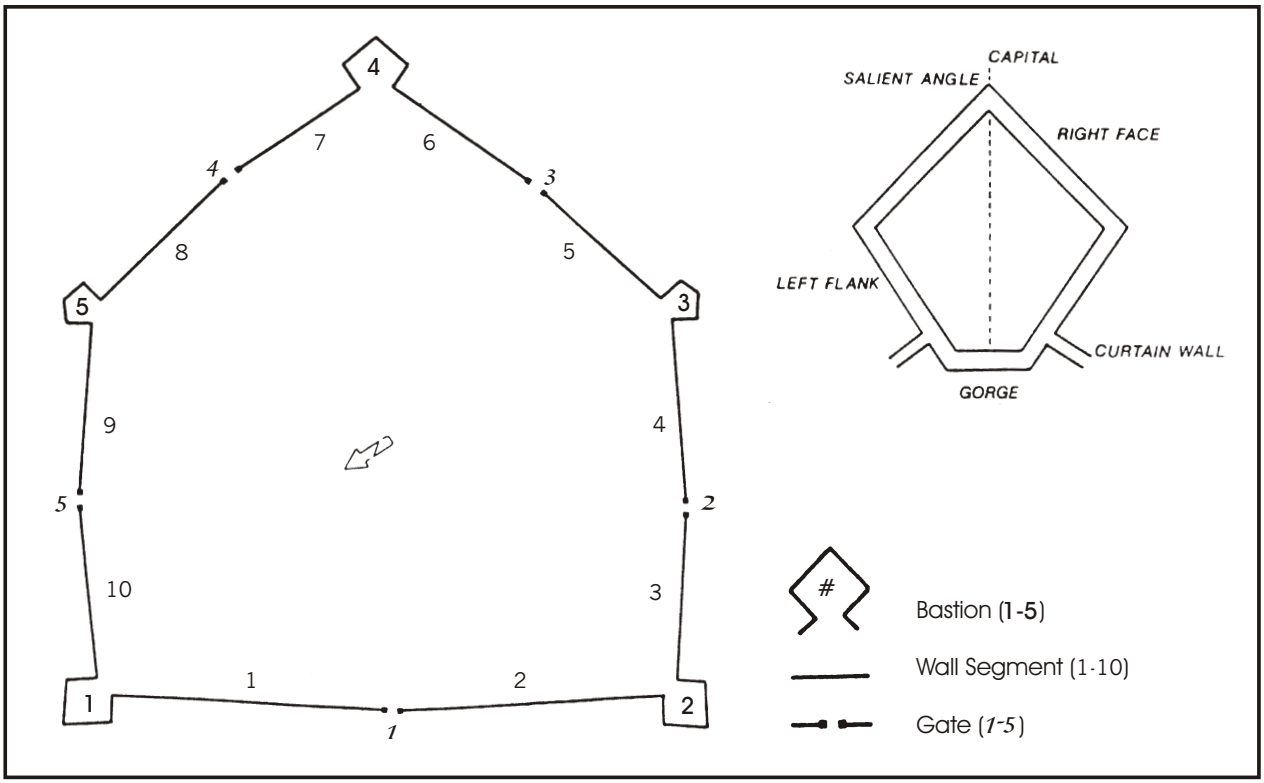

Figure 4. Plan view of the Second Fort Smith, ca. 1840, from Coleman 1990. Designations for bastions, gates, and curtain wall segments.

