Attachment 19 – Archaeological Study and Clearance

Natchitoches Parish Port
NorthPort Tract

JAY DARDENNE
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF ARCHAEOLOGY

CHARLES R. DAVIS
DEPUTY SECRETARY

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ASSISTANT SECRETARY

May 12, 2011

Mr. Paul Bundy
CRA, Inc.
636 East Kings Highway
Shreveport, Louisiana 71105

Re: Re: LDOA Report # 22-3762
Draft – A Cultural Resource Survey of the 360-Acre Natchitoches Parish Port Tract in Natchitoches Parish, Louisiana.
Cultural Resources Analysts, Inc.

Dear Mr. Bundy:

This is in response to your letter received March 30, 2011, concerning the above-referenced report. Overall, the report meets our standards. We concur with your findings that 16NA729 is not eligible for listing to the National Register of Historic Places (NRHP). Therefore, this project will not affect any known historic properties and we have no objection to its implementation.

Per our report standards, please include a curation statement concerning the storage of both artifact and field notes. We cannot finalize the report until we receive the final site form for 16NA729. We look forward to receiving two copies of the final report and a pdf version. If you have any questions, please contact Rachel Watson in the Division of Archaeology at (225) 342-8165.

Sincerely,

Pam Breaux

Pam Breaux
State Historic Preservation Officer

PB:RW:s

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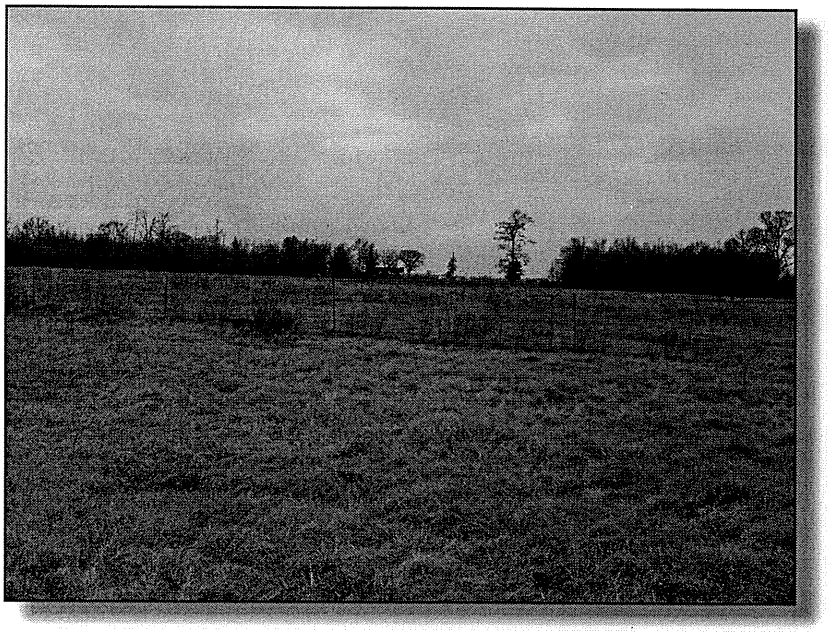
A CULTURAL RESOURCES SURVEY OF THE 360 ACRE NATCHITOCHES PARISH PORT FACILITY NATCHITOCHES PARISH, LOUISIANA



by
Paul D. Bundy, RPA
and
Justin B. Morrison

Prepared for

Natchitoches Parish PORT

and

Louisiana Office of Cultural Development, Division of Archaeology

Prepared by

cra
cultural resource analysts, inc

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A CULTURAL RESOURCE SURVEY OF THE 360-ACRE NATCHITOCHES PARISH PORT TRACT IN NATCHITOCHES PARISH, LOUISIANA

By

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Prepared for

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March 22, 2011

Lead Agency: Louisiana Office of Cultural Development,
Division of Archaeology (State Historic Preservation Office)

ABSTRACT

Cultural Resource Analysts, Inc., personnel completed a records review and cultural resource survey for the 145.69 ha (360.00-acre) Natchitoches Parish Port tract in Natchitoches Parish, Louisiana. The records review for the project was conducted on February 15, 2011. Fieldwork for this project was conducted from February 16 through February 22, 2011. This tract is located southeast of the town of Campti, Louisiana, and northeast of the city of Natchitoches, Louisiana, and is situated on the east side of Route 486 and the west side of Route 71. The area investigated consisted of approximately 360 acres.

The records review consisted of a file search using information provided by the Louisiana Office of Cultural Development, Division of Archaeology to identify cultural resources or cultural resource investigations documented in the area. The records review indicated that no previous survey and no cultural resources have been documented within the current project area.

Field investigation consisted of an intensive pedestrian survey supplemented with screened shovel tests conducted on a 30 m interval. This work identified one site (16NA729) within the project area. This site was located in the vicinity of a mapped structure depicted on the 1957 Campti, Louisiana, United States Geological Survey 15-minute topographic map and likely consists of the limited remains of a late-nineteenth- through twentieth-century homestead. No intact deposits or evidence of structural remains was observed at the location. Rather, the recovered materials consisted of fragmentary debris (bottle glass, ceramics, nails, and brick fragments) found in plow zone contexts. This resource is recommended not eligible for the National Register of Historic Places based on its limited research potential. This recommendation is based on the lack of intact archaeological deposits and the lack of connections to significant people or historic events.

Based on the findings of the records review and cultural resource survey, no archaeological sites or historic properties listed in, or recommended eligible for, the National Register of Historic Places will be affected by the proposed construction activities, and cultural resource clearance is recommended.

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I. INTRODUCTION

Cultural Resource Analysts, Inc. (CRA), personnel completed a file search on February 15, 2011, and fieldwork between February 16, 2011, and February 22, 2011, for the 145.69 ha (360.00-acre) Natchitoches Parish Port tract in Natchitoches Parish, Louisiana (Figures 1, 2, and 3). The file search and cultural resource survey were conducted at the request of R.E.L Breedlove, Jr., the Executive Director of the Natchitoches Parish Port. The proposed project area consisted of approximately 360 acres. This parcel was located in the Red River floodplain and consisted largely of cleared area in use as pasture, but a small amount of the acreage was in mixed hardwoods with standing water. The archaeological file search, using information provided by the Louisiana Office of Cultural Development, Division of Archaeology (State historic Preservation Office [SHPO]), was conducted by Justin B. Morrison. Fieldwork for the project was completed by Paul D. Bundy, Justin B. Morrison, and Michele L. Wiker in approximately 150 person hours. The cultural resource survey was supervised by Paul D. Bundy. A copy of the scope of work is provided as Appendix A.

Purpose of Study

The study was conducted to comply with SHPO requirements, which specified that an archaeological survey must be completed prior to development of the parcel.

The purpose of this assessment was to 1) locate, describe, evaluate, and to make appropriate recommendations for the future treatment of any historic or prehistoric archaeological properties that may be affected by proposed construction activities, and 2) to assess the potential for archaeological sites requiring preservation in place.

Project Description

The Natchitoches Parish Port is proposing to utilize the location for expansion of their existing development. The proposed development may include the entire project area, but at present the plans for development and schedule have not been not finalized.

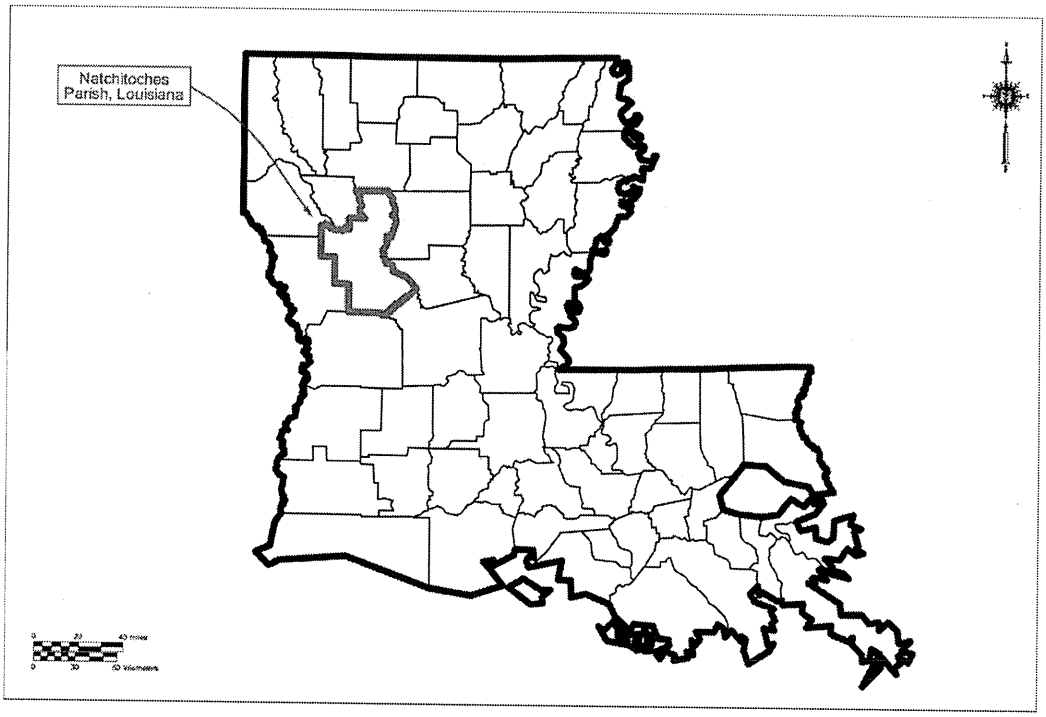

Figure 1. Map showing the location of Natchitoches Parish in the state of Louisiana.

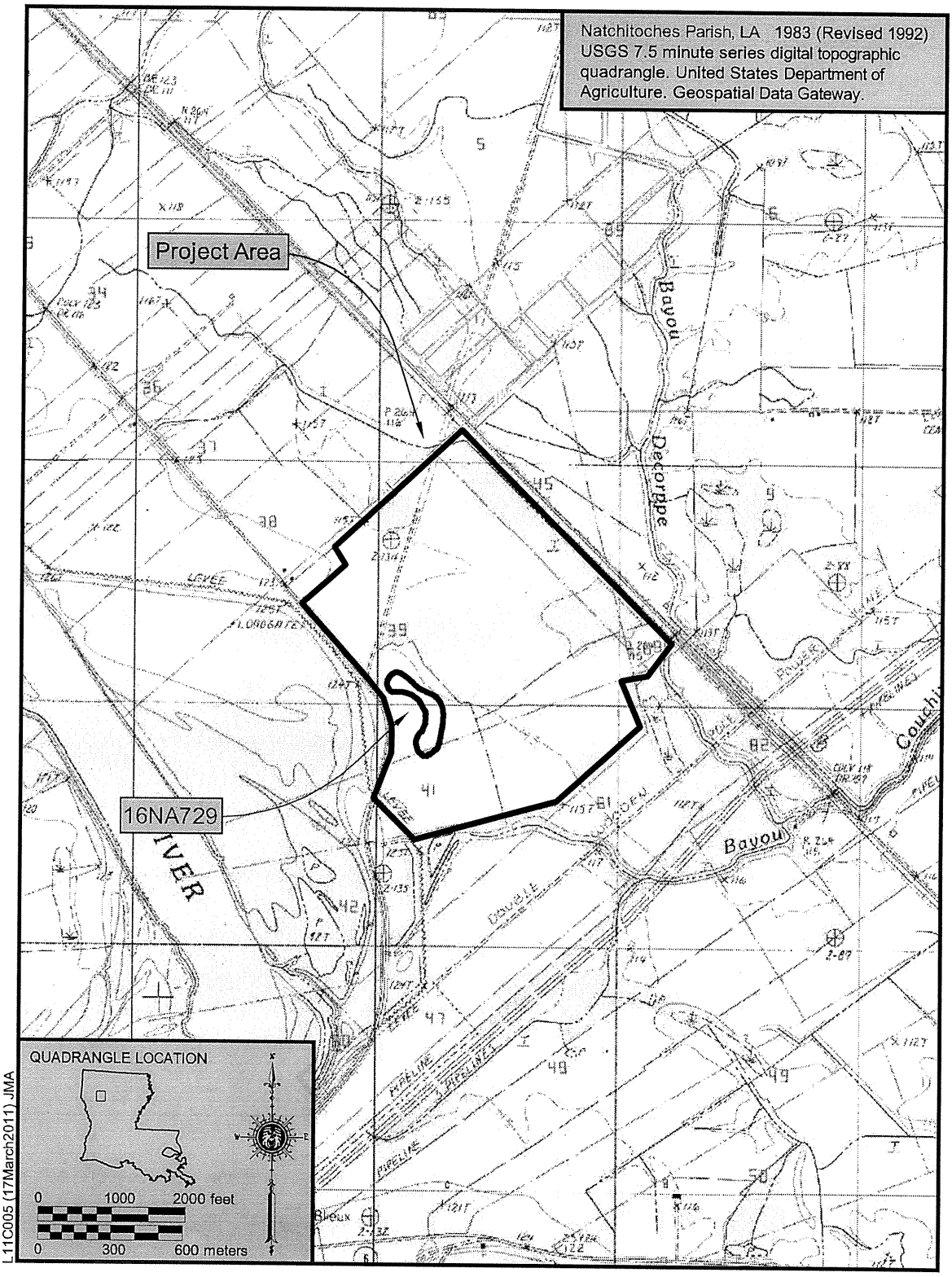

Figure 2. Topographic map showing the location of the project area.

