

Contract No. DACW29-97-D-0018
Delivery Order 0019

PHASE I CULTURAL RESOURCES SURVEY AND ARCHEOLOGICAL INVENTORY OF THE ALHAMBRA TO HOHEN-SOLMS AND HOHEN-SOLMS TO MODESTE PROJECT ITEMS, ASCENSION AND IBERVILLE PARISHES, LOUISIANA

FINAL REPORT
AUGUST 2000

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New Orleans, Louisiana 70160-0267

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204 Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	August 2000	Final Report July – September 1999

4. TITLE AND SUBTITLE
Phase I Cultural Resources Survey and Archeological Inventory of the Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items, Ascension and Iberville Parishes, Louisiana

5. FUNDING NUMBERS

6. AUTHORS
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8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Army Corps of Engineers, New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

12a. DISTRIBUTION/AVALIABILITY STATEMENT
Unclassified/Unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

This document presents the results of Phase I cultural resources survey of the Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items in Ascension and Iberville Parishes, Louisiana. This survey was conducted by R. Christopher Goodwin & Associates, Inc., during July, August, and September of 1999 R. Christopher Goodwin & Associates, Inc.; it was performed on behalf of the U.S. Army Corps of Engineers, New Orleans District. The Areas of Potential Effect consists of that portion of the batture that lies between the extant flood control structure and a series of borrow pits excavated to construct the present levee. This area measures approximately 10 to 15 m (32.8 to 49.2 ft) in width. The Alhambra to Hohen-Solms Project Item measures approximately 4,300 m (14,107.6 ft) in length and it extends from a point west of the town of Cannonburg to a point east of the town of Hohen-Solms, i.e., from River Mile 191 to 185-R. The Hohen-Solms Project Item measures approximately 5,100 m (16,732.3 ft) in length and it extends from a point east of the town of Hohen-Solms to a point south of the town of Philadelphia Point, i.e., from River Mile 185 to 179-R.

Prior to fieldwork, the proposed project items were stratified into 14 survey segments, each of which was characterized as possessing high, moderate, or low probabilities for containing intact cultural deposits. Areas characterized as having a low potential for containing intact cultural deposits were subjected to pedestrian survey only; no backhoe trenches were excavated in these areas. In areas designated as having a high probability for possessing intact cultural deposits, backhoe trenches were excavated at 30 m (98.4 ft) intervals. In moderate probability areas, backhoe trenches were spaced at 50 m (164 ft) intervals. All backhoe trenches were excavated to a depth of 200 cmbs (78.7 inbs), to sterile clay or clay-like subsoil, or until excessive amounts of groundwater impeded further excavations. A total of 14 ha (34.8 ac) of land were examined for cultural resources as a result of this investigation.

This investigation resulted in the identification and recordation of eight archeological sites (Sites 16AN68 -16AN70 in Ascension Parish and Sites 16IV48 - 16IV52 in Iberville Parish. The results of survey indicate that Sites 16IV49 and 16IV50 retain intact cultural deposits that possess good research potential. These sites are located within the Areas of Potential Effect associated with the Alhambra to Hohen-Solms project item and they contain domestic cultural deposits dating from the nineteenth to early twentieth century. Site 16IV49 also is composed partially of the remains of the Braziel Baptist Church and cemetery complex. While the church was moved to its present location prior to new levee construction in 1932, it appears, based on the preliminary results of this Phase I cultural resources survey and archeological inventory, that the entire cemetery likely was not relocated at that time; thus, it is possible that interments remain within the Area of Potential Effect. Both of these sites were assessed as eligible under criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4[a-d]). Avoidance of or mitigation of Sites 16IV49 and 16IV50 is recommended prior to the initiation of the proposed concrete slope paving project.

The remaining three sites identified within Iberville Parish, Louisiana also were identified within the Areas of Potential Effect associated with the Alhambra to Hohen-Solms project item (16IV48, 16IV51, and 16IV52). Fieldwork conducted at these sites indicates they may possess intact cultural deposits and research potential. Site 16IV48 consists of a domestic occupation dating from the nineteenth to early twentieth century. In addition, Site 16IV51 possesses domestic cultural deposits dating from the late eighteenth to early twentieth century, while Site 16IV52 retains domestic cultural deposits dating from the early nineteenth to early twentieth century. Site 16IV48 does not retain the qualities of significance because it lacks intact cultural features and has little, if any, research potential research potential, Sites 16IV51 and 16IV52 may possess the qualities of significance as defined by National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Thus, Phase II National Register eligibility testing of Sites 16IV51 and 16IV52 is recommended.

A total of three archeological sites (16AN68 - 16AN70) were identified and recorded during Phase I cultural resources survey and archeological inventory of the Hohen-Solms to Modeste project item in Ascension Parish, Louisiana. The results of fieldwork suggest that Site 16AN69 and 16AN70 both retain intact cultural strata and features and good research potential. These sites date from the late eighteenth to early twentieth century and the early nineteenth to early twentieth century, respectively. Sites 16AN69 and 16AN70 were assessed as eligible under criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is recommended that Sites 16AN69 and 16AN70 either be avoided or subjected to data recovery excavations prior to the implementation of the U.S. Army Corps of Engineers, New Orleans District's concrete slope paving project.