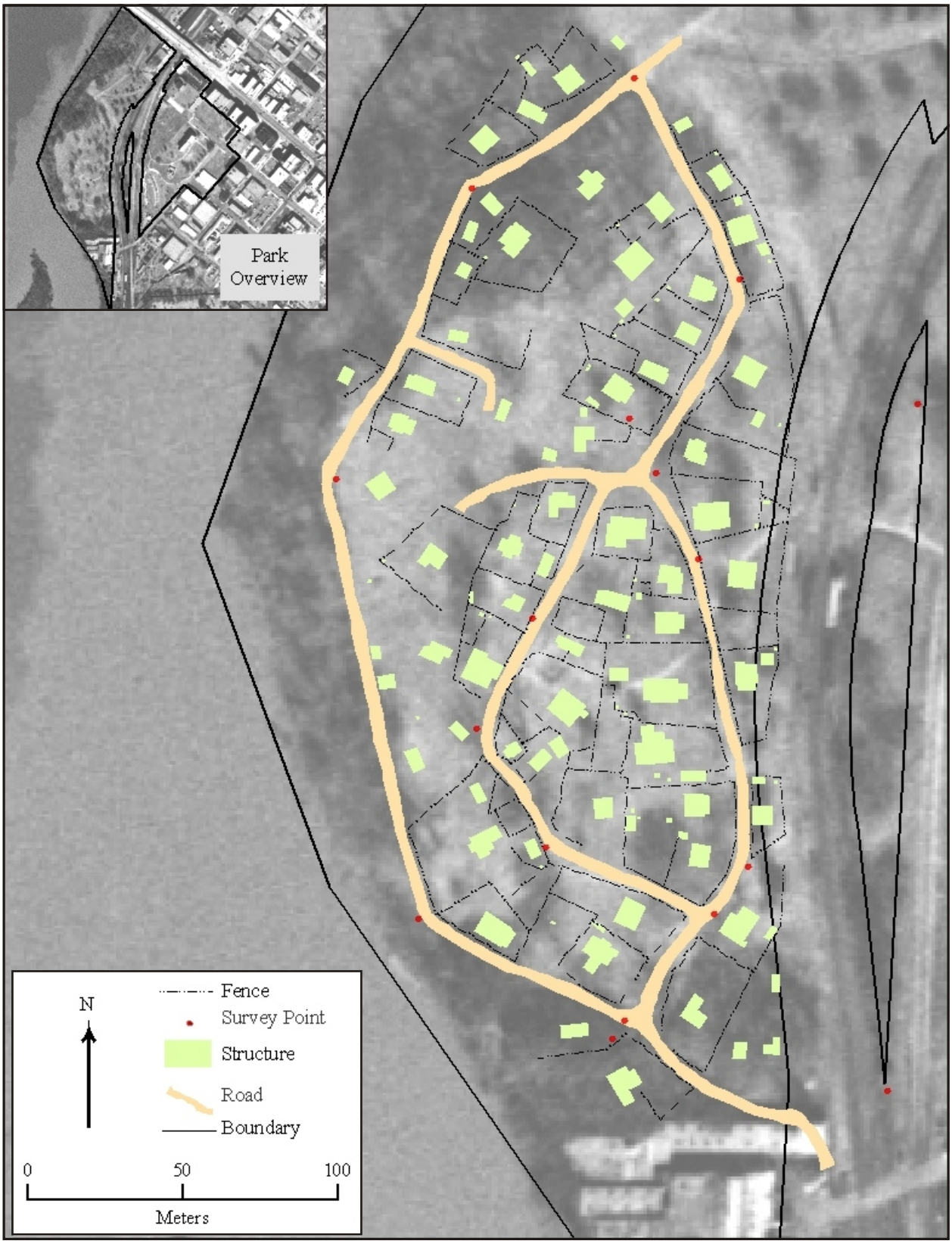

Figure 5. Bell Point features and "Coke Hill" squatter sites superimposed on a modern orthophotograph.