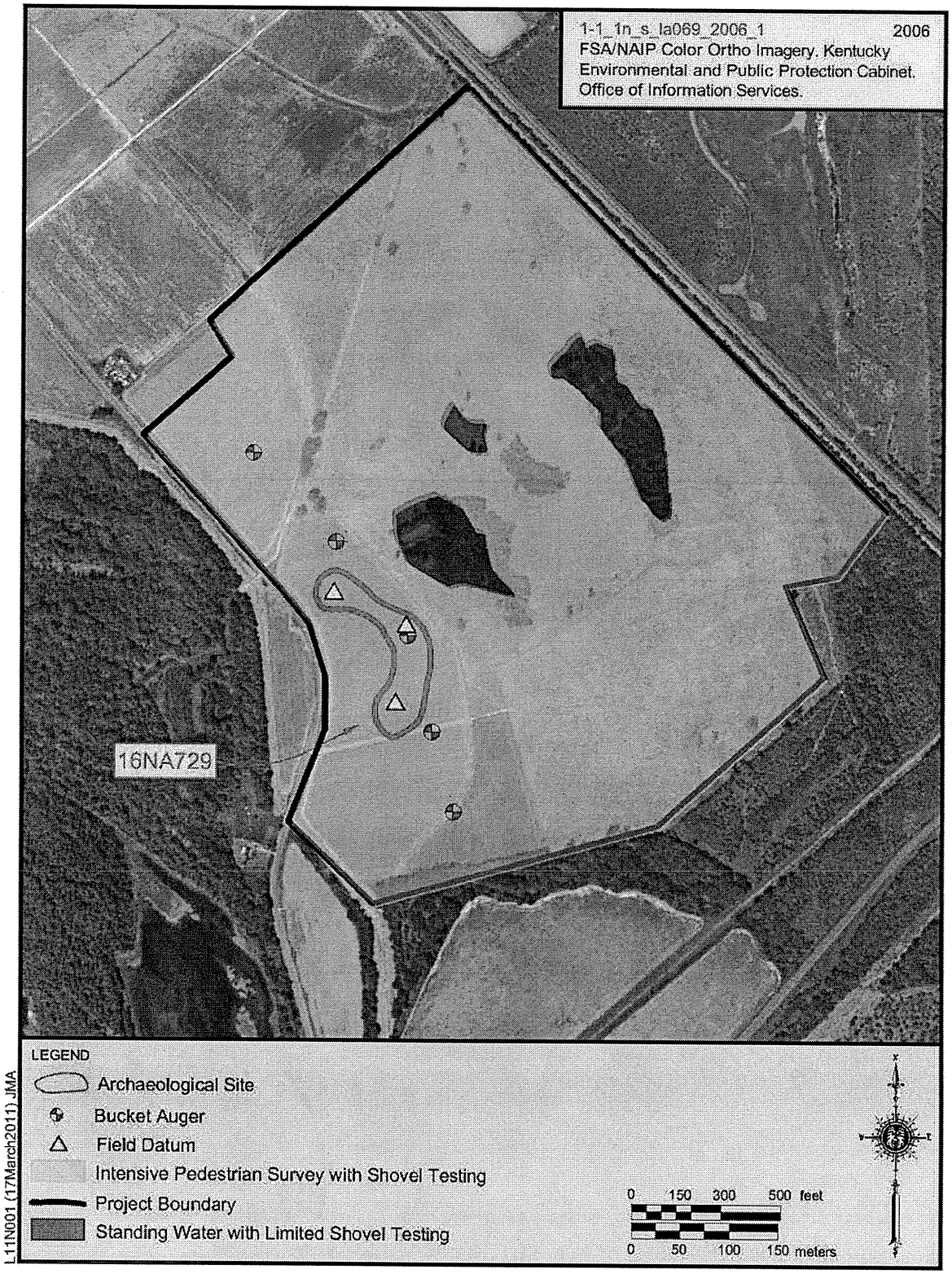

Figure 3. Project location depicted on the 2006 aerial map.

Summary of Findings

The records review, which was conducted using data available from the SHPO, indicated that no portion of the project area had been previously surveyed and no sites were recorded within the area.

Fieldwork resulted in the discovery of one historic site (16NA729), which is recommended not eligible for listing in the National Register of Historic Places (NRHP) due to limited research potential. Site 16NA729 consisted of a heavily disturbed scatter of late-nineteenth- through twentieth-century historic debris. This location generally corresponds with the location of a structure depicted on the 1957 Campti, Louisiana, United States Geological Survey (USGS) 15-minute topographic quadrangle map, suggesting a largely twentieth-century occupation of the site. Recovered artifacts included glass, nails, brick fragments, and ceramics. These materials were all found in disturbed, plow zone contexts. No intact deposits, features, or structures were observed at this location.

The identified resource (Site 16NA729) is recommended not eligible for the National Register of Historic Places. The lack of intact archaeological deposits or connection to a significant person or event in history suggests limited research potential for this site. For these reasons, no archaeological sites or historic properties listed in, or recommended eligible for, the National Register of Historic Places will be affected by the proposed construction activities. Therefore, cultural resource clearance is recommended.

II. ENVIRONMENTAL

This section of the report provides a description of the modern environment and considers those aspects of the physical environment that may have influenced the location and methods for finding archaeological sites. The discussion of the environment is divided into physiography, soils, vegetation, and climate.

Physiography

The project area is located in Natchitoches Parish, Louisiana, which is part of the West Gulf Coastal Plain physiographic region. This area covers much of northern Louisiana and extends east to the Mississippi Alluvial Valley and north to the edge of the Ouachita Highlands. More specifically, the parish consists of three major physiographic areas: floodplains, terrace uplands, and low stream terraces. The current project is located in the wide band of floodplains along the Red River. This area is poorly drained with clayey soils and areas of wetlands. Elevation in the parish ranges from approximately 24.38 m (80.00 ft) above sea level on the Red River alluvial plain to 106.68 m (350.00 ft) above sea level in the terrace uplands north of Provencal (Martin et al. 1990).

Soils

Soils within the project area were identified utilizing the Web Soil Survey online database maintained by the Natural Resource Conservation Service.

The most prominent soils within the project area are Moreland clay and Moreland silt loams (0–3 percent slopes), but Gallion silty clay loam, Latanier clay, and Roxana very fine sandy loam also occur to a smaller degree (Martin et al. 1990).

Moreland series soils (0–3 percent slope) occur in lower positions on natural floodplains and periodically experience flooding if levees are not present. Moreland soils typically have a clay content greater than 60 percent and have a surface layer that occurs in a reddish brown hue (5YR3/3-5YR4/4). The Ap horizon generally reaches a depth of 15.24 cm (6 in) and is composed primarily of clay. The following A horizon displays similar qualities (5YR3/3) but with less organic material, extending 15.24–40.64 cm (6-16 in) below ground surface (bgs). The subsoil is comprised of a Bw 40.64–66.04 cm bgs (16–26 in), Bk1 66.04–132.08 cm bgs (26–52 in), and Bk2 132.08–160.02 bgs (52–63 in), which generally appear as a dark reddish brown (5YR3/4-5YR4/4) clay with some gray

inclusions. Armistead, Gallion, Latanier, Perry, and Yorktown soils appear in relatively close proximity to Moreland soils. This is the case for the Natchitoches Port Survey project area, as Gallion and Latanier soils are present but cover small portions of the project area, as do Roxana soils (Martin et al. 1990).

Gallion Series soils appear on the west side of the project area but cover only a small percentage of the overall area. These soils are typically well drained and moderately permeable, appearing on natural levees along distributaries of the Red River. The Gallion A horizon extends approximately 0–20 cm (0–8 in) below ground surface, having a brown/reddish brown hue (7.5YR4/2-10YR4/4-5YR4/2), and appears as a silt loam. Gallion Series subsoil is represented as a Bt1 20–46 cm bgs (8–18 in), Bt2 46–84 cm bgs (18–33 in), and BC 84–135 cm bgs (33–53 in), and generally appears as a yellowish red silt loam (5YR4/6-5YR5/6) (Martin et al. 1990).

Roxana series soils are recognized as being well drained, moderately permeable soils that are located on naturally formed levees along the Red River. These soils typically have a slope of less than 1 percent. A Roxana yellowish red sandy loam A horizon (5YR4/6) extends 0–15 cm (0–6 in) below ground surface. Roxana subsoil appears as a C1 sandy loam (5YR5/6) from 15–48 cm bgs (0–6 in), a C2 sandy loam (5YR5/6) from 48–69 cm bgs (6–19 in), and a C3 silt loam that appears as a yellowish red 5YR4/6 hue. A second A horizon exists as a 2Ab, occurring approximately 107–123 cm bgs (42–48 in) as a silt loam. Another C horizon appears as a 2C4 from 122 to 168 cm bgs (48 to 66 in). This horizon appears as a strong brown (7.5YR5/6) sandy loam. Roxana Series soils are present within the project area but cover a very small portion of the southwest survey area (Martin et al. 1990).

Vegetation

The West Gulf Coastal Plain physiographic region is located within the Southern Pine Forests of the lower Mississippi Valley. During the last 150 years this region has undergone massive changes due to logging. However, in the vicinity of the project area, vegetation is typified by pine trees in the uplands and hardwoods in the bottomlands. The majority of the project area is deforested and covered in mixed grasses. Some low lying wet areas remain in mixed hardwoods with dense secondary growth (Martin et al. 1990).

Modern Climate

The modern climate of Natchitoches Parish can be described as humid, with warm summers and mild winters. Temperatures average 82 degrees F in the summer months and 51 degrees F in the winter. Humidity fluctuates throughout the day, with the evening and early morning hours potentially reaching 90 percent, and days averaging around 60 percent humidity. Annual rainfall throughout the parish totals approximately 127 cm (50 in), half of which falls between April and September. The general growing season for most crops in the region falls within this time frame. Snowfall in Natchitoches Parish is rare, but it does occur. Usually, when there is snowfall, it is of short duration, rarely exceeding 2 inches of accumulation (Martin et al. 1990).

Description of the Project Area

The Natchitoches Parish Port project area is generally located southeast of Campti, Louisiana, and northeast of Natchitoches, Louisiana. Situated on the east side of Route 486 and the west side of Route 71, this area covers approximately 360 acres. Approximately 1.70 km (1.06 mi) separate the northern and southern boundaries, while 1.5 km (0.93 mi) separate the eastern and western boundaries. This area is a part of the Red River floodplain and presently serves as cleared grazing field for cattle, although some forested wetland areas are present (Figure 4). Three separate wetland areas are located within the project area. These areas appear in the west/southwest, stretching across the central project area towards the east.

Figure 4. Project area overview, facing north/northwest.

Disturbance observed in the project area most likely resulted from a combination of area clearing and agricultural activities. One unimproved road runs north–northeast through the northern half of the project area. This raised road may have served as a tram line at some point in the history of the property.

Sediments in the southern portion of the project area generally consisted of a dark reddish brown (5YR 3/3) clay loam A horizon that ranged from 16 to 30 cm below ground surface overlying a dark reddish brown (5YR 3/4) clay to clay loam subsoil. An increase in clay content occurs in deeper strata. This profile generally conforms to the description of the soils mapped in the area. In the eastern portion of the project area surface soils were shallow, often 5 cm deep or less.

III. PREVIOUS RESEARCH AND CULTURAL OVERVIEW

On February 15, 2011, a search of records maintained by the NRHP (available online at: http://www.nr.nps.gov/nrloc1.htm) and SHPO was conducted to: 1) determine if the project area had been previously surveyed for archaeological resources; 2) identify any previously recorded archaeological sites that were situated within the project area; 3) provide information concerning what archaeological resources could be expected within the project area; and 4) provide a context for any archaeological resources recovered within the project area. The examination of SHPO data consisted of a review of professional survey reports and records of archaeological sites for an area

encompassing a 1 mi radius of the project. The review of professional survey reports and archaeological site data in the area provided basic information on the types of archaeological resources that were likely to occur within the project area and the landforms that were most likely to contain these resources. The results are discussed below.

Previous Cultural Resource Investigations

SHPO records revealed that no previous professional phase I archaeological surveys and no sites have been documented in the current project area. However, this review did reveal three cultural resource surveys (22-0662, 22-0826, and 22-1115) and nine sites (16NA242, 229, 309–313, and 535–536) documented within a 1 mi radius of the current project area (Figure 5). These are discussed below.

22-0662

SHPO Report Number 22-0662 corresponds with work that was conducted by Commonwealth Associates, Inc., in 1981. The abstract available in the Cultural Resources Bibliographic Index on SHPO website indicates this work was completed for the United States Army Corps of Engineers, New Orleans District, and covered discrete areas of the Red River Waterway from Shreveport to the Mississippi River, including areas near the Natchitoches Parish Port survey area. A total of 61 sites were located and/or revisited during the first phase of this work, resulting in the recommendation of further work at 16 sites. NRHP testing work at these 16 sites ended with 10 sites recommended eligible for listing in the NRHP. Further work was suggested for 5 of the NRHP tested sites.

According to the Louisiana Cultural Resources Map and the associated site form, one site (16NA229) associated with this project is located within 1 mi of the current project area. This site consisted of an abandoned and deteriorating wooden frame house structure and a sparse surface scatter of recent historic artifacts. No further work was recommended at the location (Newkirk and Mueller 1981).

The site forms for two additional sites (16NA535 and 536) reference the above report in the references section but indicate the sites were recorded by R. Christopher Goodwin and Associates in April of 1996 as part of a Red River Waterway Commission Project. No report is referenced for the 1996 work on the site forms, and no report was found in the Bibliographic Index corresponding with the work. These sites were classified as historic artifact scatters and were recommended not eligible for listing in the NRHP with no further work.