Finally, Site 16AN68 also was identified and recorded during Phase I cultural resources survey and archeological inventory of the Hohen-Solms to Modeste project item in Ascension Parish, Louisiana. Site 16AN68 may possess intact cultural deposits; however, it does not contain intact cultural features and it retains little, if any, research potential. It was determined in consultation with the Division of Archaeology, Department of Culture, Recreation, and Tourism, that Site 16AN68 does not retain the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Site 16AN68 is recommended.

14. SUBJECT TERMS
USACE
Ascension Parish
Braziel Baptist Church and Cemetery
Iberville Parish
Historic Archeology

15. NUMBER OF PAGES
540

PRICE CODE

16. SECURITY CLASSIFICATION OF REPORT	17. SECURITY CLASSIFICATION OF THIS PAGE	18. SECURITY CLASSIFICATION OF ABSTRACT	19. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	SAR

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)

Prescribed by ANSI Std. Z39-18
298-102

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT. CORPS OF ENGINEERS
P.O. BOX 60267
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ATTENTION OF:

August 14, 2000

Planning, Programs, and
Project Management Division
Environmental Planning and
Compliance Branch

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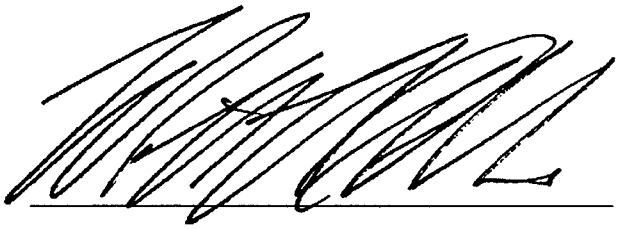
This cultural resource effort was designed and guided by the U.S. Army Corps of Engineers, New Orleans District, as part of our cultural resource management program. The authors' conducted an intensive pedestrian survey and testing investigation in support of two proposed levee improvement projects along the right descending bank of the Mississippi River between river miles 179 and 191. We concur with the authors' findings and recommendations. The Louisiana State Historic Preservation Officer also concurs with the authors' conclusions and recommendations.

Edwin Lyon
Contracting Officer's
Representative

David Carney
Acting Chief, Environmental
Planning and Compliance
Branch

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FINAL REPORT



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August 2000

For

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CHAPTER I

INTRODUCTION

This document presents the results of Phase I cultural resources survey and archeological inventory of two proposed project items in Ascension and Iberville Parishes, Louisiana (Figure 1). These project items include the Alhambra to Hohen-Solms Project Item and the Hohen-Solms to Modeste Project Item (Figure 2 [oversized map attached to back of this report]). This investigation was completed by R. Christopher Goodwin & Associates, Inc., in July, August, and September of 1999 on behalf of the U.S. Army Corps of Engineers, New Orleans District, pursuant to Contract DACW29-97-D-0018, Delivery Order 19. All fieldwork was performed in accordance with the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969, as amended; and *Louisiana's Comprehensive Archaeological Plan* (Smith et al. 1983); and the Scope of Work drafted by the U.S. Army Corps of Engineers, New Orleans District.

Project Description

Both of the current project items are located along the right descending bank of the Mississippi River in the vicinity of the Ascension/Iberville Parish boundary (Figure 2: oversized map). They are situated between the right descending bank of the Mississippi River and Louisiana State Highway 405. The Alhambra to Hohen-Solms Project Item measures approximately 4,300 m (14,107.6 ft) in length and it extends from a point west of the town of Cannonburg to a point east of the town of Hohen-Solms, i.e., from River Mile 191 to 185-R. The Hohen-Solms Project Item measures approximately 5,100 m (16,732.3 ft) in length and it extends from a point east of the town of Hohen-Solms to a point south of the town of Philadelphia Point, i.e., from River Mile 185 to 179-R.

Both project items were surveyed for cultural resources in anticipation of additions to and upgrades of the existing artificial flood control levee by the U.S. Army Corps of Engineers, New Orleans District. According to that agency, the currently proposed construction plans are designed to:

> . . . enlarge and improve a section of levee along the right descending bank of the Mississippi River between river miles 179 and 191." As a result, "the existing levee will be slightly raised and its slope re-contoured at specific locations. Borrow and fill material will come from the batture in front of the existing levee. Borrow excavations will not exceed 12 feet in depth. Concrete slope pavement will begin approximately 3 to 4 feet below the base of the levee following the excavation of a 12 to 15-foot-wide toe trench. No construction activity will take place on the landward side of the levee. Construction activity will take place between 50 and 75 feet out from the base of the levee."

The current investigation consisted of a sample survey; thus, only specific portions of the project items, i.e., areas with a moderate or high probability for containing intact cultural deposits, were examined. The research design and field methods utilized in completing this investigation are reviewed briefly below.