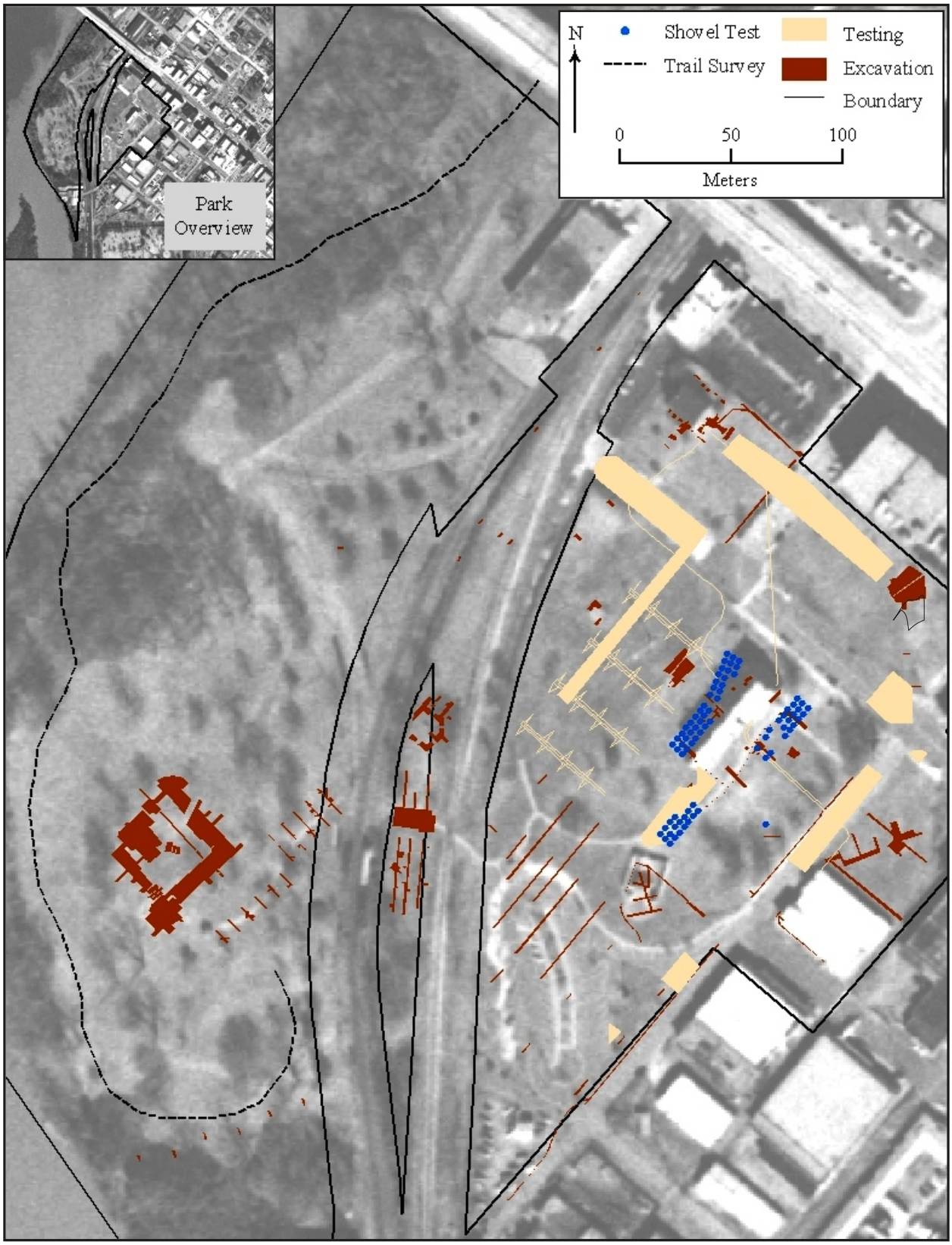

Figure 6. Locations of archeological excavations and shovel tests superimposed on a modern orthophotograph.

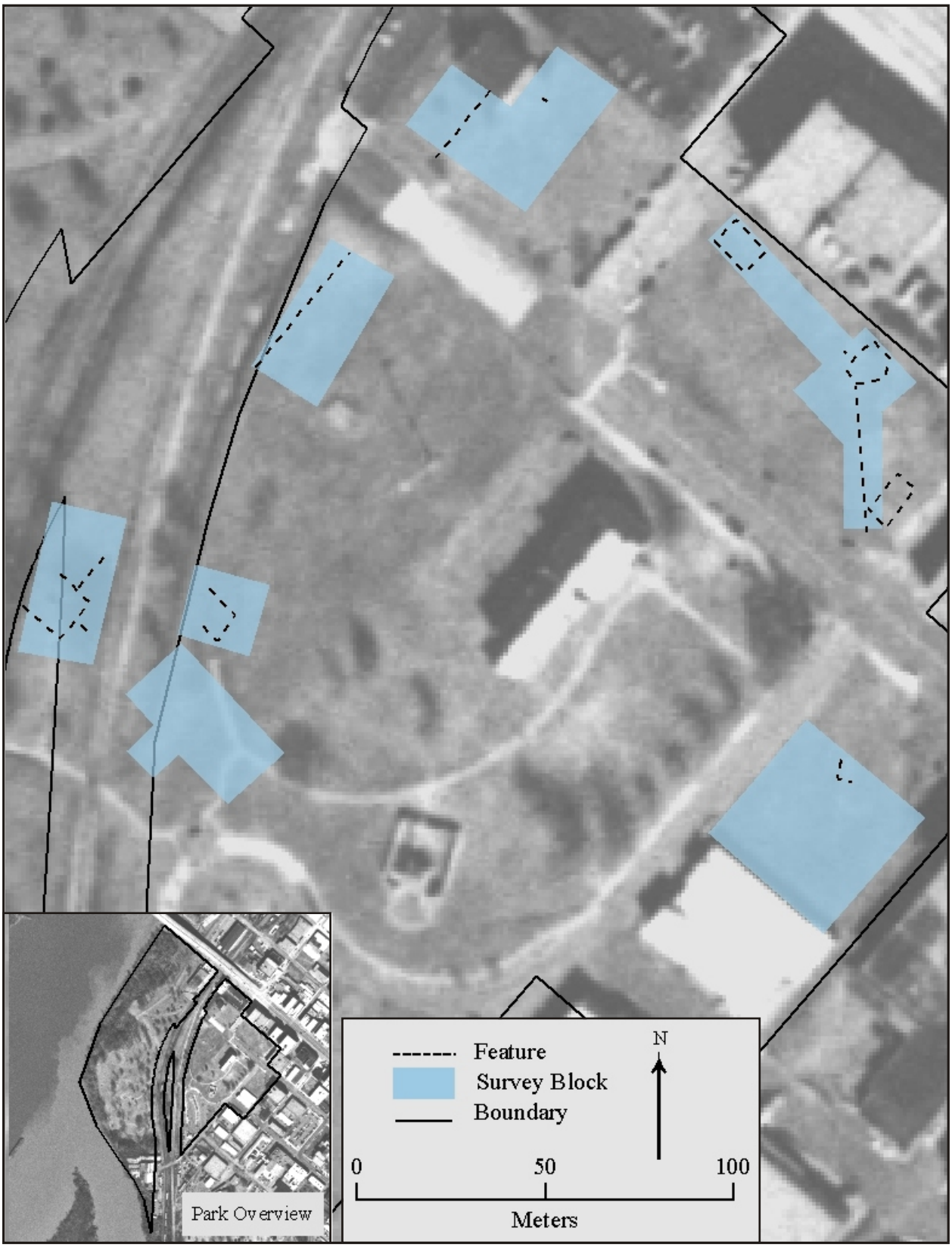

Figure 7. Geophysical survey areas and historic feature locations superimposed on a modern orthophotograph.

Figure 8. Archeological sensitivity zones within Fort Smith National Historic Site superimposed on a modern orthophotograph.