22-0826

This cultural resources survey by Coastal Environments, Inc., consisted of a terrestrial magnetic survey of 17 proposed channel realignments along the Red River from Shreveport to the junction of the Red and Black Rivers. This survey examined potential buried cultural resource sites (largely shipwrecks) and evaluated any discovered resources in terms of their significance. According to the Louisiana Cultural Resources Map and the associated site forms, one site (16NA242) associated with this project is located within 1 mi of the current project area. This site was identified as a portion of the old E. Tauzin Plantation (1860–1900) consisting of the remains of the main house, two structures (of 12 known), and 3 cisterns (in situ). The NRHP recommendations from the original survey are not stated, but an associated update form indicates that an intensive survey was unable to relocate the site.

22-1115

This archaeological survey documented in the vicinity corresponds with SHPO Report Number 22-1115. This project was conducted in 1986 within the 1.0 mi buffer of the Natchitoches Port Survey project area. It consisted of a cultural resource survey of a proposed bank stabilization and realignment

construction area adjacent to the Red River. This work was performed by Coastal Environments and involved a pedestrian survey, shovel testing, and proton magnetometer survey. According to the Louisiana Cultural Resources Map and the associated site forms, five sites (16NA309–313) associated with this project are located within 1 mi of the current project area. These sites were all twentieth-century historic sites associated with residences. All of these sites were recommended not eligible for the listing in the NRHP, and no further work was recommended.

Map Data

In addition to the file search, a review of available maps was conducted to help identify any historic structures that may be located within the project area. The 1957 Campti, Louisiana, 15-minute series topographic quadrangle (United States Geological Survey [USGS 1957]) indicates two structures greater than 50 years in age in the project area (Figure 6). One of the structures was specifically in the vicinity of the site recorded during fieldwork for this project (16NA729). The remaining structure (to the north) was near the intersection of LA 486 and the unimproved road providing access to the property. No evidence of cultural material was found associated with this structure. It may have been heavily impacted by construction and maintenance of LA 486.

Survey Predictions

Considering the known distribution of sites in the parish, the available information on site types recorded, and the nature of the present project area, certain predictions were possible regarding the kinds of sites that might be encountered within the project area. The moderate to high density of historic archaeological sites in the immediate area suggested that historic cultural materials were likely to be present. Prehistoric open habitations were also considered a possibility due to the proximity of the Red River and surrounding lakes and bayous.

Cultural Overview

Paleoindian (13,000 B.C. to 8000 B.C.)

The Paleoindian cultural tradition throughout much of the eastern United States has been recognized to include the Clovis culture. This was a widespread, highly mobile, New World culture typified by a specialized lithic tool kit designed primarily for hunting, butchering, and hide-working activities (Maggard and Stackelbeck 2008). The most distinctive artifacts in Paleoindian assemblages are lanceolate shaped, often fluted, hafted bifaces. The sociopolitical organization of this time period is believed to have been small groups who were highly mobile, and who utilized large-game hunting supplemented by the acquisition and consumption of seasonally available plant resources (Anderson and Sassaman 1996:32–33).

Archaic (8000 B.C. to 1000 B.C.)

The Archaic period was the most extensive stage of cultural development in the Southeast. It is primarily identified by a technological change from the lanceolate, fluted projectile points of the Paleoindian period to notched and stemmed triangular stone points. This change is also marked by the development and utilization of other technologies, like stone containers and ground and polished stone artifacts. The period is also recognized for the first construction of earthen mounds and earthworks, the formation of large settlements and sites, and the establishment of long-distance trade (Bense 1994). The period is typically broken down into three subperiods: the Early, Middle, and Late Archaic. These three periods are generally noted to span from the end of the Paleoindian period up to the beginning of the Poverty Point culture. Archaic components are quite numerous throughout Louisiana, with 3,407 having been recorded in state site files by 1996 (Anderson and Sassaman 1996:172).

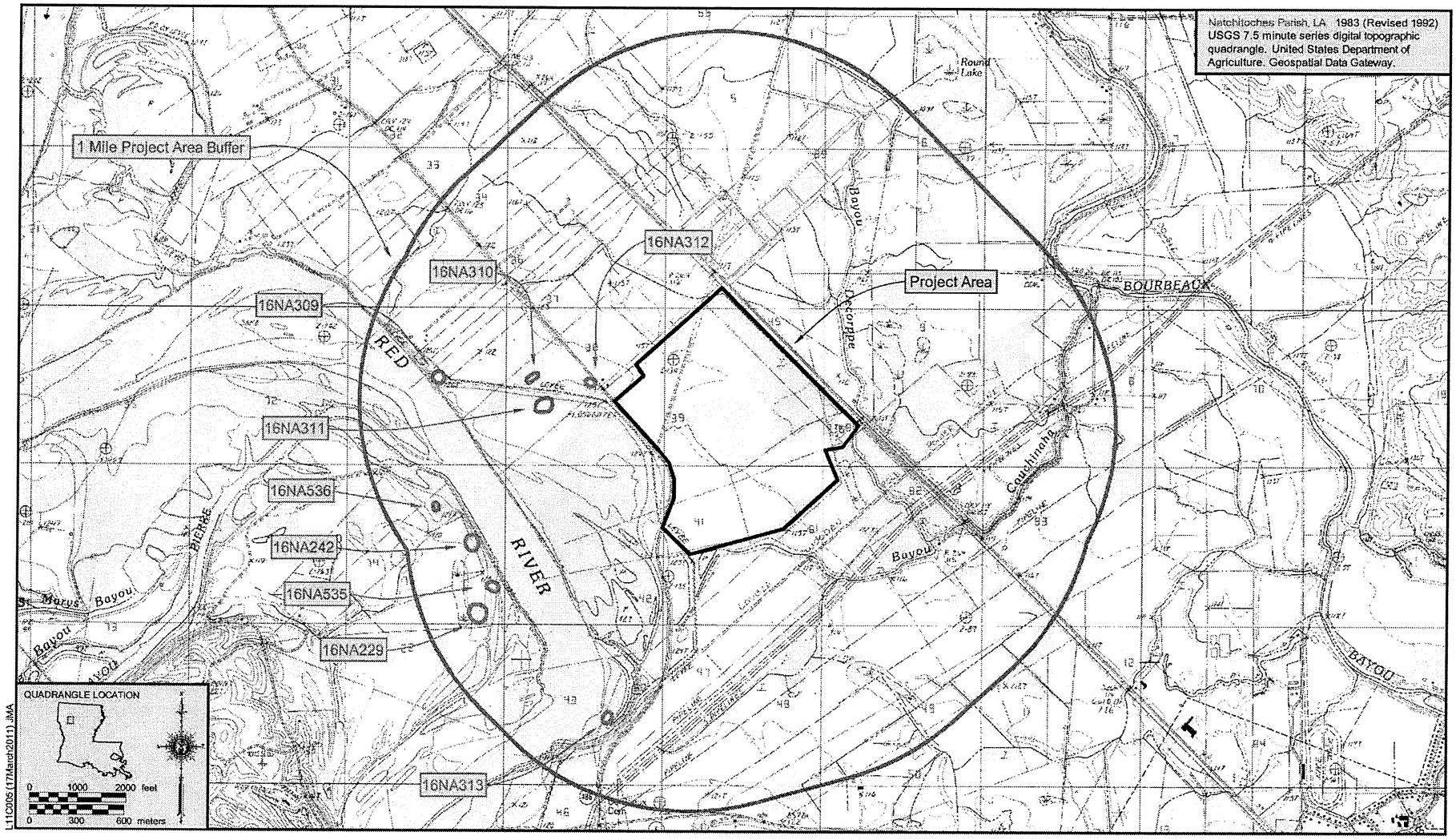

Figure 5. Topographic map showing the location of previously recorded sites within 1 mi of the project area.

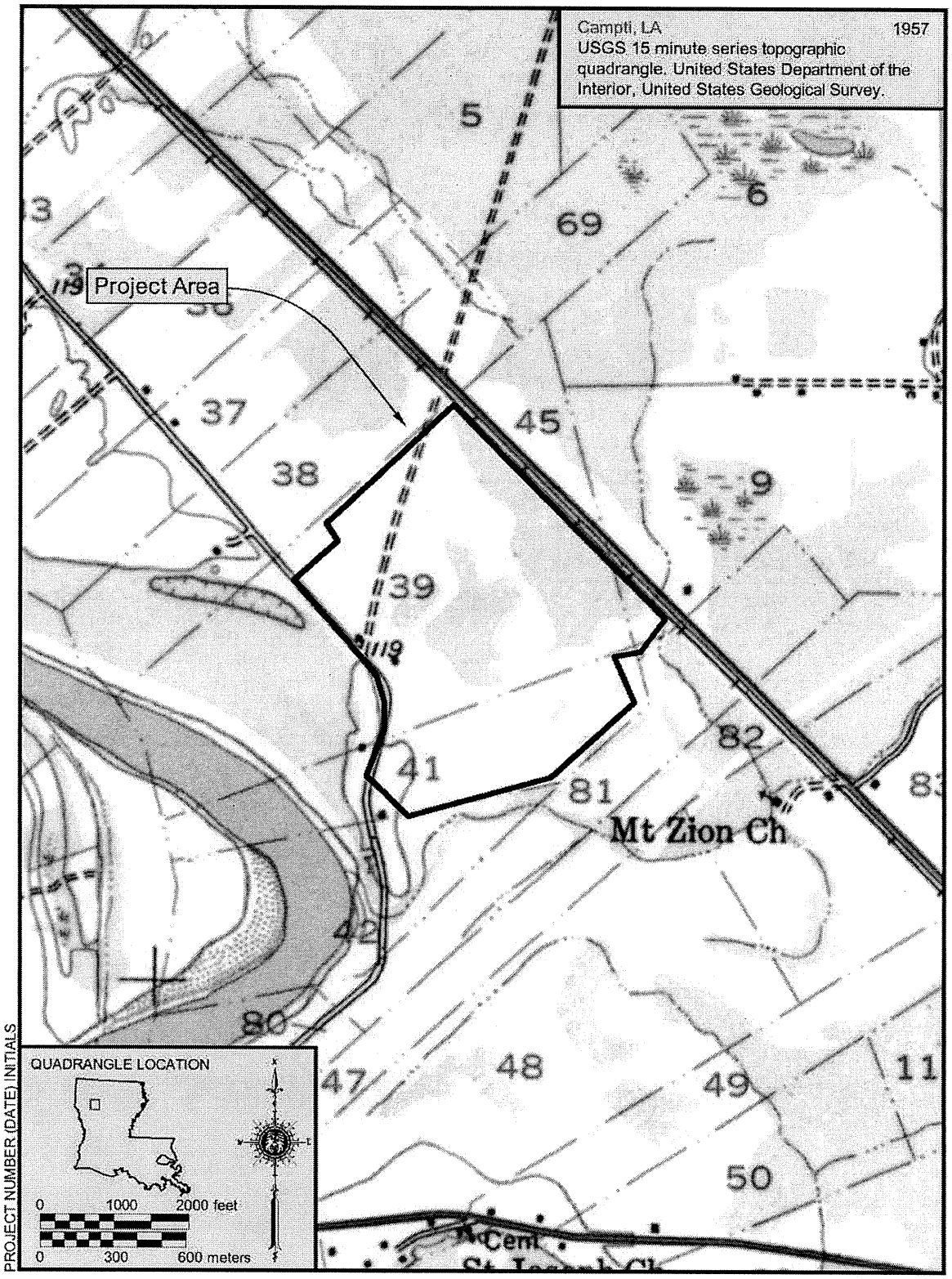

Figure 6. Project location depicted on the 1957 topographic map.

Early Archaic (8000 B.C. to 6000 B.C.)

People of the Early Archaic resembled highly mobile Paleoindian hunter-gatherers like the Clovis and Dalton, though their use of stemmed and notched projectile points allowed them to adapt to hunting and procuring a different group of prey (Trubowitz and Jeter 1982). This change in point type may partially be due to the invention of the atlatl. Settlement patterns during the Early Archaic consisted primarily of base camps and short-term special-purpose camps (Bense 1994). Climate during this time experienced a warming trend known as the Hypsithermal Event, which consequently affected the local environment as well as the wildlife and human cultures within that environment (McNutt 1996). Plant and animal food remains indicate that Archaic subsistence patterns had expanded from those of the Paleoindian, particularly to include more plant foods.

Middle Archaic (6000 B.C. to 4000 B.C.)

As populations increased during this time period, increased territorialism likely prompted stylistic diversity. Mobility of the regional populations may have reduced at this time, as a reliance on heavily curated formal tools declined in favor of a more expedient technology using lower quality, local material. The acquisition and ultimate re-use of Early Archaic tools by Middle Archaic peoples is noted and is believed to reflect reduced mobility, less energy spent during lithic tool production, and the apparent exposure of earlier sites to Middle Archaic peoples during this time period (Anderson and Sassaman 1996:45).

Point types during the Middle Archaic generally took on the form of the basally notched variety or other stemmed forms having contracting, short and straight, or expanding stems. Points were often extensively resharpened and recycled into drills and end scrapers (Anderson and Sassaman 1996:45).

The end of the Middle Archaic/beginning of the Late Archaic saw the Hypsithermal warming episode reach its peak, as climates became hot and dry, causing a shift in the weather pattern throughout the region. Environmental change included a change in the composition of local forests, as well as a change in the hydrology of the river valley floodplains (Bense 1994).

Late Archaic (4000 B.C. to 1000 B.C.)