Research Design and Field Methods

The current investigation was designed to identify, record, and assess the distribution of all

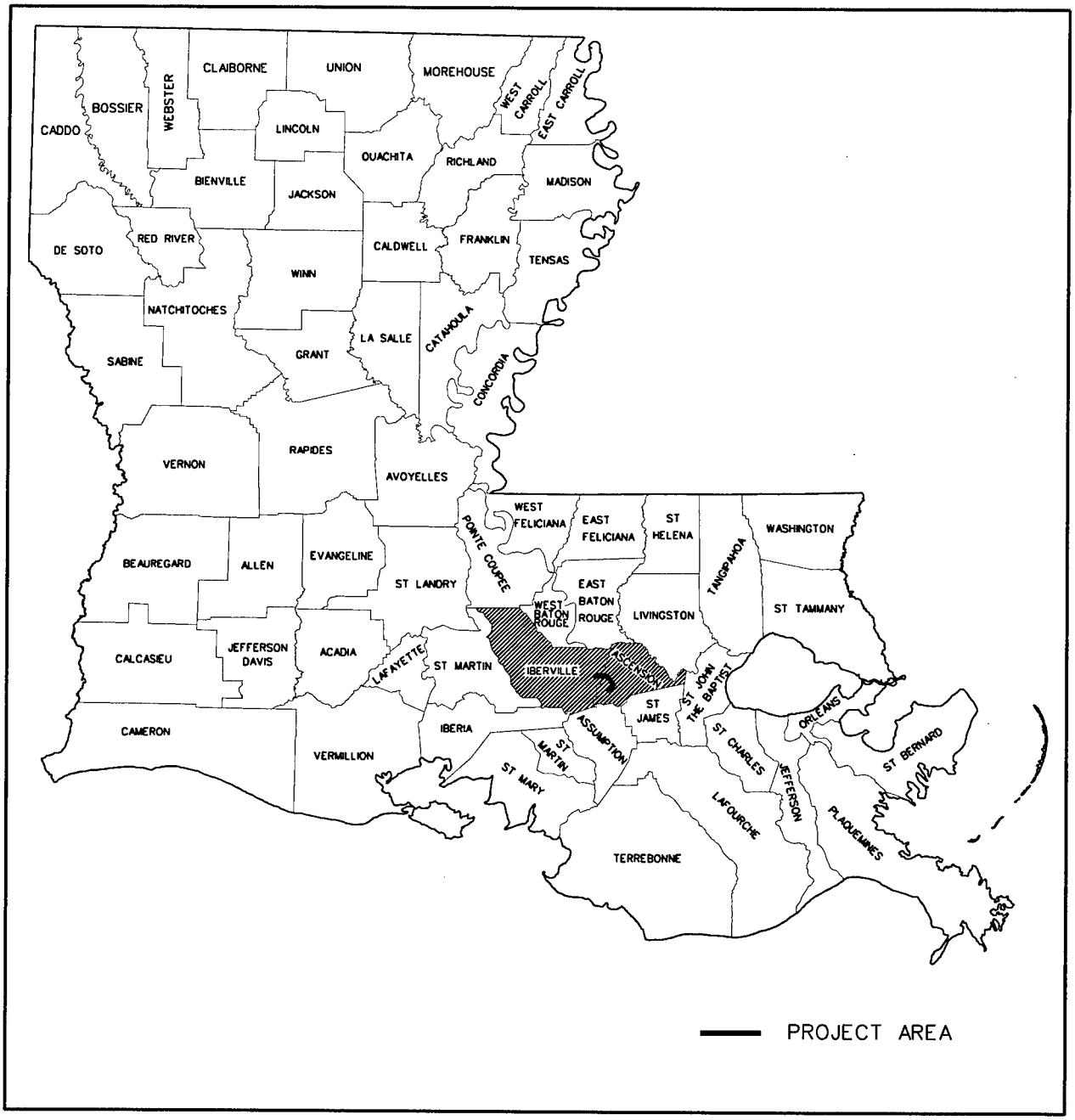


Figure 1. **Map of Louisiana depicting the location of the proposed Alhambra to Hohen-Solms Project Item and the Hohen-Solms to Modeste Project in Ascension and Iberville Parishes, Louisiana. The proposed project items are highlighted in boldface.**

cultural resources situated within the Areas of Potential Effect associated with the Alhambra to Hohen-Solms Project Item and the Hohen-Solms to Modeste Project Item. Since this investigation was designed as a sample survey, the Areas of Potential Effect were stratified into areas with a low, moderate, or high probability for containing intact cultural deposits. This stratification was completed prior to undertaking fieldwork. Only those areas designated with a moderate or high probability for containing intact cultural deposits were examined during survey by subsurface testing.

Areas of high probability for containing intact cultural deposits were designated on the basis of several natural and cultural factors. During the design of the survey methods, several layers or "overlays" of natural features, as well as identifiable and potentially identifiable cultural features were digitized and compiled in a map of the project reach. These natural and cultural features included changes in various Mississippi River bankline locations over the last 100 years or so; the positions of modern artificial flood control structures; the locations of modern disturbances, e.g., natural gas pipelines and buried power lines; and the positions of extant historic period standing structures and other potentially identifiable cultural features noted on historic period maps of the area. The latter included historic period landings and numerous structures, some of which were likely related to local plantations and which may have been worker cabins, sheds, or barns.