Appendix A: Archeological Resource Assessment by Land Tract

Previous investigations have identified prehistoric and historic resources at Fort Smith National Historic Site. Although these are a fraction of the remains that are potentially present, they nonetheless provide important information on the extent, variety, and integrity of resources for most land tracts within the park boundary. The following discussion deals with known and predicted resources for all park land tracts. Pertinent data regarding resource identification, integrity, depth, and location are summarized and specific recommendations for resource protection are made at the tract level.

For more specific information, the reader is referred to original field records and completion reports housed in the field generated record file in the park curatorial facility (File Cabinet B). These records may be accessed by the project number format used herein.

Tracts 01-101, 01-103, 01-104, 01-105

Owner: National Park Service

Project Numbers 4, 6, 10, 22, 24, 29, 30, 31

Resources: The Commissary lot contains numerous structural remains and significant buried deposits. Intact foundations for Wall Sections 1 and 10 occur and are encountered 4 and 9 inches below surface, respectively. Structural remains associated with exterior features of the Commissary include a flagstone walk that parallels the right flank of the building (ca. 1.5 ft below surface); two stone piers and a possible post mold from the left flank porch (0.73–2.8 ft below surface); buried steps that once serviced the porch on the right face of the Commissary (2.6 ft below surface); and two post molds on the right flank that mark a former porch at this location (2.0 ft below surface). Eleven distinct soil zones, including two historic ground levels, have been identified in these tracts. Within the boundaries of the fort curtain wall, a buried historic ground level is encountered 2.0 ft below surface. In extrafort areas where more fill has accumulated, two former occupational surfaces are evident. The first historic ground level occurs at 1.8 ft below surface, postdates 1898/9, and is associated with the late historic period of the site. The second historic ground level occurs at 2.4 ft below surface, overlies the fort wall construction surface, and dates from ca. 1839–1898/9. This historic ground level contains significant artifacts and holds potential for the discovery of features and structural remains. The interior of the Commissary contains a previously unknown cellar or basement. The cellar fill appears to be relatively sterile as far as artifacts are concerned, but its size as well as wall and floor features are relatively unknown.

Recommendations: Construction activities in the vicinity of the Commissary should be carefully planned to avoid known structural remains. To prevent impact to porches and other external features of the Commissary, destructive activity within a 10-ft radius of the building should be avoided whenever possible. Because of shallow structural remains, some only 4 inches deep, even superficial work should be monitored by an archeologist. Significant buried ground levels at 2 ft below surface should be avoided. If avoidance is not possible and historic deposits must be disturbed, a 100-percent excavation of the affected area should be conducted.

Tracts 01-107 and 01-110

Owner: National Park Service

Project Numbers 7, 14, 15C, 22, 31

Resources: Significant cultural resources are present on Tracts 01-107 and 01-110. The second fort Cistern and 35 subsurface features identified in this area relate to possible well and privy locations, and wall lines from Officers Row. Investigations suggest that less than 1.7 ft and 0.5 ft of fill remain in the basements of Officers Quarters A and B, respectively. Evidence of the Commandant's Quarters no longer exists or at least has not been identified by previous investigations. A 100-ft-long segment of Wall Section 1 occurs from 1.5 to 1.8 ft below surface on Tract 01-107. Although the historic ground level is cut

away on the fort interior, significant buried deposits exist in extrafort areas on Tract 01-107. Test 15C-1, on the north boundary of Tract 01-107, yielded a buried historic ground level and historic trash midden from 2.0 to 3.5 ft below surface. At 3.5 ft below surface, sterile military embankment occurs that may overly significant pre-1839 cultural deposits. In Test 15C-2, ten distinct soil zones were recognized. These include two historic ground levels and wall construction and demolition surfaces separated by two episodes of military embankment. Historic ground levels in Test 2 are encountered at 0.5 ft and 2.7 ft below surface, respectively. Military embankment at this location is greater than 3.0 ft deep, and pre-1839 remains may occur below it.

Recommendations: To prevent disturbance to subsurface portions of the second fort Cistern, potentially destructive activity within a 5-ft radius of the modern Cistern platform should be avoided. To avoid impacting significant features, structures, and buried historic ground levels, construction should be limited to the upper 1.5 ft of soil. Activity that extends 1.5 ft below surface should be monitored by an archeologist. Significant cultural remains identified at this level must be avoided. If avoidance is not possible, a 100-percent excavation of the affected area is necessary.

Tract 01-108

Owner: National Park Service

Project Numbers 5, 9, 12, 16, 19, 22, 26, 28, 30, 32

Resources: Having escaped the wholesale urbanization that disrupted much of the site, the visitor center lawn is the least altered area within the park. Known structures and features include a filled well east of the visitor center entrance and the filled basement of Soldier's Barracks B. Bisected by the 1888 Jail addition, only narrow strips of the former barracks basement survive and are encountered 2 ft below surface. A sandstone foundation identified near Wall Section 5, at 54 cm below surface, is probably the remains of an ordnance shed depicted on an 1870 Army survey map. Additional unidentified features may exist on Tract 01-108 in buried historic ground levels.