Following the climax of the Hypsithermal at the close of the Middle Archaic/beginning of the Late Archaic, temperatures cooled off and moisture increased (Bense 1994:85). Vegetation and weather conditions of this time period took on modern characteristics and generally remained consistent to the present. The Late Archaic was a time of population expansion, and sites of this time period are more common than those from earlier time periods.

Systematic reoccupation of specific site localities seems to have occurred during this time period. This may have developed in response to mobility constraints imposed by regional population growth. The stockpiling of resources could also lend credence to this idea. The Late Archaic use of logistical procurement strategies is emphasized in the work of numerous researchers in the Southeast and could explain the reasoning for the regular use of task groups or part-time specialists for the preparation and manufacture of stone tools (Anderson and Sassaman 1996:46).

Point types during this period are typically of a broad-bladed, long-stemmed variety, but can also appear as narrower-bladed, short-stemmed types. In the Mississippi Valley, a smaller side-notched type was made. Points during this time period became smaller in overall size but retained the same triangular shape and stemmed base as those of the previous Archaic periods. In addition to changes in point manufacture technology, pottery was developed at this time but was not as heavily utilized as it was during the Woodland period (Bense 1994:85).

Burial practices at this time remained similar to those of the preceding period. Mound

construction is believed to have been associated with funerary activities, with mounds serving as special mortuary markers or symbols (Bense 1994:85).

Woodland (1000 B.C. to A.D. 1000)

The Woodland period witnessed the establishment of larger settlements within river valleys. In addition, the manufacture of pottery became widespread, burials became more elaborate, and mound construction increased. Long-distance trade became more extensive at this time, as did plant cultivation and storage. Like the Archaic, the Woodland period is broken down into three subperiods: the Early, Middle, and Late Woodland (Bense 1994:85).

Early Woodland (1000 B.C. to A.D. 0)

Climate during the first few centuries of the Woodland period was somewhat cooler than that of the Late Archaic, as two fairly dramatic though short-term cold events occurred. These cold periods were not enough, however, to prevent an increase in mound construction and ceremonialism amongst cultural groups. The adaptation of producing and utilizing pottery remains one of the key characteristics of the period. This widespread production resulted in variation of manufacture techniques, specifically temper types and general production methods (e.g., coiling, paddle and anvil, or rounding/pointing of vessel base) (Bense 1994:85).

Information pertaining to Early Woodland communities is limited, since settlement models typically depend on information provided from surface collections. It is believed that some Early Woodland cultures inhabited specific settlement locations year-round that were characterized by well-defined structures, large subterranean storage pits, and dense occupational middens. Though this may be true at some locations, Anderson and Mainfort (2002) state that sites in the Central Mississippi Valley are typically small, having a few structures and probably no more than 50–60 people. With group mobility still a potential defining characteristic of indigenous peoples at this time, social organization appears to have been based on unranked or minimally ranked lineages and clans (Anderson and Mainfort 2002:45).

The Early Woodland saw the cultivation of native plant species like goosefoot, sumpweed, sunflower, knotweed, squash/gourd, and maygrass in substantial quantity, though the level of dependence upon such crops is unknown. It is, however, acknowledged that the use of cultigens varied regionally (Anderson and Mainfort 2002:45).

Middle Woodland (A.D. 0 to A.D. 500)

A stable climate during the Middle Woodland period may have allowed for less stress on subsistence systems, while promoting the spread of the Hopewellian ceremonial complex throughout most of the Southeast. This prompted an unprecedented era of mound construction for both burial and ritual activities (Bense 1994), while also facilitating sociopolitical evolution of group organization.

This time period has produced enough evidence in the form of burial mound construction, shared artifacts, and iconography to suggest that societies across eastern North America, at least to some extent, interacted widely with one another. This was particularly true with trade and religious activity (Anderson and Mainfort 2002:45). Middle Woodland populations in many parts of the Southeast also built platform mounds which were possibly connected with mortuary ritual in some areas, and to public consumption/feasting activities in other locations. Still, other platform mounds are surmounted by structures or large posts, suggesting ceremonial facilities or possible astronomical alignments. Mound centers of this time period do not appear to have supported large numbers of residents (Anderson and Mainfort 2002:45).

Late Woodland (A.D. 500 to A.D. 1000)

With a mild decline in average temperature followed by a period of warmer climate,

thought favorable to agriculture in the East, the Late Woodland period became a time of appreciable cultural change (Anderson and Smith 2003). Households and small communities became both numerous and widely scattered. The invention of the bow and arrow may have been partially responsible for an increase in warfare, while the number of large-scale earthwork and mound building projects decreased (Anderson and Mainfort 2002:45). Subsistence patterns were generally characterized by hunting, gathering, and fishing, supplemented in some areas by gardening, including the cultivation of maize at this time. Settlements were of the traditional seasonal base camp-satellite camp organization, with greater complexity in some areas. Population increased in many areas during the Late Woodland and expanded into the uplands and along small tributaries (Bense 1994).

As the period came to an end, the Hopewellian ceremonial complex declined and the emergence of ranking or hereditary status had emerged within groups in some areas. Despite the cessation of elaborate mortuary ceremonialism, less elaborate burials continued to take place, as did mound construction (Bense 1994).

Mississippian (A.D. 1000 to A.D. 1500)

The Mississippian period comprises the last 500 years of North American prehistory, prior to European contact. The political organization of groups into chiefdoms stands as a defining characteristic of Mississippian culture, along with the flourishing of the Southeastern Ceremonial Complex, and the expansion of platform mound centers. Mississippian subsistence patterns were of two varieties—riverine: the use of crop rotation in which plants, especially maize, were cultivated and supplemented by the collection of wild foods; and coastal: farming played a smaller role while hunting, gathering, and fishing were emphasized (Bense 1994).

Mississippian chiefdoms were either simple or complex in status. Simple chiefdoms were typically comprised of several communities under the control of a single ruler. Complex chiefdoms were made up of several simple chiefdoms that were controlled by the ruling elite of one of the chiefdoms. It is also possible that a higher status existed for another ruling individual (or group) that consisted of either several affiliated complex chiefdoms or an affiliation of both simple and complex chiefdoms (Bense 1994).

The main themes in Mississippian society were ancestor worship, war, and fertility. This complex flourished halfway through the period, as rituals and mound building were a primary means of political control. Eventually, warfare began to replace ceremonialism as the primary means of political control in many areas during this period (Bense 1994). The end of this period saw political turmoil and population relocations. Instability and violence were encountered in some areas as environmental and political problems ensued. Though this caused some endeavors, such as mound building, to wane in some areas, it continued to occur in others (Bense 1994).

Formative (circa A.D 800–1000) and Early Caddo (circa A.D. 1000–1200)

Caddo settlements dating to these periods were primarily located in uplands near major streams and smaller tributaries. Permanent settlements were generally comprised of structures, middens, pits, and cemeteries. Habitation sites appear to range from basic hamlets and farmsteads to larger, more complex communities. These village types are more common during the Early Caddo, with a continuation occurring into the Middle Caddo. Distinctive artifacts have been found at larger Caddo settlements: celts, earspools, pipes, and distinctively decorated ceramics (Perttula 2004; 378–386).

Middle Caddo (circa A.D. 1200–1400)

There are a number of Caddo sites dating to this period throughout northwest Louisiana and eastern Texas. Diverse ceramics and larger

habitation sites continue from the Early Caddo into the Middle, including the construction of earthen mounds appearing at the end of the Early Caddo period. Habitations have been found to include mounds, middens, and public structures. Farming has also been observed from evidence of maize and squash (Perttula 2004; 378–386).

Late Caddo (circa A.D. 1400–1680)

Late Caddo sites dating to the Belcher Phase appear throughout the northwest Louisiana region. Many Late Caddo settlements range from large permanent communities with mounds, cemeteries, hamlets, and farmsteads, to smaller farmstead habitations. These settlements were agricultural communities that were governed by high status individual(s) who typically lived at mound centers (Perttula 2004:393).

Protohistoric (A.D. 1500 to A.D. 1700)

The Protohistoric era pertains to the initial contact period between European explorers and native peoples in the region. In Louisiana, original contact is believed to have occurred in 1542 when surviving members of De Soto's expedition to find a southwestern route to Mexico encountered Caddoan groups in northwestern Louisiana. This was followed by a long period without contact until Robert de LaSalle's voyage throughout the area in 1682 (Anderson and Smith 2003).

European Settlement (A.D. 1680 to A.D. 1800)

Robert de LaSalle claimed Louisiana for the French government, naming it after his king, Louis XIV. From the late 1600s through the late 1700s, France and Spain maneuvered to determine the border between their properties in the area. In 1762, the French signed the secret Treaty of Fontainebleu, transferring the area west of the Mississippi to Spain. In 1800, Spain signed the second Treaty of San Ildefonso, giving Louisiana back to France. A short time later, in 1803, France sold Louisiana to the United States for $15 million (Anderson and Smith 2003). The border between the Spanish and American claim was disputed and unclear until 1819 with the signing of the Adams-Onis Treaty. During this time, Europeans were settling in Louisiana. In northwest Louisiana this included largely English and colonial traders and settlers through the latter part of the eighteenth century.

History of Natchitoches Parish

In 1805, the Territorial Legislature of Orleans, which governed territory acquired by the United States in the Louisiana Purchase, divided the Territory of Orleans into 12 counties (or parishes), one of which became Natchitoches Parish. The city of Natchitoches, being the oldest settlement in the Louisiana Purchase, was founded along the banks of the Red River in 1714 by Louis Juchereau de St. Denis (Martin et al. 1990). Natchitoches was established to promote French interests in the region, particularly trade. Its position at the head of the navigable portion of the Red River helped to ensure this was possible, as goods intended for western markets were brought in to the region by way of the Mississippi River and up the Red River to Natchitoches, where they were then shipped overland to their intended destinations (Anderson et al. 1988).

The Spanish, who considered the founding of Natchitoches an intrusion in their affairs in the region, established San Miguel de Los Adaes and later Presidio Nuestra Señora del Pilar de Los Adaes in 1721. The latter was established only 14 mi west of Natchitoches (Anderson et al. 1988), near the present-day town of Robeline in west Natchitoches Parish (Martin et al. 1990), and served as a military and government outpost throughout most of the eighteenth century (Anderson and Smith 2003). The area between Natchitoches and Los Adaes became the conventional boundary between the French and Spanish at this time (Anderson and Smith 2003).

In time, an illicit trade developed between the peoples of Natchitoches and Los Adaes (Martin et al. 1990), and small ranches and farms began to appear around both towns

(Anderson et al. 1988). The land along the Red River provided economic opportunities to many temporary and permanent settlers of Natchitoches Parish, primarily by way of fur trade. Natchitoches became the regional center for fur trade in the region (Martin et al. 1990) following Spain's acquisition of the territory from France in 1762 by way of the Treaty of Fountainebleu (Anderson and Smith 2003).

Farming in Natchitoches Parish saw substantial profits from the sale of Indigo and tobacco, though cotton became the main crop of the region following the invention of the cotton gin in 1790. The Red River floodplain provided fertile land for the planting of cotton, and many people moved to the region from east of the Mississippi to take advantage of this farming opportunity (Martin et al. 1990).

The Louisiana territory continued to be governed by Spain until 1800, when the signing of the second Treaty of San Ildefonso saw it returned to the French (Anderson et al 1988). However, with Napoleon's desire for the conquest of Europe, France opted to sell the Louisiana territory to its American neighbors and focus on its priorities overseas. The Louisiana Purchase of 1803 nearly doubled the American domain, costing $15 million. The Adams-Onìs Treaty of 1821 allowed for the legitimate settlement of American immigrants within the Louisiana territory (Anderson and Smith 2003).

The Civil War brought grief to the parish, as farmers and planters witnessed the destruction of property and crops (Martin et al. 1990). As young men went to war, their farms were left to be tended by elders, women, and children. At times, the women and children would abandon the farms altogether, seeking refuge in nearby towns where it seemed they would be safer (Anderson and Smith 2003).

The timber industry boomed in northwestern Louisiana during the late 1800s–early 1900s, as entrepreneurs saw the potential for profit from harvesting the area's prime forests. Newly constructed railroads helped promote the success of timber harvesting in the region (Anderson 1988).

In 1884, Act 51 of the Louisiana State Legislature created a Louisiana State Normal School for the preparation of teachers in the town of Natchitoches. From 1885 to 1918, the Normal School offered two years of study for the training of teachers. Baccalaureate programs were then developed and inaugurated, and in 1921, the name of the school was changed to the Louisiana State Normal College.

The resources and curricula continued to steadily grow in order to meet the demands of Louisiana's expanding population. In 1944 the school began to be recognized as Northwestern State College of Louisiana. On June 18, 1970, the school became formally known as Northwestern State University of Louisiana.

V. METHODS

The entire project area was subjected to an intensive pedestrian survey supplemented by shovel testing in all undisturbed areas. Deep testing was also incorporated in areas along the western border of the project area where the soil survey suggested buried deposits may be present.

Shovel tests were excavated on a 30 m grid in all undisturbed areas with ground visibility less than 20 percent. In all cases, shovel tests measured 30-x-30 cm and extended well into the subsoil, which varied in depth based on location on the floodplain. All fill removed from the tests was screened through .64-cm (.25-in) mesh hardware cloth, and the sidewalls and bottoms were examined for cultural material and features. Sites were delineated using shovel tests excavated on a 10 m grid to determine boundaries unless sites were larger than 50 m across. The interval was increased to 20 m for sites larger than 50 m across, with additional shovel tests excavated (as needed) to investigate context or specific deposits.