Areas with a moderate probability for containing intact archeological components were designated more on the basis of natural than cultural criteria. Areas of moderate probability consisted of those areas that fell between the historic period banklines of the Mississippi River and the present artificial flood control levee. Detailed map analyses, however, suggested that these moderate probability areas did not contain cultural features such as stores, landings, or other identifiable structures, at least none were portrayed on the examined maps.

Fieldwork associated with this investigation consisted of a combination of pedestrian reconnaissance and backhoe trenching; all survey was limited to the Area of Potential Effect associated with each of the proposed project items. A multistaged approach was utilized to complete the fieldwork for this project. This approach initially consisted of pedestrian survey within the Areas of Potential Effect, as well as the recordation and preliminary assessment of all identified cultural resources. After the completion of this portion of the investigation, backhoe trenches were excavated systematically in those areas where cultural resources had been identified on the historic period maps and/or where the probability for locating intact archeological deposits was considered to be either moderate or high. In high probability areas, backhoe trenches were excavated at 30 m (98.4 ft) intervals, whereas in moderate probability areas, backhoe trenches were excavated at 50 m (164 ft) intervals. A total of 14 ha (34.8 ac) was surveyed during this investigation.

Project Results

This Phase I cultural resources survey resulted in the identification and recordation of eight archeological sites (Sites 16IV48 - 16IV52 in Iberville Parish and Sites 16AN68 – 16AN70 in Ascension Parish). Each site is discussed briefly below.

Site 16IV48

Site 16IV48 consists of a nineteenth to early twentieth century historic period artifact scatter situated within Sections 8 and 9 of Township 10S, Range 13E (Figure 2: oversized map); it is oblong in shape and it encompasses and area that measures approximately 1.29 ac (0.52 ha) in area. The site was identified within Segment AHP-1a, i.e., in High Probability Area #1a, of the Alhambra to Hohen-Solms project item. During survey, 170 historic period artifacts and eight faunal specimens were recovered from the site area. The historic period artifacts consisted of 7 historic period ceramic sherds, 50 brick fragments, 1 piece of mortar, 64 glass shards, 47 metal artifacts, and 1 wood corner molding fragment The faunal specimens consisted of 1 cow tibia fragment, 4 Virginia oyster shell fragments, and 3 unidentified mammal bone fragments. Domestic artifacts recovered from Site 16IV48 included historic period ceramic sherds, glass shards, and iron can fragments. Temporally diagnostic artifacts recovered from the site included opaque white/milk glass, machine-made bottle glass, turn paste mold bottle glass, machine-cut nails, and a single transfer-printed whiteware sherd.

Archeological data collected during survey indicate that Site 16IV48 may contain intact cultural deposits; it likely is associated with one or more historic period buildings that are depicted on Mississippi River Commission maps of the area, as well as those shown on the design plans for the Bayou Goula New Levee setback. The latter map was produced in 1932 by the Office Board of State Engineers. This historic period archeological site may possess intact cultural deposits; however, it does not contain intact cultural features. After consultation with the Division of Archaeology of the Department of Culture, Recreation, and Tourism, it was determined that Site 16IV48, since it retains little, if any research potential, does not possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Site 16IV48 is recommended.

Site 16IV49

Site 16IV49 consists of a nineteenth to early twentieth century historic period artifact scatter located within Sections 7 and 8 of Township 10S, Range 13E (Figure 2: oversized map). The site was identified within Segment AHP-1b, i.e., in High Probability Area #1b of the Alhambra to Hohen-Solms project item. It is oblong in shape and it encompasses and area that measures approximately 1.22 ac (0.48 ha) in size. As a result of this investigation, 142 historic period artifacts and 11 faunal specimens were recovered from the site area. The historic period material consisted of 12 historic period ceramic sherds, 28 architectural artifacts, 1 piece of architectural stone, 26 glass shards, 74 metal artifacts, and 1 synthetic artifact. These artifacts included a variety of domestic artifacts, such as historic period ceramic sherds, bottle glass shards, and a cast iron stove part. Temporally diagnostic artifacts recovered from Site 16IV49 included machine-made glass shards, turn paste mold glass shards, tooled lip glass, cup bottom mold glass shards, wire nails, machine-cut nails, whiteware sherds, and ironstone sherds. In addition, 11 faunal specimens were recovered from the site. These consisted of 6 oyster shell fragments, 1 *Rangia* clam shell fragment, and 4 unidentified mammal bone fragments.

In addition, 17 human bone fragments also were recovered during delineation of the site. These fragments consisted of 1 canine, 1 incisor, 2 molars, 2 premolars, 1 superior eye orbit fragment, 1 tooth bearing element, 2 mastoid fragments, and 7 miscellaneous cranial bones. They were identified in association with the single decorative casket element recovered during delineation testing of Site 16IV49 All excavation in the area was halted after identification of the human remains and all delineation backhoe trenches were backfilled completely.