Fill on the visitor center lawn exceeds 4 ft in depth. At least eight soil zones are found on Tract 01-108 including two buried historic ground levels. The uppermost ground level is 0.8-ft deep, but is expected to be closer to the surface near the tract edge. The lowest historic ground level, dating to ca. 1846–1888, is encountered 1.4 ft below surface. Both levels contain historic artifacts and possibly unidentified structural remains. Sterile military embankment underlying the second historic ground level covers the entire east half of Tract 01-108. In at least one location on the tract edge, this fill overlies an historic trash midden located 3.25 ft below street level. The deposit is believed to have accumulated between the fall of 1821 and August 1838, when the civilian community of Fort Smith occupied the site. Potentially, deposits such as this could underlay military embankment elsewhere within the park.

Recommendations: The potential for significant cultural remains on the visitor center lawn exists at any level. Late prison-related features may occur in Zone 2, a buried historic ground level 0.8 ft below surface. Second fort and early Federal Courthouse remains undoubtedly occur in the buried historic ground level 1.4 ft below surface. Evidence of the early civilian community of Fort Smith and possible prehistoric remains will be encountered at an unspecified depth below second fort fill (Zone 6). If future earth-altering activities on the visitor center lawn cannot be avoided, impact must be mitigated through data collection. Proposed construction projects will be archeologically investigated to prevent impact to structures, features, and historic artifacts. Structural remains must be avoided. All impacted areas of historic ground level and features that cannot be avoided must be systematically excavated.

Tracts 01-111 and 01-134

Owner: National Park Service

Project Numbers 4, 5, 11, 12, 21, 31, 32

Resources: The only structural remains encountered in Tracts 01-111 and 01-134 include two ca.-1900 building foundations, remnants of the Webber-Ayere's warehouse complex that occupied the west half of Tract 01-111. The northwest corner of this tract had been cut for construction of the warehouses, exposing sterile subsurface clays. Elsewhere in the tract, substantial fill deposits occur that date from the late 1870s to ca. 1947 and are predominantly twentieth century in age. These deposits are contained in a former ravine, depicted on the 1870 Army survey map. This former erosional feature is estimated to have been 285 ft wide and 23 ft deep at this location.

Recommendations: The building foundations and fill deposits in Tracts 01-111 and 01-134 were not deemed significant to the park, but may have significance to the city of Fort Smith. Significant archeological remains are not expected to occur on the surface. Potentially significant, older deposits are thin, discontinuous, and deeply buried. Mitigation of future construction impacts in this area is unnecessary.

Tract 01-113

Owner: National Park Service

Project Number 17

Resources: Tract 01-113, the site of the first fort garden, contains a buried historic ground level from 2.5 to 3.8 ft below surface. Significant prehistoric and historic remains might occur in this area.

Recommendations: Earth-altering activities on Tract 01-113 should not exceed 2.5 ft in depth. If disturbance to the buried historic ground level there cannot be avoided, then the affected area should be archeologically investigated to assess adverse effects to significant archeological resources.

Tracts 01-114 and 01-115

Owner: National Park Service

Project Numbers 5, 14, 15C, 16, 31

Resources: The railroad median strip has been the subject of intensive investigation for construction of the pedestrian trail, for capping and outlining Bastion 2, and for geophysical remote sensing. Tracts 01-114 and 01-115 contain a buried historic ground level predating ca. 1898/9 that is coextensive with the entire median strip area. It is encountered 0.6 to 3.5 ft below surface and contains abundant artifacts and structural remains. These include a fireplace foundation from one building of Laundress Row, the foundation of Bastion 2, and the adjoining fort Wall Sections 2 and 3.

Approximately 67 percent of Bastion 2 is intact and foundation exists on all five sides of the structure. Wall Section 2 is represented by a 27.5-ft-long foundation and Wall Section 3 by a 10.5-ft-long foundation. Construction stone is encountered from 0.4 to 4.3 ft below surface.

Stratification in the vicinity of Bastion 2 is more complex than elsewhere on the median strip. On the bastion interior, extant ground surface marks former floor level. Thus, internal features may survive here. The small area of fort interior, between Wall Sections 2 and 3, contains numerous levels of military embankment and a single historic ground level, ca. 1839–1930, 0.8 ft below surface. Over time, extrafort areas in the immediate vicinity of Bastion 2 received successive layers of fill.

Four historic ground levels occur here at 0.4, 1.4, 2.8, and 3.2 ft below surface, respectively. Artifacts and structural remains are associated with each level. External building features constructed during the 1866–1867 renovations when the structure was converted to a barracks are encountered at the lowest

ground level. These include stone piers for full-length porches on the right face and left flank (opposite sides) of the structure.

Recommendations: The railroad median strip contains significant artifact bearing deposits and structural remains. Bastion 2 and adjacent, related foundations must be avoided. Sensitive archeological deposits occur close to the surface near Bastion 2 (0.4 ft below surface) and should not be disturbed. Elsewhere, a buried historic ground level occupies the median strip, sloping from 0.6 to 3.5 ft below surface to the south. Earth alteration that would disrupt this level and disturb its contents must be avoided. If avoidance is not possible, impacts should be mitigated through data collection.