Universal Transverse Mercator (UTM) coordinates were recorded with a MobileMapper 6 global positioning system (GPS) unit manufactured by Magellan to verify locations within the project area. All UTM positions recorded by the GPS unit during the project were taken under sunny conditions, with

typically three to five satellites being tracked. This unit is capable of accuracy to less than 3 m.

VI. MATERIALS RECOVERED

Historic materials were recovered during the current survey from one site (16NA729). The assemblage is described below. In addition, an inventory of materials recovered from the site discussed by provenience is presented in the site description section of this report, Chapter VII.

Methods

The historic assemblage includes artifacts classified and grouped according to a scheme originally developed by Stanley South (1977). South believed that his classification scheme would present patterns in historic site artifact assemblages that would provide cultural insights. Questions of historic site function, the cultural background of a site's occupants, and regional behavior patterns were topics to be addressed using this system.

South's system was widely accepted and adopted by historical archaeologists. However, some have criticized South's model on theoretical and organizational grounds (Orser 1988; Wesler 1984). One criticism is that the organization of artifacts is too simplistic. Swann (2002) observed that South's groups have the potential to be insufficiently detailed. She suggested the use of sub-groups to distinguish between, for example, candleholders used for religious purposes and those used for general lighting. Others, such as Sprague (1981), have criticized South's classification scheme for its limited usefulness on late nineteenth and early twentieth century sites, sites which include an array of material culture—such as automobile parts—not considered by South. Despite its shortcomings, most archaeologists recognize the usefulness of South's classification system to present data.

Stewart-Abernathy (1986), Orser (1988), and Wagner and McCorvie (1992) have subsequently revised this classification scheme. In this report, artifacts were grouped into the following categories: domestic and architecture. The artifacts recovered during this project are summarized in Table 1.

Table 1. Historic Artifacts Recovered According to Functional Group.

Site	Architecture	Domestic	Total
16NA729	8	107	115
Total	8	107	115

Grouping artifacts into these specific categories makes it more efficient to associate artifact assemblages with historic activities or site types. One primary change associated with the refinement of these categories is reassigning artifacts associated with the "Miscellaneous and Activities" under South's (1977) original system. Considering the potential variety of historic dwellings and outbuildings within the project area, a refinement of the artifact groupings was considered important to perhaps observe whether the distribution of specific artifact groups would produce interpretable patterns related to activity areas or structure types. Each one of these groups and associated artifacts is discussed in turn.

Information on the age of artifacts as described in the artifact analysis is derived from a variety of sources cited in the discussion of the materials recovered.

The beginning and ending dates cited need some clarification. Usually, an artifact has specific attributes that represent a technological change, an invention in the manufacturing process, or simple stylistic changes in decoration. These attribute changes usually have associated dates derived from historical and archaeological research. For example, bottles may have seams that indicate a specific manufacturing process patented in a certain year. The bottle then can be assigned a "beginning" date for the same year of the patent. New technology may eliminate the need for the same patent and the bottle would no longer be produced. The "ending" date will be

the approximate time when the new technology took hold and the older manufacturing processes are no longer in use.

Specific styles in ceramic decorations are also known to have changed. Archaeological and archival researchers have defined time periods when specific ceramic decorations were manufactured and subsequently went out of favor (e.g., Lofstrom et al. 1982; Majewski and O'Brien 1987). South's (1977) mean ceramic dating technique uses this information. The dates presented here should not be considered absolute but are the best estimates of an artifact's age available at this time. A blank space indicates that the artifact could not be dated or, alternately, that the period of manufacture was so prolonged that the artifact was being manufactured before America was colonized. An open-ended terminal date was assigned for artifacts that may be acquired today. The rationale for presenting dates for the artifacts recovered is to allow a more precise estimate of the time span the site was occupied, rather than the mean occupation date of a site.

A summary of the artifacts recovered follows. A complete inventory of the historic artifacts can be found in Appendix B.

Materials Recovered by Functional Group

There were 115 historic artifacts recovered during the investigation. The following provides a descriptive discussion of the types and age of artifacts recovered from throughout the survey area.

Architecture Group (N = 8)

The architecture group is comprised of artifacts directly related to buildings, as well as those artifacts used to enhance the interior or exterior of buildings. These artifacts primarily consist of window glass, plate glass, nails, and construction materials, such as brick and mortar. The architecture group items are discussed below (Table 2).

Table 2. Summary of Architectural Artifacts Recovered from the Project Area.

Site	Machine-made brick	Unidentified nail	Total
16NA729	3	5	8
Total	3	5	8

Construction Materials (n = 3)

Construction materials refer to all elements of building construction. For this project, the building materials collected consisted entirely of brick. The recovered brick fragments were classified as machine-made (n = 3).

Hand-made or early machine-made bricks often have a glaze, resulting from the sand in the clay turning to glass in the kiln. The paste is usually more porous, and the shape of the early bricks is more irregular. None of the bricks recovered appeared to be hand-made or early machine-made bricks. The later machine-made bricks have a harder, more consistent paste and are uniform in shape. Machine-made bricks will often have marks in the clay related to the machine manufacturing process (Greene 1992; Gurcke 1987). The recovered bricks likely all fell into this category, but some pieces were too fragmentary to identify confidently. The brick fragments recovered were not assigned specific dates.

Nails (n = 5)

There are three stages recognized in the technological chronology of nails: wrought nails, cut nails, and wire-drawn nails.

Wrought nails were handmade and were the primary type of construction fastener in the eighteenth and early-nineteenth centuries. Their use ended around 1810 with the widespread use of square cut or machine cut nails (Nelson 1968:8).

The cut nail, introduced in approximately 1800, originally had a machine-cut body with a hand-made head. Around 1815, crude machine-made heads replaced hand-made heads on cut nails, and overall, cut nails replaced wrought

nails in the construction industry. Early fully machine-cut nails exhibit a "rounded shank under the head," and therefore, often appear pinched below the head of the nail (Nelson 1968:8). By the late 1830s, these "early" fully machine-cut nails were replaced with "late" fully, or modern, machine-cut nails.

The first wire-drawn nails were introduced into the United States from Europe by the mid-nineteenth century. These early wire nails were primarily used for box construction and were not well adapted for the building industry until the 1870s. Although the cut nail can still be purchased today, the wire nail nearly universally replaced it by the turn of the twentieth century (Nelson 1968:8).

A total of five nails were recovered from the project area. Of the nails recovered, it is believed all were fragments of wire-drawn nails, but due to their fragmentary nature, identification was unclear. These were all classified as indeterminate.

Domestic Group (N = 107)

Artifacts included in the domestic group consisted of ceramics (n = 33), container glass (n = 68), closures (n = 1), and glass tableware (n = 5) (Table 3).

The ceramic inventory consisted of refined and utilitarian wares dating from the nineteenth century through the twentieth century. A full description of ceramic types recovered from the project area is listed below followed by descriptions of other domestic group artifacts.

Table 3. Summary of Domestic Artifacts Recovered from the Project Area.

Site	Ceramics	Container glass	Glass Tableware	Total
16NA729	33	69	5	107
Total	33	69	5	107

Ceramics (n = 33)

The ceramics recovered were grouped into three major ware types: whiteware (n = 24), ironstone (n = 3), and stoneware (n = 6). Ceramics within each of these ware groups were separated into decorative types that have temporal significance. Each of these ware groups is reviewed below, followed by discussions of associated decorative types.

Whiteware (n = 24)

As a ware type, whiteware includes all refined earthenware that possesses a relatively non-vitreous, white to grayish white clay body. Undecorated areas on dishes exhibit a white finish under clear glaze. This glaze is usually a variant combination of feldspar, borax, sand, nitre, soda, and china clay (Wetherbee 1980:32). Small amounts of cobalt were added to some glazes, particularly during the period of transition from pearlware to whiteware and during early ironstone manufacture. Some areas of thick glaze on whiteware may, therefore, exhibit bluish or greenish-blue tinting. Weathered paste surfaces are often buff or off-white and vary considerably in color from freshly exposed paste (Majewski and O'Brien 1987).

Most whiteware produced before 1840 had some type of colored decoration. These decorations are often used to designate ware groups (i.e., edgeware, polychrome, and colored transfer print). Most of the decorative types are not, however, confined to whiteware. Therefore, decoration alone is not a particularly accurate temporal indicator or actual ware group designator (Price 1981).

The most frequently used name for undecorated whiteware is the generic "ironstone," which derives from "Ironstone China" patented by Charles Mason in 1813 (Mankowitz and Haggar 1957). For purposes of clarification, ironstone will not be used when referring to whiteware. Ironstone is theoretically harder and denser than whiteware produced prior to circa 1840. Manufacturer variability is, however, considerable and precludes using paste as a definite ironstone identifier or as a temporal indicator. Consequently, without independent temporal control, whiteware that is not ironstone is difficult to identify, as is early vs. later ironstone. For this analysis, the primary

determining factor in classification of a sherd as whiteware was the hardness and porosity of the ceramic paste. Decorative types observed on the whiteware sherds in our assemblage are summarized and defined in the following discussions.

Plain (n = 24)

This decorative type includes vessels with no decoration. While some researchers such as Lofstrom et al. (1982:10) and Wetherbee (1980) include molded designs with "plain" whiteware, we agree with Majewski and O'Brien (1987:153) that molded vessels should be grouped on their own. Plain whiteware vessels became very popular following the Civil War and continued in popularity throughout the late nineteenth and early twentieth centuries (Faulkner 2000). Bacteriological research emerged after the Civil War, and it was not long before it became widely known that there is a link between bacteria and disease (Duffy 1978:395). Since bacteria could not be seen with the naked eye, it was commonly thought that plain, undecorated wares were best suited for maintaining and serving clean, bacteria-free food. Hence, bacteriological research helped spur the rise in popularity of undecorated vessels, which resulted in increasing competition between whiteware and ironstone manufacturers.

Purity crusades also indirectly helped increase the popularity of plain, white vessels in the late nineteenth and early twentieth centuries as social reformers focused on cleaning up city streets, improving sanitation, and ridding cities of disease epidemics. Part of this crusade was the public promotion of purity at the dinner table. Unfortunately, many of these white public health reformers were also motivated by Social Darwinist ideas, and sanitation problems and disease epidemics were often blamed on African Americans and East-European immigrants who were stereotyped as being the harbingers of disease and social decay (Friedman 1970:123).

Twenty-four undecorated, or plain, whiteware sherds were recovered during the current survey. These sherds were dated from 1830 to the present (Majewski and O'Brien 1987:119). While plain sherds may have come from plain vessels, it should be noted that many of these sherds may be undecorated parts of decorated vessels.

Ironstone (n =3)

Ironstone is a white or gray-bodied, refined stoneware with a clear glaze. It is often indistinguishable from whiteware. Ironstone differs from whiteware in that the body is more vitreous and dense. In addition, a bluish tinge or a pale blue-gray cast often covers the body. In some cases, a fine crackle can be seen in the glaze; however, this condition is not as common as it is in whiteware (Denker and Denker 1982:138).

Confusion in the classification of white-bodied wares is further compounded by the use of the term as a ware type or trade name in advertising of the nineteenth century. Both ironstones and whitewares were marketed with names such as "Patent Stone China," "Pearl Stone China," "White English Stone," Royal Ironstone," "Imperial Ironstone," "Genuine Ironstone," "White Granite," and "Granite Ware" (Cameron 1986:170; Gates and Ormerod 1982:8). These names do not imply that true ironstone was being manufactured. Some investigators avoid the distinctions entirely by including ironstones as a variety of whiteware. Others, such as Wetherbee (1980), refer to all nineteenth-century white-bodied earthenwares as ironstone. For this analysis, the primary determining factor in classification of a sherd as ironstone was the hardness and porosity of the ceramic paste. Sherds with a hard vitreous paste were classified as ironstone.

Charles James Mason is usually credited with the introduction of ironstone (referred to as Mason's Ironstone China) in 1813 (Dodd 1964:176). Others, including the Turners and Josiah Spode, produced similar wares as early as 1800 (Godden 1964). As a competitive response to the highly popular oriental porcelain, British potters initiated this early phase of ironstone production. The ironstone of this early phase bears a faint blue-gray tint and oriental motifs, much like Chinese porcelain. A second phase of ironstone began after 1850 in response to the popularity of hard paste

porcelains produced in France. This variety of ironstone had a harder paste and reflected the gray-white color of French porcelains.

While some ironstones continued to use oriental design motifs after 1850, the general trend was toward undecorated or molded ironstones (Collard 1967:125–130; Lofstrom et al. 1982:10). Ironstone continued to be produced in England, and, after 1870, it was also manufactured by numerous American companies. For many years, classic ironstone—the heavy, often undecorated ware—had been frequently advertised as being affordable and suitable for "country trade" (Majewski and O'Brien 1987:121). By the late 1800s, these thick, heavy ironstones began losing popularity and were often equated with lower socioeconomic status (Collard 1967:13). At the same time, ironstone manufacturers began shifting to thinner, lighter weight ironstones. As a result, this type of ironstone became popular tableware in American homes during most of the twentieth century (Majewski and O'Brien 1987:124–125). In spite of the shift toward thinner and lighter ironstones, heavy ironstone remained on the market and continues to be popular in hotel/restaurant service (hence, this heavy, twentieth-century ironstone is sometimes called "hotelware"). However, its production for home use all but ceased by the second decade of the twentieth century (Lehner 1980:11).

The ironstone sherds recovered from the current study were of the thinner, light weight ware. These sherds postdate 1880 and were popular throughout most of the twentieth century (Majewski and O'Brien 1987:124–125).