After additional historical research, it was determined that the human remains likely represent an interment associated with the Braziel Baptist Church and cemetery complex, which is depicted on the 1932 design plans for the Bayou Goula New Levee setback. In accordance with regulations concerning the unexpected discovery of human burials, the identification of human remains was reported to the Iberville Parish Sheriff and the coroner. A full discussion of the human remains, the Braziel Baptist Church and cemetery complex, and recommendations for relocation of the cemetery will be discussed in a separate report to be submitted to the U.S. Army Corps of Engineers, New Orleans District by R. Christopher Goodwin & Associates, Inc.

Archeological data collected from Site 16IV49 indicate that it consists of both an intact nineteenth to early twentieth century domestic occupation and the Braziel Church and cemetery complex. These archeological deposits associated with the site retain excellent research potential and the site was assessed as significant applying criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Avoidance or mitigation of the proposed impacts to Site 16IV49 prior to the installation of the concrete slope paving and levee re-contouring is recommended.

Site 16IV50

Site 16IV50 also was characterized as a nineteenth to early twentieth century historic period artifact scatter; it is situated within Sections 2 and 3 of Township 10S, Range 13E (Figure 2: oversized map). This site is oblong in shape and it encompasses and area that measures approximately 1.26 ac (0.51 ha) in size. This site

was identified within Segment AHP-2a, i.e., in High Probability Area #2a, of the Alhambra to Hohen-Solms project item. A total of 181 historic period artifacts and 13 faunal specimens were recovered from the site area during backhoe trenching. The historic period artifacts consisted of 58 historic period ceramic sherds, 18 pieces of brick, 64 glass shards, and 41 metal artifacts. In addition, 13 faunal specimens were recovered from the site area. They consisted of 1 pig ulna fragment, 1 cow tibia fragment, 1 cow rib fragment, and 1 unidentified mammal humerus fragment, and 9 pieces of unidentified mammal bone. Domestic artifacts recovered from Site 16IV50 included historic period ceramic sherds, porcelain buttons, glass shards, and machine-cut nails. Temporally diagnostic artifacts recovered from the site included whiteware, yellowware, Albany slip-glazed stoneware, opaque white/milk glass, machine-made bottle glass, tooled lip bottle glass, pressed glass, amethyst-colored glass, and machine-cut nails.

In addition a single cultural feature was identified and recorded during backhoe trenching at Site 16IV50. This feature appeared to be a builder's trench that measured approximately 60 cm (23.6 in) in width; it extended to a depth of at least 115 cmbs (45.3 inbs). Excavation of the feature was terminated at 115 cmbs (45.3 inbs) and the feature was covered with plastic and backfilled in order to preserve it in situ. Artifacts recovered from the feature included whiteware sherds, brick fragments, glass shards, and sheet metal fragments; all of these artifacts date from the nineteenth century.

Data collected during survey indicate that Site 16IV50 consists of an intact nineteenth to early twentieth century domestic occupation that likely is associated with the remains of at least one, and possibly more, historic period dwellings that once stood in the area. This site was assessed as significant under criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Avoidance or mitigation of the proposed impacts to Site 16IV51 is recommended prior to the installation of the concrete slope paving and levee recontouring.

Site 16IV51

Site 16IV51 consists of a late eighteenth to early twentieth century historic period artifact scatter located within Section 14 of Township 10S, Range 14E (Figure 2: oversized map); it is oblong in shape and it encompasses and area that measures approximately 0.65 ac (0.26 ha) in extent. The site was identified within Segment AHP-2b, i.e., in High Probability Area #2a, of the Alhambra to Hohen-Solms project item. A total of 55 historic period artifacts and 30 faunal specimens were recovered from the site area during survey. The historic period artifacts consisted of 29 historic period ceramic sherds, 5 pieces of brick, 8 glass shards, 11 metal artifacts, 1 limestone fragment, and 1 piece of unidentifiable fired earth. Faunal specimens recovered from the site area consisted of 1 pig molar, 2 pig premolars, 2 pig canines, 5 unidentified pig tooth fragments, 3 pig tibia fragments, 5 cow long bone shaft fragments, 7 unidentified mammal bone fragments, and 5 unidentified vertebrate bone fragments. Domestic artifacts recovered from Site 16IV51 included both historic period ceramic sherds and nails. Temporally diagnostic artifacts recovered during survey of Site 16IV51 consisted of finger-painted and mocha-decorated creamware; transfer-printed, annular-decorated, and scalloped-rim pearlware; transfer-printed and mocha-decorated white-ware, and; machine-cut, wire, and hand-wrought nails.

Data collected from Site 16IV51 indicate that it may possess intact domestic cultural deposits that date from the late eighteenth to early twentieth century. These deposits may be associated with one or more historic period buildings depicted on Mississippi River Commission maps of the area and the site may possess research potential. This site was assessed as potentially significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4[a-d]). Phase II National Register testing and evaluation of Site 16IV51 is recommended.