Tract 01-116

Owner: National Park Service

Project Numbers 1A, 113, 16, 18, 23, 25, 27

Resources: Numerous features are present on Belle Point, but most are from the twentieth century Coke Hill occupation of the site. An estimated 2.2 percent of the features on Belle Point are potentially historic. Investigations here have encountered the foundations of the first Fort Smith—now capped and outlined, the post well, and an unidentified privy or cellar from an extrafort structure. Artifacts are quite abundant on Belle Point, but like the features, most are recent. It is estimated that less than 5 percent of all artifacts there are potentially historic. Artifacts are contained in a 1-ft-thick, disturbed topsoil—a product of early National Park Service landscaping activity.

Thus, the historic ground level does not exist on Belle Point. Low-lying areas on the north edge of the area, however, do have potential for a buried historic ground level. Such a deposit was identified 2.5 ft below surface on the fort garden area. The south edge of Belle Point is also a naturally low area. In fact, the ravine identified in across the railroad tracks also crosses the south end of Belle Point. In this area, however, the ravine received substantially less fill. Deposits here are only 1.5 to 3.5 ft deep and contain a mix of historic and post-historic artifacts, signifying recent deposition.

Recommendations: All ground-disturbing activities conducted at Belle Point must account for the presence of significant cultural resources. The area enclosed by the fort walls has not been completely excavated and since foundations were only selectively capped, other subsurface structural remains are present. All earth alteration on the interior of the first Fort Smith must be avoided.

The discovery of the post well and a first fort cellar or privy establishes the presence of significant historic features beyond the walls of the first Fort Smith. The north end of Belle Point, like adjacent Tract 01-113, may contain a buried historic ground level. To prevent adverse impact to significant resources, construction activities on Belle Point should be restricted to the upper foot of soil. If this is not possible, an archeological investigation should be conducted to identify and assess adverse effects on significant cultural resources. If avoidance is not possible, a 100-percent excavation of all endangered significant remains should be undertaken. Since fill deposits on the south end of Tract 01-116 are recent, mitigation of construction impacts in this area should not be necessary.

Tracts 01-119 and 01-133

Owner: National Park Service

Project Number 25

Resources: One inventory was conducted on these tracts in conjunction with the development of a new pedestrian trail. The shovel testing effort found twentieth-century materials in the upper one foot of fill. The area was significantly impacted by bulldozing in the early 1960s. The adjacent Tract 01-113 contains a buried historic ground level 2.5 ft below surface. Thus, archeological remains might occur in Tracts 01-119 and 01-133.

Recommendations: Prior to earth alteration deeper than one foot on Tracts 01-119 and 01-133, an archeological investigation to assess impact to significant resources should be undertaken. If a buried historic ground level is present, it should be avoided. If avoidance is not possible, a 100-percent excavation of the affected area should be conducted.

Tracts 01-120, 01-131, 01-148

Owner: Belle Point Beverage Co., Inc.

Project Number 25

Resources: One inventory was conducted on these tracts in conjunction with the development of a new pedestrian trail. The shovel testing effort found twentieth-century materials in the upper foot of fill. The area was significantly impacted by bulldozing in the early 1960s. Adjacent Tract 01-113 contains a buried historic ground level 2.5 ft below surface. Thus, archeological remains may occur in Tracts 01-119 and 01-133.

Recommendations: Prior to earth alteration deeper than one foot on Tracts 01-119 and 01-133, an archeological investigation to assess impact to significant resources should be undertaken. If a buried historic ground level is present, it should be avoided. If avoidance is not possible, a 100-percent excavation of the affected area should be conducted.

Tracts 01-122 and 01-135

Owners: United State Forgecraft Corporation and the City of Fort Smith

Project Number —

Resources: Although archeological investigation has not been undertaken in Tracts 01-122 and 01-135, the area is suspected to contain the first fort cemetery and the second fort sawmill (Coleman and Dollar 1984:51–52). The site is significantly altered from building construction, but the extent of cutting and filling cannot be determined without an investigation.

Recommendations: If the National Park Service acquires this property, an archeological investigation should be conducted to determine if the first fort cemetery and second fort sawmill are present. These remains should be identified, delineated, and protected from destruction or impairment.

Tract 01-124

Owner: National Park Service

Project Numbers 12 and 30

Resources: Utility excavations on Tract 01-124, between the park maintenance building and Parker Avenue, revealed subsurface deposits. Although no historic ground level exists here, extensive military embankment is present and extends deeper than 7 ft below surface—at least on the south edge of the tract. There is potential for significant buried deposits below this sterile fill.

Recommendations: Earth-altering activities can be safely conducted on Tract 01-124 to a depth of 7 ft. If construction will disturb deposits greater than 7 ft below surface, archeological monitoring to identify significant remains should be conducted.