Stoneware (n = 6)

Stoneware served as the "daily use" pottery of America, particularly rural America, after its introduction during the last decade of the eighteenth century. By 1850, this ware generally replaced coarse redware as the primary utilitarian ware used in American households. Stoneware is a semi-vitreous ware manufactured of a naturally fine, but dense, clay. The pottery was fired longer and to a higher temperature than earthenwares; a kiln temperature of at least 1,200 to 1,250 degrees Celsius had to be obtained (Cameron 1986:319; Dodd 1964:274–275). As a result, stoneware generally exhibits a hard body and a very homogeneous texture. The paste may vary from gray to brown, depending on the clay source, and length and intensity of the firing.

Because this ware is fired at such high temperatures, its body is nonporous and well suited to liquid storage. Stoneware, as mentioned, was not typically manufactured as a refined ware (such as its cousin, ironstone, or eighteenth-century refined white salt-glazed stoneware), and hence, it was, for the most part, utilized for utilitarian activities associated with jars, churns, crocks, tubs, jugs, mugs, pans, and pots. These vessels were typically glazed, with salt glazing and slip glazing most common.

Although refined salt glazing was practiced in England during the eighteenth century, by 1780, the production of English salt-glazed tableware had been virtually supplanted by the manufacture of cream colored earthenwares (Lewis 1950:29). The salt-glazing technique continued to be utilized for utilitarian vessels, however, and was eventually introduced to the United States in the early nineteenth century. Salt glazing was accomplished by introducing sodium chloride into the kiln during the firing process, at which point the salt quickly volatilized. The vapor reacted with the clay to form a sodium aluminum silicate glaze (see Billington 1962:210; Dodd 1964:239). The surface of the glaze is typically pitted, having what is commonly known as an "orange peel" effect.

Stoneware may also be coated with a colored slip (a suspension of fine clay and pigment). The Albany slip—named after the rich brown clay found near Albany, New York—first appeared in the 1820s. Initially, it was mainly used for the interior of stoneware vessels. However, by the 1850s, it was also used as an exterior glaze. Bristol glaze, an opaque white slip, was introduced late in the nineteenth century. When used in combination with Albany slip, Bristol-glazed stoneware vessels have a general date range of 1880–1925 (Ketchum 1983:19; Raycraft and Raycraft 1990:5).

A third glaze often used on stoneware is the alkaline glaze. Like the Albany slip, it was developed in the 1820s. The basic alkaline glaze is made up of wood ash, clay, and sand. Other additions may be slaked lime, ground glass, iron foundry cinders, or salt. These additions affected the color and texture of the glaze. Colors vary from olive to brown to a gray-green or yellowish hue, depending on adjustments in proportion of ingredients (Ketchum 1991:9). Although not as prevalent, alkaline glazing has been used in combination with salt glazing. This causes the stoneware vessel to exhibit the colors of alkaline glazing with the pitted texture of a salt glaze.

Six stoneware sherds were recovered that date from the 1850s through the twentieth century. These stoneware sherds consisted of one salt glazed, two Bristol (interior and exterior) slipped, one Albany interior/Bristol exterior slipped, and two sherds with the interior surface damaged beyond identification with exterior slips of one Bristol and one Albany.

Container Glass (n = 68)

A variety of container glass was recovered during the current investigations. Research by Baugher-Perlin (1982), Jones and Sullivan (1985), and Toulouse (1972) were used to date glass containers. Glass color was the only attribute that could be used for dating those fragments that were not identifiable as to type of manufacture.

The approximate date of manufacture for bottles and bottle fragments recovered from the project area was established by determining the manufacturing process associated with the bottle (i.e., creation of the base and lip of the container) and using any patent or company manufacturing dates embossed on the bottle.

The lip on a bottle can be informative. A lipping tool, patented in the United States in 1856, smoothes and shapes the glass rim into a more uniform edge than a hand-smoothed lip or "laid-on ring." Certain types or styles of lips were associated with specific contents; for example, medicines were often contained in bottles with prescription lips (Jones and Sullivan 1985). A "sheared," or unfinished, bottle lip typically dates before 1880.

Lipping tools were used throughout the middle and end of the nineteenth century until the advent of the fully automatic bottle machine (ABM) in 1903. It should be noted, however, that as automated bottle manufacture became available after the turn of the twentieth century (see below), tooled finishes continued to be produced—albeit in steadily decreasing numbers. That is, there is a lag time between tooled finishes and ABM finishes, and although ABM glass is given an inception date of 1903, most tooled-glass vessel sherds will be given a terminal date around the 1920s due to this lag time, unless other diagnostic characteristics are observed enabling one to give it an earlier terminal date.

The manufacturing process can be roughly divided into three basic groups: free blown, blown in mold (BIM), and machine manufactured (ABM) vessels (Baugher-Perlin 1982:262–265). Only ABM glass was recovered from the current project. An unidentified category was used for those that could not be determined. Each process will be discussed separately.

Automatic Bottle Machine (ABM) (n = 2)

The Owens automatic bottle-making machine was patented in 1903 and creates suction scars and distinctive seams that run up the length of the bottle neck and onto the lip. This ABM mold provides a firm manufacturing date at the beginning of the twentieth century. Another automatic bottle machine, called the Individual Section, was also used in the commercial production of bottles. This machine was widely used starting in 1925 and, by 1940, became the most widely used bottle manufacturing device (Jones and Sullivan 1985:39). This bottle machine was more cost effective than the Owens machine, which was no longer used after 1955.

There were two bottle glass fragments assigned to the ABM category during the current survey. These included one amber and one clear bottle fragment. The amber glass bottle fragment finish consisted of a small

mouth with external thread. The clear glass fragment was small but had a bead finish. These dated from 1903 to the present.

Undiagnostic Container Glass (n = 66)

When no other diagnostic features were present, the color of the glass was noted, although there is some subjectivity inherent in color classification. Jones and Sullivan (1985) observed that chemicals color glass, either as natural inclusions or additions by the manufacturer. The concern here was primarily to note the presence of purple or "amethyst" glass, selenium glass, cobalt glass, and "milk" glass.

Opaque white, or "milk," glass has been manufactured as long as glass has been made, but milk glass became common in the late nineteenth and twentieth centuries, when it became frequently used in "containers, tablewares, and lighting devices" (Jones and Sullivan 1985:14). Cobalt glass began to be used in container glass manufacturing in approximately 1840 (Fike 1987:13; Lindsey 2008). Clear glass, as previously mentioned, came into popular demand beginning in the 1860s with the growing public desire to see the contents of the bottles with the burgeoning public health movements following the Civil War (Baugher-Perlin 1982:261; Wiebe 1967).

The majority of the fragmentary container glass sherds (n = 66) were not diagnostic. Six colors were represented, including amber (n = 6), amethyst (n = 7), aqua (n = 2), clear (n = 45), light green (n = 5), and opaque white (n = 1). These generally suggest late-nineteenth- through twentieth-century dates.

Closures (n = 1)

Bottle closures serve both to prevent the spilling of a bottle's contents and to protect a bottle's contents from contamination and evaporation (Berge 1980). Closures have been used almost as long as animal skins and bottles have been employed to contain liquids. Closures range from a utilitarian piece of paper or cloth stuffed into the mouth of a bottle to a delicately-crafted crystal stopper for a decanter. There are three primary closure types: caps, stoppers, and seals (Berge 1980). The only bottle closure identified in the assemblage was a glass canning jar lid seal closure.

Seal closures utilized the vacuum on the interior of the glass container. The heating and then cooling of the bottle's contents created the vacuum. Seal closures, although dating back to 1810, did not become popular until the mid-twentieth century. These closures were most often used in food jars (Berge 1980). There were several types of seal closures including Phoenix, Sure Seal, Giles, spring seal, and disc seal.

The disc seal was used as early as 1810 by Nicholas Appert (Berge 1980). John L. Mason used this type of closure on his patented fruit jar in 1858 (Berge 1980). Mason's closure was made of zinc and was held in place with an exterior screw cap ring. Unfortunately, the zinc reacted with the contents of the jars, giving the contents an unpleasant metal taste (Jones and Sullivan 1985). Glass liners were then developed and added to the disc around 1869 by Lewis R. Boyd (Toulouse 1969a, 1977). These liners prevented the zinc from reacting with the contents of the jar. To aid in opening, Boyd added a handle to the disc circa 1900 (Toulouse 1977). Both of these disc seal types were used until around 1950 (Jones and Sullivan 1985; Toulouse 1969a, 1977). In 1865, the Kerr two piece seal was patented. This system utilized a metal seal disc held in place by an exterior screw cap with no center. This seal and cap type system is still in use today.

The closure artifact recovered from the project was a milk glass canning jar lid liner. This artifact was likely manufactured between 1869 and 1950.

Glass Tableware (n = 5)

Press molding was first used (although on a very small scale) in England in the late seventeenth century to make small solid glass objects, such as watch faces and imitation precious stones (Buckley 1934). By the end of the eighteenth century, decanter stoppers and glass feet for objects were also being produced (Jones and Sullivan 1985). The production of complete hollowware glass objects did not become possible until there were innovations in

press-molded techniques in the United States during the late 1820s (Watkins 1930). Mass production of press-molded glassware was well established by the 1830s (Watkins 1930).

Earlier press-molded glass objects were predominately made of colorless, lead glass (Jones and Sullivan 1985). William Leighton of the Hobbs-Brockunier Glass Works in Wheeling, West Virginia, invented lime glass. This type of glass looked like lead glass, had superior pressing attributes, and was much more inexpensive than lead glass (Revi 1964). Advancements in mold technology in the 1860s and 1870s led to the application of steam-powered mold operation. This, in turn, led to increased production and reduced costs (Revi 1964). Modern press molding is conducted entirely by machine (Jones and Sullivan 1985).

Press-molded table glass was made by dropping hot pieces of glass into a mold. A plunger was then forced into the mold, pressing the hot glass against it. The outer surface of the glass took on the form of the mold, while the inner surface of the glass was shaped by the plunger. The plunger was withdrawn, and the glass object was removed from the mold. The surface of the glass was often fire polished to restore the brilliance of the glass surface that was disturbed by its contact with the mold (Jones and Sullivan 1985).

Press-molded glass may be recognized by several characteristics. Usually, the glass object must be open-topped in order for the plunger to be withdrawn from the mold. Narrow mouthed vessels were produced, but additional manipulation of the glass was necessary after the plunger was removed from the mold. Evidence of this manipulation should be present on the vessel (Jones and Sullivan 1985). There is no relationship between the exterior shape and design of a press-molded vessel to the interior shape and design because the plunger shapes the interior of the object, most often leaving behind a smooth surface. This differs from earlier glass vessel production techniques like blown glassware, where interior shape was related to the exterior shape and design (Jones and Sullivan 1985).

Another characteristic of press-molded containers was that mold seams were generally present. The seams were sharp and distinct, unless steps had been taken to deliberately remove them. The texture of the glass surface of press-molded glass was disturbed and often disguised by an all-over stipple design. The edges of the designs on press-molded glass had a predisposition toward rounded edges. The bases of press-molded objects were usually polished. The quality of the designs on press-molded glassware was precise and the design motifs were numerous (Jones and Sullivan 1985).

In contrast to press-molded glass, cut glass generally had a polished, smooth, glossy surface texture. The design edges were sharp and distinct. Cut glass designs consisted mostly of panels, flutes, and miters. The designs were often slightly uneven and asymmetrical. Mold seams were usually absent; they were polished off prior to cutting (Jones and Sullivan 1985). Contact-molded glass also differs from press-molded glass in that the exterior and interior of the vessel will portray parallel patterns. The interior of the vessel is also generally much more diffuse towards the base.

A total of five pieces of glass tableware were recovered. These consisted of small fragments with unidentifiable molds. Four colors were represented in the assemblage, including amethyst (n = 2), aqua (n = 1), opaque white (n = 1), and clear (n = 1). These date from the late nineteenth through twentieth century.

Discussion

There were 115 historic artifacts recovered from one site during the investigation. The material collected is discussed in detail above and summarized below in the site discussion. A complete inventory can be found in Appendix B.

Site 16NA729 Summary

Historic cultural materials were recovered from within the plow zone in 37 shovel tests excavated at Site 16NA729. These materials were recovered in three distinct clusters. These

locations may represent activity areas, perhaps a residence and outbuildings or dump locations. In fact, one of these artifact clusters (the northernmost) roughly correlates with a structure location depicted on the 1957 Campti, Louisiana, topographic map. The remaining two scatters may be associated with outbuildings or dump locations roughly contemporaneous with the possible residence. An alternative theory for the distribution of materials is based on modern activities creating the distribution, and each artifact cluster representing push piles associated with clearing and maintenance of the area. This is supported by push piles that were seen scattered across the project area. In either case, the recovered materials were found in disturbed contexts and are diagnostic of late-nineteenth- through twentieth-century domestic activities.

Investigation of this late-nineteenth- through twentieth-century site yielded 115 artifacts, with the majority of artifacts from the domestic group and fragmentary. The domestic group (n = 107) was represented by container glass, ceramics, closures, and glass tableware. Container glass dominated the assemblage (n = 68) but consisted largely of small undiagnostic fragments (n = 66). The colors represented in the undiagnostic fragments are suggestive of nineteenth- through twentieth-century manufacture and use. Diagnostic container glass consisted of two ABM bottle fragments that postdate 1903. One canning jar lid container closure was found that was likely manufactured between 1869 and 1950. The recovered ceramics (n = 33) included 24 plain whiteware sherds, 3 plain ironstone sherds, and 6 stoneware sherds. The manufacture and use of these ceramics suggest a date from the nineteenth through twentieth century.