Site 16IV52

Site 16IV52 consists of an early nineteenth to early twentieth century historic period artifact scatter located within Sections 4 and 5 of Township 10S, Range 13E (Figure 2: oversized map);

it encompasses an area that measures approximately 0.48 ac (0.19 ha) in size and it is oblong in shape. The site was identified within Segment AMP-2, i.e., in Moderate Probability Area #2, of the Alhambra to Hohen-Solms project item. As a result of this investigation, 65 historic period artifacts were recovered from the site area; no faunal specimens were recovered during pedestrian survey and backhoe trenching of the immediate area. The historic period artifact assemblage included 27 historic period ceramics, 5 pieces of brick, 30 glass shards, and 3 metal artifacts. Domestic artifacts recovered from Site 16IV52 included both historic period ceramics and glass shards. Temporally diagnostic artifacts recovered from Site 16IV51 consisted of whiteware, pearlware, yellowware, Albany slip-glazed stoneware, tooled-lip glass shards, turn paste mold glass shards, and wire nails.

In addition, Site 16IV52 produced evidence of a single cultural feature. This probable builder's trench or brick pier measured approximately 70 cm (27.6 in) in width and it was noted in plan view at a depth of approximately 60 cmbs (23.6 inbs). Artifacts recovered from this feature consisted of historic period ceramic sherds, brick fragments, and a single glass shard. Based on the recovery of the temporally diagnostic historic period ceramic sherds, it appears that the feature dates from the early to mid nineteenth century.

Data collected from Site 16IV52 indicate that it may consist of an intact early nineteenth to early twentieth century domestic occupation that possibly is associated with one or more historic period buildings depicted on Mississippi River Commission maps of the area. This site may possess research potential. Site 16IV52 may possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Phase II National Register eligibility testing of this potentially significant cultural resource is recommended.

Site 16AN68

Site 16AN68 consists of a nineteenth to early twentieth century historic period artifact scatter located within Sections 44, 45, and 46 of Township 10S, Range 14E (Figure 2: oversized map). The site was identified within Segment HSMP-2, i.e., in Moderate Probability Area #2, of the Hohen-Solms to Modeste project item. It is oblong in shape and it encompasses an area that measures approximately 1.07 ac (0.43 ha) in size. A total of 67 historic period artifacts were recovered from Site 16AN68; no faunal material was recovered as a result of this investigation. The historic period artifacts consisted of 40 historic period ceramic sherds, 4 pieces of brick, and 23 glass shards. Domestic artifacts recovered from Site 16AN68 were limited to historic period ceramic sherds and glass shards. Temporally diagnostic artifacts recovered during survey of Site 16AN68 included decal-decorated, transfer-printed, plain, underglazed hand-painted white-ware, engine-turned pearlware, mold-decorated and plain ironstone, opaque white/milk glass, cup bottom mold bottle glass, machine-made bottle glass, and blown-in-mold bottle glass.

Archeological data collected from Site 16AN68 indicate that the site may contain intact cultural deposits; however, this site does not appear to be associated with any of the historic period structures depicted on the Mississippi River Commission maps of the area. Despite containing possible intact cultural deposits, Site 16AN68 did not produce evidence of intact cultural features or substantive research potential. It was determined in consultation with the Division of Archaeology of the Department of Culture, Recreation, and Tourism, that Site 16AN68 does not possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Site 16AN68 is recommended.

Site 16AN69

Site 16AN69 consists of a late eighteenth to early twentieth century historic period artifact scatter located within Sections 40 and 41 of Township 10S, Range 14E (Figure 2: oversized map). This site is oblong in shape and it encompasses and area that measures approximately 3.04 ac (1.2 ha) in area. The site was identified within Segment HSHP-1, i.e., in High Probability Area #1, of the Hohen-Solms to Modeste project item. A total of 346 historic period artifacts and 14 faunal specimens were recovered from the site area. The historic period artifacts consisted of 180 historic period ceramic sherds, 13 pieces of brick, 93 glass shards, 57 metal artifacts, 1 piece

of shoe leather, 1 shell button, and 1 unidentified synthetic artifact. The recovered faunal assemblage consisted of 1 oyster shell fragment, 1 cow illium fragment, 1 cow radius midshaft fragment, 2 cow tibia midshaft fragments, 1 unidentified mammal illium fragment, 7 unidentified mammal bone fragments, and 1 unidentified mammal tibia fragment. Domestic artifacts recovered from Site 16AN69 included a variety of historic period ceramic sherds. The temporally diagnostic artifacts recovered during survey of Site 16AN69 consisted of opaque white/milk, machine-made, tooled lip, turn past mold, and amethyst-colored bottle glass; pressed, contact molded, "Depression," and vent-molded glass; mocha-decorated, and annular-decorated creamware; domestic brown and Albany slip-glazed stoneware; "negative" blue transfer-printed, annular-decorated, finger-painted, flow blue, mold-decorated, and transfer-printed pearlware; transfer-printed, annular-decorated, flow blue, overglazed hand-painted, underglazed hand-painted, finger-painted, molded/embossed, scalloped-rim, and transfer-printed whiteware; yellowware; ironstone; hard past porcelain; tin-enameled earthenware; and machine-cut and wire nails.

In addition, two cultural features were noted during backhoe trenching of the Site 16AN69 area. Feature 1 consisted of a shallow deposit, i.e., a 10 cm (3.9 in) thick band, of black (10YR 2/1) silt mixed with charcoal and historic period artifacts. Artifacts recovered from this deposit included a single ceramic figurine fragment, historic ceramic sherds, brick fragments, glass shards, nails, a single unidentified metal fragment; a single shell button, a single unidentified synthetic artifact, and unidentified mammal bone fragments. The feature was exposed at a depth of 86 to 93 cmbs (33.8 to 36.6 cmbs) and it represents a midden feature.