Tracts 01-125 and 01-143

Owner: National Park Service

Project Numbers 2, 3, 5, 15B, 31

Resources: Although disturbed from parking lot construction in 1963, Tracts 01-125 and 01-143 contain significant structural remains. A small portion of Bastion 4 is intact on Tract 01-125. A 6-ft-long

section of the bastion gorge is encountered 0.55 ft below surface. Intensive testing failed to identify surviving foundation from the flanks and faces of Bastion 4 or from adjoining Wall Sections 6 and 7. Significant features, however, do occur on the bastion interior. A 17-ft-long section of the *parados*, an internal foundation to support the terreplein, survives. It is a fragile, dry-laid foundation of sandstone slabs. A complex arrangement of pit features, possibly privies, also occurs within the former bastion walls. At least three superimposed features exist. They contain historic artifacts and are encountered 0.6 ft below surface.

Complex stratigraphy is evident on Tracts 01-125 and 01-143. Twenty-three soil zones have been identified. The uppermost deposits are disturbed to 1 ft below surface and a buried historic ground level does not exist. Below this topsoil, sterile military embankment is encountered. Seven distinct levels of this historic fill were identified to a depth of 3.5 ft below surface where testing was discontinued. The potential exists for encountering significant prehistoric and historic cultural deposits below this military embankment. A 1-ft-thick cinder zone occurs within the embankment as does a linear concentration of sandstone rubble. Sandwiched between two layers of embankment, the rubble follows a sloping contour toward the interior of the fort, from 0.4 to 2.2 ft below surface. The stone concentration parallels the site of Wall Section 6 and is probably a former wall construction surface. Testing suggests that this rubble is coextensive with Tract 01-125—Features 3 and 4 as identified by Anderson (Project No. 3) might be a continuation of this construction surface.

Recommendations: Significant structural remains and features in Tracts 01-125 must be avoided. All activity extending 1 ft below surface in Tracts 01-124 and 01-143 should be monitored by an archeologist.

Tracts 01-127 and 01-128

Owner: National Park Service

Project Numbers 5, 15A, 31

Resources: Significant structural remains occur in Tract 01-127. Archeological investigation reveals that Bastion 5 is approximately 95 percent complete—only a portion of the gorge and left flank are disturbed, and a city storm sewer creates a short break in the right and left faces of the structure. Construction stone in the bastion is encountered from 1.0 to 2.5 ft below surface. The *parados*, on the bastion interior, occurs 0.3 ft below surface. This pentagonal arrangement of dry-laid sandstone slabs was intended to support the terreplein and might mark the historic ground level at this location. Both adjoining fort walls are represented. Wall Section 8, in places only 0.3 ft deep, is completely intact on Tract 01-127. Only a 2-ft-long segment of Wall Section 9 exists at the juncture of Bastion 5. It is 3.0 ft below surface. The remainder had been destroyed by basement construction for the former Speer Building. The implication also holds for other cultural remains between Bastion 5 and Second Street (e.g., the Guardhouse) that have also been destroyed by basement excavation. A small portion of Wall Section 9, however, may survive on Tract 01-128 between the Speer Building foundation and Second Street.

No historic ground level exists on Tracts 01-127 and 01-128, and few historic artifacts were recovered there. The southeast portion of Tract 01-127, however, does contain sterile military embankment. Significant buried deposits may occur at an unknown depth below this fill episode.

Recommendations: Construction activity must avoid known bastion and wall foundations. Since the potential for subsurface features and buried deposits exists on the eastern half of Tract 01-127, all activity in this area should be monitored by an archeologist.

Tract 01-136

Owner: National Park Service

Project Number 25

Resources: One archeological investigation associated with a pedestrian trail revealed disturbed soils to a depth of at least one foot and twentieth-century deposits. A brief survey of the area also indicates that late-nineteenth- and early-twentieth-century artifacts are eroding from exposures along the Arkansas River. Boat mooring rings mark landing sites at the river's edge, and one stone monument marking the Choctaw Boundary exists in the tract. Therefore, the potential for significant cultural remains exists.

Recommendations: An archeological investigation should be undertaken on the riverfront to document cultural resources for future management needs. Until cultural resources in this area can be assessed, all earth-altering activity should be preceded by archeological testing to determine adverse effect to significant cultural resources.

Tract 01-138

Owner: National Park Service

Project Numbers 4, 5, 11, 12, 21

Resources: This former section of Parker Avenue has been intensively investigated for evidence of Bastion 3 and the Gallows. Testing encountered sterile subsoil and revealed no evidence of historic structures. Apparently, Parker Avenue had been cut considerably lower than historic grade. Because of discoveries on adjacent Tract 01-108, the potential for military embankment and pre-1839 cultural deposits exists on the extreme east end of Tract 01-138. Midden should be encountered here approximately 3.25 ft below street level.

Recommendations: Fill placed on Tract 01-138 by the National Park Service, however, has raised the elevation at least 1 ft above former grade. Construction in the first foot of soil on Tract 01-138 will not impact significant cultural resources. Because of the potential presence of significant buried deposits, all ground-disturbing work extending deeper than one foot should be monitored by an archeologist.