The low density of architectural materials suggests the structure may have been moved to another location, rather than demolished in place. The architecture group (n = 8) included only three machine-made brick fragments and five indeterminate nail fragments. The brick fragments were found at the northern two artifact clusters, suggesting these may be associated with structures, and nails were found at the central and southern artifact clusters. Although not specifically datable, the machine-made brick fragments are considered to have been manufactured after the 1880s.

VII. RESULTS

This survey consisted of a combination of intensive pedestrian survey and shovel testing. The majority of the project area was currently in use as pasture and ground cover with mixed grasses. The remaining portions of the project area consisted of wetlands with dense vegetation and standing water. Intensive pedestrian survey supplemented with screened shovel testing was conducted on a 30 m interval in all portions of the project area, except areas with standing water. This work resulted in the location of one site (16NA729).

The following is a description of Site 16NA729. This desription includes information concerning the archaeological investigation at the site and the NRHP recommendations.

Site 16NA729

UTM Coordinates:
Datum 1 Z15, N3523058, E0493197 (NAD 83)
Datum 2 Z15, N3523281, E0493071 (NAD 83)
Datum 3 Z15, N3523219, E0493217 (NAD 83)
Elevation: 45.72 m (150 ft) AMSL
Components: Historic
Specific Components: Nineteenth through twentieth century
Site Type: Homestead
Size: 47,350.0 sq m (509,967.8 sq ft)
Distance/direction to nearest water: Bayou Couchinaha is located 250 m south of site, but there may have been a well on-site during occupation (no evidence remains).
Type and extent of previous disturbance: Clearing of the property and agricultural activities
Topography: Floodplain
Vegetation: mixed grasses
Ground surface visibility: Less than 10 percent
Slope Direction (Aspect): level
Recommended NRHP status: Not eligible

Site Description

Site 16NA729 consisted of a heavily disturbed, nineteenth- through twentieth-century homestead site with no intact deposits. This site was located in the vicinity of a mapped structure depicted on the 1957 Campti, Louisiana, USGS topographic map. Despite intensive pedestrian investigation of the area, no structural elements or indications of a structure or related features were evident at the location. Instead, the site was identified as a result of shovel testing. Site dimensions, established by positive shovel test positions, were 320.00 m (1,049.87 ft) north–south and 145.00 m (475.72 ft) east–west. The site boundaries were defined to include three, low density artifact clusters. Although these clusters had gaps between them, they were considered a single site because the materials were contemporary and generally consistent in composition, and a single structure was indicated on historic maps.

This site area was in use as a pasture, and vegetation at the time of investigation consisted of mixed grasses. The mixed grasses were dense enough to reduce ground surface visibility at the site location (Figure 7).

Investigation Methods

The site was initially located as a result of shovel testing conducted on a 30 m grid. The site boundaries were delineated using a 10 m grid until it was determined that the site was larger than 50 m across. Once the site was found to cover a large area, the portions of the boundaries for each cluster that were not already defined by 10 m shovel testing were delineated using a 20 m grid. Thirty-seven shovel tests yielded cultural material. The recovered material is discussed below in the Artifacts section.

Data pertaining to the site location was recorded, and the site was indicated on appropriate maps. Multiple points and a site datum were established, with UTM coordinates recorded using a handheld GPS unit. The boundary of the site was irregular and crescent shaped. As mentioned above, the site includes three clusters of artifacts. GPS coordinates for the boundary of the site taken at the northern edge (N3523330, E4933060), southern edge (N3523000, 493200), eastern edge (N3523160, E493260), and western edge (N3523280, E493040) provide a general location of the site.

A site sketch map was drawn showing the placement of the shovel test positions in relation to physiographic features (Figure 8).

Figure 7. Overview of Site 16NA729, facing northwest.

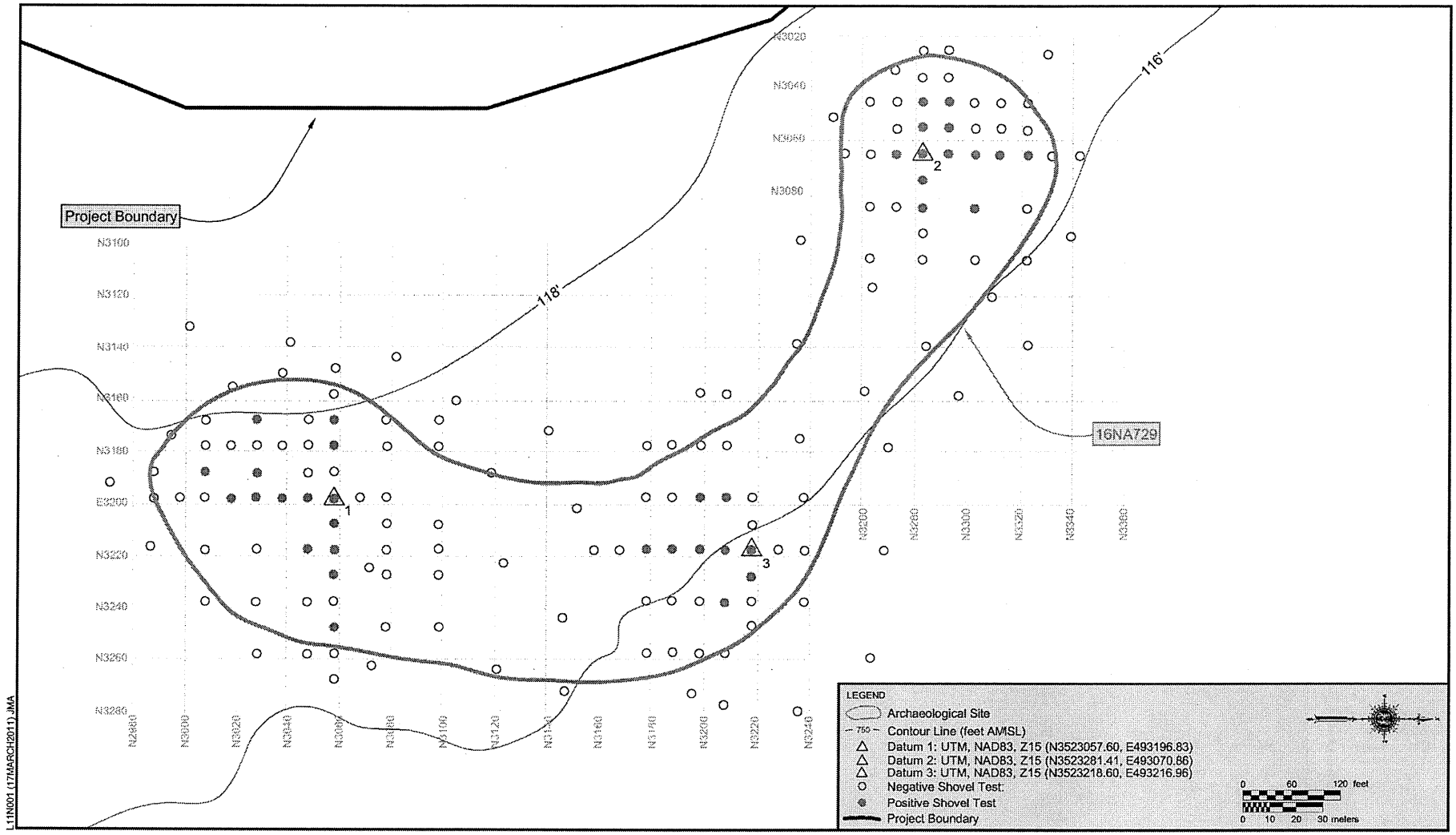

Figure 8. Schematic plan map of Site 16NA729.

Depositional Context

Profiles observed at Site 16NA729 were typical of the soil series mapped for the area (Moreland Silt Loam), although the A horizon was generally more shallow than the series profile. Shovel tests generally revealed an Ap horizon consisting of a dark reddish brown (5YR 3/3) clay loam to as deep as 25 cm (9.8 inches) underlain by a strong brown (7.5YR 3/4) to reddish brown (5YR 3/4) clay (Figure 9). Moreland Silt Loam soils typically have an A horizon consisting of a dark reddish brown (5YR 3/3) clay to 40.64 cm (16 in) below ground surface. This is underlain by a Bw horizon described as a dark reddish brown (5YR 3/4) clay that extends to 66.04 cm (26 in) below ground surface. The shallow surface soil may be the result of erosion or disturbance associated with agricultural activities in the area.

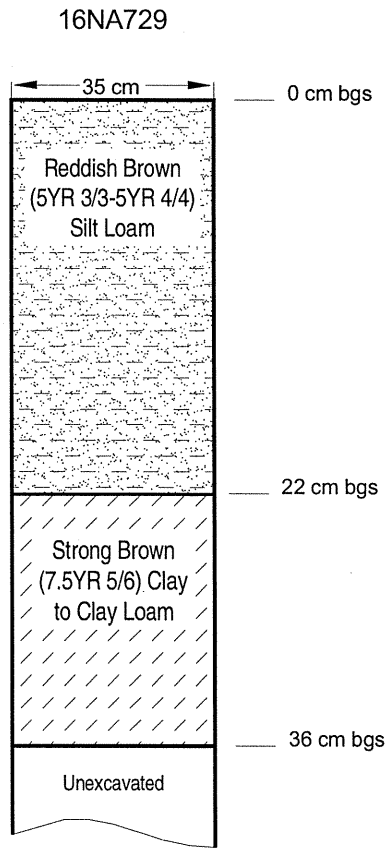

Figure 9. Representative profile from 16NA729 (N3218E3218).

Artifacts

The Site 16NA729 assemblage consisted of 115 artifacts, and the majority of artifacts were from the domestic group and fragmentary. The domestic group (n = 107) contained container glass, ceramics, closures, and glass tableware. Container glass dominated the assemblage (n = 68) but consisted largely of small undiagnostic fragments (n = 66). The colors represented in the undiagnostic fragments are suggestive of nineteenth- through twentieth-century manufacture and use. Diagnostic container glass consisted of two ABM bottle fragments that postdate 1903. One canning jar lid container closure was found that was likely manufactured between 1869 and 1950. The recovered ceramics (n = 33) included 24 plain whiteware sherds, 3 plain ironstone sherds, and 6 stoneware sherds. The manufacture and use of these ceramics suggest a date from the nineteenth through twentieth century.

A low density of architectural materials was found. The architecture group (n = 8) included only three machine-made brick fragments and five indeterminate nail fragments. The brick fragments were found at the northern two artifact clusters, suggesting these may be associated with structures, and nails were found at the central and southern artifact clusters. Although not specifically datable, the machine-made brick fragments are considered to have been manufactured after the 1880s.

Features

No features were observed during the investigation of the site.

Summary and National Register Evaluation

Site 16NA729 consisted of a heavily disturbed, low density, nineteenth- through twentieth-century historic artifact scatter with no intact deposits. No indications of foundation elements or other features were observed at the site, and all recovered materials were from disturbed plow zone

contexts. Due to disturbance and the lack of features, the archaeological aspect of Site 16NA729 has no integrity and, as a result, has a limited archaeological research potential. This site is not considered to have the potential to provide important information about local or regional history and is recommended not eligible for the NRHP (Criterion D). No further work is recommended. It is unlikely that further investigation of Site 16NA729 would produce information beyond that recorded during the current survey.

VIII. CONCLUSIONS AND RECOMMENDATIONS

Cultural Resource Analysts, Inc., personnel completed a records review and cultural resource survey for the Natchitoches Port in Natchitoches Parish, Louisiana. The archaeological file search was conducted by Justin Morrison on February 15, 2011. This records review included referencing cultural resource data maintained by the SHPO to identify any cultural resources or cultural resource investigations documented in the area. This work indicated that no surveys or sites were documented in the current project area. All sites and surveys that were found within 1 mi of the current project area are discussed in the previous research section of this report.

Field investigation consisted of an intensive pedestrian survey supplemented with screened shovel tests executed at a 30 m interval. Fieldwork for this project was conducted from February1 to 22, 2011. This cultural resource survey resulted in the identification of one previously unrecorded site (16NA729). This resource is recommended not eligible for the National Register of Historic Places. This recommendation is based on the lack of intact archaeological deposits. Without any connections to significant people or historic events, research potential for these resources is limited.

Based on the findings of the records review and cultural resource survey, no archaeological sites or historic properties listed in, or recommended eligible for, the National Register of Historic Places will be affected by the proposed activities, and cultural resource clearance is recommended.

Note that a principal investigator or field archaeologist cannot grant clearance to a project. Although the decision to grant or withhold clearance is based, at least in part, on the recommendations made by the field investigator, clearance may be obtained only through an administrative decision made by the SHPO.

If any previously unrecorded archaeological materials are encountered during activities in the project area, the SHPO should be notified immediately. If human skeletal material is discovered, the construction activities should cease, SHPO should be contacted immediately, and SHPO Guidelines should be followed.

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APPENDIX A. SCOPE OF WORK

Scope of Services

The proposed project consists of the cultural resource survey of approximately 360 acres that is scheduled for development by the Natchitoches Parish Port. This work will be conducted in accordance with current specifications for conducting fieldwork and preparing cultural resource reports issued by the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development (LA SHPO).

File Search/Archival Research/APE

A review of the archaeological site files maintained by the LASHPO will be conducted for the proposed project area plus a 1 mile buffer. The result of this review will be summarized in the report.