Feature 2, the remains of a probable builder's trench, measured approximately 150 cm (59 in) in width. This feature produced historic ceramic sherds, glass shards, unidentified nails, and faunal specimens.

Archeological data collected during survey indicate that Site 16AN69 consists of an intact late eighteenth to early twentieth century domestic occupation with good research potential; it likely is associated with one or more historic period buildings that once stood in the project area. Site 16AN69 possesses the qualities of significance specified under criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Avoidance of the site or mitigation of the proposed impacts to Site 16AN69 prior to the construction of concrete slope paving and completion of levee recontouring is recommended.

Site 16AN70

Finally, Site 16AN70 consists of a early nineteenth to early twentieth century historic period artifact scatter located within Sections 40 and 41 of Township 10S, Range 14E (Figure 2: oversized map); it is oblong in shape and it encompasses area that measures approximately 1.19 ac (0.48 ha) in area. The site was identified within Segment HSMP-1, i.e., in Moderate Probability Area #1, of the Hohen-Solms to Modeste project item. A total of 691 historic period artifacts and 196 faunal specimens were recovered from the site area. The historic period artifacts consisted of 312 historic period ceramic sherds, 20 pieces of brick, 5 pieces of mortar, 1 piece of marble, 314 glass shards, 36 metal artifacts, and 3 synthetic artifacts. Faunal material recovered from the site area included 5 burned chicken bones, 17 unidentified invertebrate fragments, 95 cow bone fragments, 20 pig bone fragments, 44 unidentified mammal bone fragments, and 15 unidentified vertebrate bone fragments. Domestic artifacts recovered from Site 16AN70 included historic period ceramic sherds, kaolin pipestem and ceramic figurine fragments, glass shards, an iron hoe fragment, shoe leather, and a shell button. Temporally diagnostic artifacts recovered during the investigation of Site 16AN70 included pressed glass; turn paste mold glass; amethyst-colored glass; machine-made, continuous thread lip, and crown finish bottle glass; annular-decorated creamware; salt-glazed domestic gray stoneware; transfer-printed ironstone; decal decorated ironstone; molded/embossed whiteware; "negative" blue transfer-printed, annular-decorated, finger-painted, flow blue, and scalloped-rim pearlware; and machine-cut and wire nails.

In addition, two cultural features were identified. Feature 1 consisted of a shallow deposit, i.e., a 10 cm (3.9 in) thick band, of dark red (2.5YR 3/6) silty clay identified at a depth of

40 to 50 cmbs (15.7 to 19.6 inbs); it may represent the remains of a midden. This feature produced a single whiteware sherd, a single brick fragment; and numerous glass shards.

Feature 2, the partial remains of a structure, was identified between 30 to 40 cmbs (11.8 to 15.7 inbs). The exposed portion produced a single ceramic figurine fragment, porcelain buttons, historic period ceramic sherds, a single flower pot sherd, brick fragments, glass shards, a single iron spike, a single continuous thread screw, nails, unidentified metal fragments, and a single metal toothpaste/ointment tube. No faunal remains were recovered from this feature. Excavation of the feature also revealed, in addition to historic period artifacts, two walls of a structure that were constructed of bricks and mortar.

Archeological data collected during survey indicate that Site 16AN70 consists of an intact early nineteenth to early twentieth century domestic occupation with good research potential. This site likely is associated with one or more historic period buildings that once stood in the area. Site 16AN70 possesses the qualities of significance under criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]. Avoidance of this significant cultural resource or mitigation of the proposed impacts to Site 16AN70 prior to the installation of the concrete slope paving and the completion of the levee re-contouring is recommended.

Recommendations

The current investigation resulted in the identification and recordation of eight historic period sites within the proposed Areas of Potential Effect. During survey, three sites (16AN68 – 16AN70) were identified within the Ascension Parish portion of the proposed project reach, while five sites (16IV48 – 16IV52) were recorded within the Iberville parish portion of the Area of Potential Effect. These eight sites range in date from the late eighteenth to the early twentieth centuries. At least four of these sites (16IV49, 16IV50, 16AN69, and 16AN70) possess intact cultural deposits and research potential; they appear to be associated with historic period structures depicted in Mississippi River Commission maps of the area, as well as on the design plans for the 1932 Bayou Goula New Levee setback, which were produced by the Office Board of Sate Engineers. Avoidance of or data recovery excavations should be performed at these sites prior to the completion of the proposed levee re-contouring and concrete slope paving project effort.

The remaining four sites (16IV48, 16IV51, 16IV52, and 16AN68) may contain intact cultural deposits that range in date from the late nineteenth to early twentieth century. With the exception of Site 16AN68, all of these sites may be associated with historic period structures depicted on the Mississippi River Commission maps of the area, as well as those shown on the design plans for the Bayou Goula New Levee setback. Sites 16IV51 and 16IV52 may possess intact cultural deposits and research potential. These sites may contain the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Phase II National Register eligibility testing of Sites 16IV51 and 16IV52 is recommended. Sites 16IV48 and 16AN68 do not possess research potential or the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Sites 16IV48 and 16AN68 is recommended.