Tract 01-139

Owner: National Park Service

Project Numbers 7, 8, 11, 22, 33

Resources: Archeological monitoring and testing in Tract 01-139, an abandoned section of Second Street, has identified significant cultural remains in portions of the area. The second fort Flagstaff, long covered by street pavement, is marked by a 20-x-20-ft square excavation. This feature, 1.5 ft below surface, contains a well-preserved wooden structure or Flagstaff base. Elsewhere in Tract 01-139, sterile subsurface clays are evident. The presence of other historic features on this former section of parade ground is possible.

Recommendations: All construction activity should avoid the site of the second fort Flagstaff. Because of the potential for other significant features, all work in Tract 01-139 that is conducted 1.5 ft below surface or deeper should be monitored by an archeologist.

Tracts 01-140 and 01-141

Owner: City of Fort Smith

Project Numbers 22 and 33

Resources: Four active city streets once crossed the park: Rogers Avenue, Second Street, Third Street, and Parker Avenue. These are included in Tracts 01-140 and 01-141. There have been two archeo-

logical investigations related to utilities placement and tree plantings. No historic features were seen and subsurface deposits all appear to be extensively disturbed. Historical documentation and testing on adjacent area indicates that significant cultural resources should underlay street pavements. Military embankment and subsurface cultural deposits may be present on the east and west ends of Rogers Avenue within the park boundary. The remaining segment of Second Street overlay Wall Sections 9 and 10 and Gate 5, although geophysical investigations suggest that the wall segements were destroyed by construction. Third Street and Parker Avenue, although cut below historic grade, cover military embankment that may overly pre-1839 midden deposits. In at least one area, a buried midden occurs 3.25 ft below street level on the adjacent lawn of the Courthouse/Jail complex.

Recommendations: An archeologist should monitor all future construction activity in the street alignments and significant resources, if present, should be avoided.

Tract 01-142

Owner: The Old Commissary Museum Association

Project Number —

Resources: This area, now a parking lot for the Old Fort Museum, once contained a warehouse with basement. Significant cultural resources will not be found here.

Recommendations: If the National Park Service acquires this property, it will not be necessary to mitigate future construction impacts in Tract 01-142.

Tracts 01-144 and 01-145

Owner: United State Forgecraft Corporation

Project Number 12

Resources: A buried historic ground level is present in Tracts 01-144 and 01-145. This former occupational surface (ca. 1839–1898/9) occurs 1.2 ft below surface over a layer of military embankment and a 1-ft-thick cinder deposit. Artifacts were not recovered from the historic ground level, but the potential exists for locating artifacts and structural remains. The presence of embankment here indicates that the military intended to use this area, south of the historic ravine, as a construction site. The 1870 Army survey map indicates that the Post Bakehouse was situated nearby.

Recommendations: If the National Park Service acquires Tracts 01-144 and 01-145, an exploratory excavation to document cultural resources should be conducted. Any activities that affect deposits 1.2 ft below surface should be preceded by an archeological investigation. A 100-percent excavation of the affected historic ground level should be undertaken. All soil from this former occupational surface should be screened and all artifacts should be retained for analysis.

Tract 01-146

Owner: Douglas Stites

Project Number —

Resources: The Frisco Station, a restaurant and National Register property, is located on Tract 01-146. The area is deeply cut from Second Street to track grade at the adjacent Arkansas and Missouri Railroad. It is expected that all cultural resources relating to Fort Smith National Historic Site in Tract 01-146 have been destroyed. One possible exception may be the Sutler's Store in the northeast corner of the tract.

Recommendations: Significant archeological resources, with one possible exception, will not be found in Tract 01-146. If the National Park Service should acquire this property, an archeological investigation should be conducted to identify remains of the Sutler's Store. The remainder of Tract 01-146 will not require archeological mitigation.

Tract 01-147

Owner: National Park Service

Project Number —

Resources: Investigation on an adjacent tract suggests that an historic ground level will not be found on Tract 01-147. This area has been disturbed by a spur of the former St. Louis & San Francisco Railroad. Intact subsurface features, however, might occur in this tract.

Recommendations: Construction activities in Tract 01-147 should be monitored by an archeologist.

Tracts 01-149, 01-150, 01-151

Owners: Arkansas and Missouri Railroad and Union Pacific Railroad

Project Numbers 13, 14, 20

Resources: The railroad right-of-way crossing Fort Smith National Historic Site is cut below historic grade. The entire length of right-of-way has been investigated, indicating that the railroads are on sterile, subsurface deposits. Significant historic resources are not present here.

The northern half of the railroad median strip, although distinct from the railroad cuts, is included in Tract 01-149. Like Tracts 01-114 and 01-115, the southern end of the median strip, this area also contains significant buried deposits and structural remains. A buried historic ground level will occur here. Although the depth of this former occupational surface is unknown, it is expected to be shallow at the northern end of the median where the historic cistern overflow drain was once exposed at the surface. The surface drain has been covered with fill, however, and is no longer visible. The existence of additional structural remains is likely since construction stone is exposed in the North Arkansas and Missouri Railroad cut where the 1870 Army survey map depicts the post hospital. This site, however, has not been investigated.

Recommendations: Mitigative action is not required for construction within the railroad cuts. Any potentially destructive activity on the median strip between the railroad cuts, however, must be avoided. If avoidance is not possible, a 100-percent excavation of affected deposits is required.