Field Research

The field investigation will consist of an intensive survey of the proposed area following standard archaeological methods (i.e., pedestrian and shovel test survey). The portions of the project area that cross terrain with good surface visibility (for example plowed/cultivated fields) or characterized by steep slopes (creek bank) will be subject to pedestrian survey. This entails a walking, visual inspection of the ground surface to identify historic and prehistoric artifacts. Portions of the project that are located on relatively flat terrain with poor surface visibility will be shovel tested. This assessment method requires the excavation of screened shovel tests measuring 35-x-35 cm at intervals of 30 m. All archaeological sites and historic structures discovered within the intensive survey area will be recorded following current LA SHPO specifications.

Deliverables

The results of the archival and field investigation will be documented in a detailed written report. The report will conform to the specifications of the LA SHPO. The report will describe all cultural resources located during the investigation and make recommendations for their treatment in relation to potential impacts. In addition, site survey forms and historic structure forms will be prepared for each archaeological site and historic structure recorded with this data submitted to the proper agency.

APPENDIX B. HISTORIC MATERIALS

Table B.1. Historic Artifacts Recovered.

Bag	Site	Unit #	Dep	Group	Class Definition	Type Definition	Count	Combined Attributes	Weight	Vessel Part	Vessel Type	Function	MinDate	MaxDate
001	16NA729	STP	0-20 cm bgs	D	Ceramics	Stoneware	1	Bristol slipped exterior, -, -, Indeterminate interior, -, -, Indeterminate, -, -	6.14	Handle	Indeterminate server	Serving	1780	1925
001	16NA729	STP	0-20 cm bgs	D	Ceramics	Ironstone	1	, -, -, -, -, -, -, -, -	0.97	Rim	Saucer	Place Setting	1830	0
001	16NA729	STP	0-20 cm bgs	D	Ceramics	Whiteware	4	Plain, -, -, -, -, -, -, -, -	2.61	Indeterminate part	-		1830	1930
002	16NA729	STP	0-20 cm bgs	D	Ceramics	Ironstone	1	Undecorated, -, -, -, -, -, -, -, -	0.31	Indeterminate part	-		1830	0
005	16NA729	STP	0-10 cm bgs	D	Ceramics	Whiteware	1	Undecorated, -, -, -, -, -, -, -, -, -	0.43	Rim	Saucer	Place Setting	1830	0
008	16NA729	STP	0-15 cm bgs	D	Ceramics	Stoneware	2	Bristol slipped exterior, -, -, Bristol slipped interior, -, -, Indeterminate, -, -	9.82	-	-		1780	1925
009	16NA729	STP	0-20 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	1.16	-	-		1830	0
010	16NA729	STP	0-20 cm bgs	D	Ceramics	Whiteware	2	Plain, -, -, -, -, -, -, -, -	4.29	-	-		1830	0
013	16NA729	STP	0-10 cm bgs	D	Ceramics	Whiteware	2	Plain, -, -, -, -, -, -, -, -	4.59	-	-		0	0
014	16NA729	STP	0-10 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	3.94	-	-		0	0
016	16NA729	STP	0-21 cm bgs	D	Ceramics	Whiteware	2	Plain, -, -, -, -, -, -, -, -	3.58	-	-		0	0
019	16NA729	STP	0-15 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	1.06	-	-		0	0
020	16NA729	STP	0-25 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	1.65	-	-		0	0
023	16NA729	STP	0-25 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	2.03	-	-		0	0
025	16NA729	STP	0-31 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	1.35	-	-		0	0
029	16NA729	STP	0-23 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	2.59	-	-		0	0
030	16NA729	STP	0-26 cm bgs	D	Ceramics	Whiteware	1	Plain, -, -, -, -, -, -, -, -	5.12	-	-		0	0
031	16NA729	STP	0-20 cm bgs	D	Ceramics	Whiteware	3	Plain, -, -, -, -, -, -, -, -	18.78	-	-		0	0
031	16NA729	STP	0-20 cm bgs	D	Ceramics	Stoneware	1	Albany slipped exterior, -, -, Indeterminate interior, -, -, Indeterminate, -, -	0.43	-	-		0	0
032	16NA729	STP	0-20 cm bgs	D	Ceramics	Stoneware	1	Salt glazed exterior, -, -, Salt glazed interior, -, -, Indeterminate, -, -	1.16	-	-		0	0
033	16NA729	STP	0-14 cm bgs	D	Ceramics	Stoneware	1	Bristol slipped exterior, -, -, Albany slipped interior, -, -, , -, -	5.78	-	-		0	0
035	16NA729	STP	0-16 cm bgs	D	Ceramics	Whiteware	2	Plain, -, -, -, -, -, -, -, -	1.15	-	-		0	0
035	16NA729	STP	0-16 cm bgs	D	Ceramics	Ironstone	1	Plain, -, -, -, -, -, -, -, -	0.24	-	-		0	0
026	16NA729	STP	0-37 cm bgs	A	Construction Material	Brick (measure in inches)	1	Machine made brick: non-vitrified, -, -, -, -, -, -, -	174.02	-	-		0	0
030	16NA729	STP	0-26 cm bgs	A	Construction Material	Brick (measure in inches)	1	Machine made brick: non-vitrified, -, -, , -, -, -, -, -	4.65	-	-		0	0
035	16NA729	STP	0-16 cm bgs	A	Construction Material	Brick (measure in inches)	1	Machine made brick: non-vitrified, , -, -, -, -, -, -, -	1.62	-	-		0	0
001	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	0.42	Indeterminate part	Indeterminate bottle/jar	Bottle - Jar	1903	0
002	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	1.6	-	Canning jar	Bottle - Jar	1903	0
003	16NA729	STP	10-20 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Indeterminate, Clear glass, -, Embossed, -, -, -, -, -	0.79	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
004	16NA729	STP	0-15 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	3.99		Miscellaneous bottle	Bottle - Jar	1903	0
004	16NA729	STP	0-15 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Clear glass, -, -, -, -, -, -, -	2.34	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
005	16NA729	STP	0-10 cm bgs	D	Container Glass	Undiagnostic container fragment	2	, Light green glass, -, -, -, -, -, -, -	8.86	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
005	16NA729	STP	0-10 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Clear glass, -, -, -, -, -, -, -	1.98	-	Mason's patent canning jar	Bottle - Jar	1903	0
006	16NA729	STP	0-10 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Clear glass, -, -, -, -, -, -, -	4.79	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
006	16NA729	STP	0-10 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Amber glass, -, -, -, -, -, -, -	14.83	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
007	16NA729	STP	0-10 cm bgs	D	Container Glass	Other glass container	1	Owens mold, Clear glass, -, Indeterminate, -, -, -, -, Bead	3.08	-	Miscellaneous bottle	Bottle - Jar	1903	1955
008	16NA729	STP	0-15 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	1.86	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
009	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Amethyst glass, -, -, -, -, -, -, -	1.74	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
009	16NA729	STP	0-20 cm bgs	D	Container Glass	Other glass container	1	Glass lid for top seal Mason, -, -, -, -, -, -, -, -	2.75	-	-		1865	1940
009	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Clear glass, -, -, -, -, -, -, -	1.5	-	Indeterminate bottle/jar	Bottle - Jar	1903	0
010	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Aqua glass, -, -, -, -, -, -, -	0.27	-	Indeterminate bottle/jar	Bottle - Jar	0	0
011	16NA729	STP	0-15 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Clear glass, -, -, -, -, -, -, -	1.17	-	Indeterminate bottle/jar	Bottle - Jar	0	0
012	16NA729	STP	0-10 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	2.43	-	Indeterminate bottle/jar	Bottle - Jar	0	0
013	16NA729	STP	0-10 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	0.4	-	Indeterminate bottle/jar	Bottle - Jar	0	0
015	16NA729	STP	0-10 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Amethyst glass, -, -, -, -, -, -, -	9.65	-	Indeterminate bottle/jar	Bottle - Jar	0	0
016	16NA729	STP	0-21 cm bgs	D	Container Glass	Undiagnostic container fragment	3	Fragment, Clear glass, -, -, -, -, -, -, -	4.42	-	Indeterminate bottle/jar	Bottle - Jar	0	0
017	16NA729	STP	0-21 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Amber glass, -, -, -, -, -, -, -	0.5	-	Indeterminate bottle/jar	Bottle - Jar	0	0
019	16NA729	STP	0-15 cm bgs	D	Container Glass	Undiagnostic container fragment	3	Fragment, Clear glass, -, -, -, -, -, -, -	4.31	-	Indeterminate bottle/jar	Bottle - Jar	0	0
020	16NA729	STP	0-25 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	2.27	-	Indeterminate bottle/jar	Bottle - Jar	0	0
021	16NA729	STP	0-29 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Light green glass, -, -, -, -, -, -, -	1.46	-	Indeterminate bottle/jar	Bottle - Jar	0	0
022	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	4	Fragment, Clear glass, -, -, -, -, -, -, -	4.85	-	Indeterminate bottle/jar	Bottle - Jar	0	0
023	16NA729	STP	0-25 cm bgs	D	Container Glass	Other glass container	1	Owens mold, Amber glass, -, Indeterminate, -, -, -, -, External thread		-	Indeterminate bottle/jar	Bottle - Jar	1903	1955
024	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	3	Fragment, Clear glass, -, -, -, -, -, -, -	6.08	-	Indeterminate bottle/jar	Bottle - Jar	0	0
027	16NA729	STP	0-25 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Amber glass, -, -, -, -, -, -, -	2.61	-	Indeterminate bottle/jar	Bottle - Jar	0	0
028	16NA729	STP	0-19 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Aqua glass, -, -, -, -, -, -, -	1.48	-	Indeterminate bottle/jar	Bottle - Jar	0	0
028	16NA729	STP	0-19 cm bgs	D	Container Glass	Undiagnostic container fragment	3	Fragment, Clear glass, -, -, -, -, -, -, -	2.87	-	Indeterminate bottle/jar	Bottle - Jar	0	0
029	16NA729	STP	0-23 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Opaque white glass, -, -, -, -, -, -, -	2.06	-	Indeterminate bottle/jar	Bottle - Jar	0	0
029	16NA729	STP	0-23 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	6.43	-	Indeterminate bottle/jar	Bottle - Jar	0	0
029	16NA729	STP	0-23 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Amethyst glass, -, -, -, -, -, -, -	32.8	-	Indeterminate bottle/jar	Bottle - Jar	0	0
030	16NA729	STP	0-26 cm bgs	D	Container Glass	Undiagnostic container fragment	3	Fragment, Amethyst glass, -, -, -, -, -, -, -	5.36	-	Indeterminate bottle/jar	Bottle - Jar	0	0
030	16NA729	STP	0-26 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Light green glass, -, -, -, -, -, -, -	11.84	-	Indeterminate bottle/jar	Bottle - Jar	0	0
030	16NA729	STP	0-26 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Amber glass, -, -, -, -, -, -, -	3.34	-	Indeterminate bottle/jar	Bottle - Jar	0	0
032	16NA729	STP	0-20 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Clear glass, -, -, -, -, -, -, -	1.82	-	Indeterminate bottle/jar	Bottle - Jar	0	0
033	16NA729	STP	0-14 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Amber glass, -, -, -, -, -, -, -	4.45	-	Indeterminate bottle/jar	Bottle - Jar	0	0
033	16NA729	STP	0-14 cm bgs	D	Container Glass	Undiagnostic container fragment	2	Fragment, Clear glass, -, -, -, -, -, -, -	4.44	-	Indeterminate bottle/jar	Bottle - Jar	0	0

Bag	Site	Unit #	Dep	Group	Class Definition	Type Definition	Count	Combined Attributes	Weight	Vessel Part	Vessel Type	Function	MinDate	MaxDate
034	16NA729	STP	0-21 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	1.93	-	Indetermiate bottle/jar	Bottle - Jar	0	0
035	16NA729	STP	0-16 cm bgs	D	Container Glass	Undiagnostic container fragment	3	Fragment, Clear glass, -, -, -, -, -, -, -	9.43	-	Soda / Mineral water	Bottle - Jar	0	0
036	16NA729	STP	0-21 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	9.15	-	Indetermiate bottle/jar	Bottle - Jar	0	0
037	16NA729	STP	0-23 cm bgs	D	Container Glass	Undiagnostic container fragment	1	Fragment, Clear glass, -, -, -, -, -, -, -	4.66	-	Indetermiate bottle/jar	Bottle - Jar	0	0
004	16NA729	STP	0-15 cm bgs	D	Glass Tableware	Undiagnostic fragment	1	, Amethyst glass, -, -, Indeterminate, -, -, , -	0.24	-	-		1880	1916
005	16NA729	STP	0-10 cm bgs	D	Glass Tableware	Undiagnostic fragment	1	, Amethyst glass, -, -, Indeterminate, -, -, , -	1.54	-	-		1880	1916
009	16NA729	STP	0-20 cm bgs	D	Glass Tableware	Undiagnostic fragment	1	, Aqua glass, -, -, Indeterminate, -, -, , -	1.07	-	-		0	0
030	16NA729	STP	0-26 cm bgs	D	Glass Tableware	Undiagnostic fragment	1	Fragment, Opaque white glass, -, -, -, -, -, -, -	1.4	-		Bottle - Jar	0	0
031	16NA729	STP	0-20 cm bgs	D	Glass Tableware	Undiagnostic fragment	1	, Clear unleaded glass, -, -, Indeterminate, -, -, , -	2.67	-	-		0	0
009	16NA729	STP	0-20 cm bgs	A	Nails	Indeterminate	4	, , -, -, -, -, -, -, -	7.08	-	-		0	0
030	16NA729	STP	0-26 cm bgs	A	Nails	Indeterminate	1	, -, -, -, -, -, -, -, -	20.75	-	-		0	0
							115							