Project Personnel

Mr. William P. Athens, M.A., served as Principal Investigator for this project and he supervised all aspects of the investigation. Mr. David R. George, M.A., A.B.D., acted as Project Manager. Ms. Susan Barrett Smith, B.A., coordinated the historic research for this project. Ms. Charlene Keck, M.A., directed the laboratory analysis; she was assisted by Ms. Rebecca Johnson, B.A., and Mr. James A. Green. Ms. Kari Krause, M.S., served as the Assistant Project Manager and she directed the fieldwork associated with this investigation; she was assisted by Mr. David Stitcher, B.A., Mr. David Roth, B.A., Ms. Stephanie Clayton, B.A., Mr. James Clark, B.A., Mr. Matthew Phillips, B.A., and Ms. Wendy Bosma, B.A.

Organization of the Report

The natural setting of the proposed project reach is presented in Chapter II. It includes a brief overview of the geomorphology, soils,

flora, fauna, and climate of the region. The prehistory of the project reach is outlined in Chapter III. The history of the study area is chronicled in Chapter IV. It consists of a narrative that describes the historic plantations that once existed in the immediate vicinity of the two proposed project items, as well as a general history of the region. A review of all previously recorded archeological sites, previously recorded historic period standing structures, and previously completed cultural resources surveys located within the vicinity of the proposed project items is contained in Chapter V. The field methods used to complete this investigation are discussed in Chapter VI. That chapter also includes a discussion of the laboratory methods and procedures used to process and analyze the cultural material recovered during survey. The results of this investigation, including a description of each identified cultural resource, are described in Chapter VII. A summary and management recommendations are presented in Chapter VIII. A list of artifacts recovered as a result of this investigation is included as Appendix I. State of Louisiana site record forms for Sites 16IV48 – 16IV52 in Iberville Parish and for Sites 16AN68 – 16AN70 in Ascension Parish are contained in Appendix II. A mitigation plan for Sites 16IV49, 16IV50, 16AN69, and 16AN70 is contained in Appendix III.

CHAPTER II

NATURAL SETTING

Introduction

This chapter provides an overview of the geology, physiography, geomorphology, flora, fauna, and climate characteristic of the proposed project reach. For ease of discussion, the chapter has been divided into two major sections. The first section provides a discussion of the geology, physiography, and geomorphology of the two proposed project items. The second section describes the flora, fauna, and climate associated with each of the proposed work areas.

Physiographic and Geologic Setting in the Vicinity of the Alhambra to Hohen-Solms Project Item and the Hohen-Solms to Modeste Project Item

The proposed project reach lies within the Mississippi River deltaic plain subsection of the Gulf segment of the Gulf and Atlantic Coastal Plain province of North America (Murray 1961). The deltaic plain is a flat, low-lying tract of alluvial land that is dominated by two landscapes: (1) broad expanses of intratidal wetlands situated in shallow basins characterized by swamps, marshes, shallow lakes, and tidal channels; and (2) the low, narrow natural levee ridges (meander belts) that flank the present course of the Mississippi River and its numerous abandoned deltaic distributaries. These distributary ridges form a network and system analogous to a skeletal framework, the basic pattern of which has been known and mapped for decades (Fisk 1944; Frazier and Osanik 1965; Kolb and VanLopik 1958) (Figure 3).

Because of its short length and narrow width, the vicinity of the proposed project reach is characterized only by two types of terrain, the natural levee ridge and the adjacent backswamp. The natural levees, the focus of prehistoric and historic period occupation along the Mississippi River, form a flat, but gently sloping, ridge that attains a maximum (crest) elevation of nearly 6 m (20 ft) adjacent to the river channel. From there, the levees slope distally to a mean elevation of less than 3 m (10 ft) in the backswamp areas; i.e., on the landward side of the artificial flood control levees. Surface runoff from the natural levees is toward the backswamp.

Geologically, the deltaic plain overlies the northern portion of the east-west trending Gulf Basin, a deep structural trough or geosyncline where the continental crust, composed of Paleozoic basement rocks, has been depressed and where mostly unconsolidated sediments of fluvial, estuarine, and marine origin accumulated during the Cenozoic Era. These sediments have developed to a thickness of tens of thousands of meters. The basin is still characterized by subsidence and active faulting.

The Mississippi River deltaic plain represents the surface manifestation of a relatively thin, seaward thickening prism of Holocene deltaic and shallow marine deposits that overlie Pleistocene deposits of similar origin (Kolb and VanLopik 1958). The increase in thickness toward the Gulf of Mexico is due at least in part to scouring by the Mississippi River in its present channel and subsequent deposition. The contact between the Holocene prism and the underlying Pleistocene-age deposits is a widely recognized and mapped erosional unconformity (Kolb 1962; Kolb and VanLopik 1958; Saucier 1994).

In general terms, this prism consists of a mixture of clays and silts that grade downward into a series of silts and fine sands (Kolb 1962). The upper half of the prism, which measures

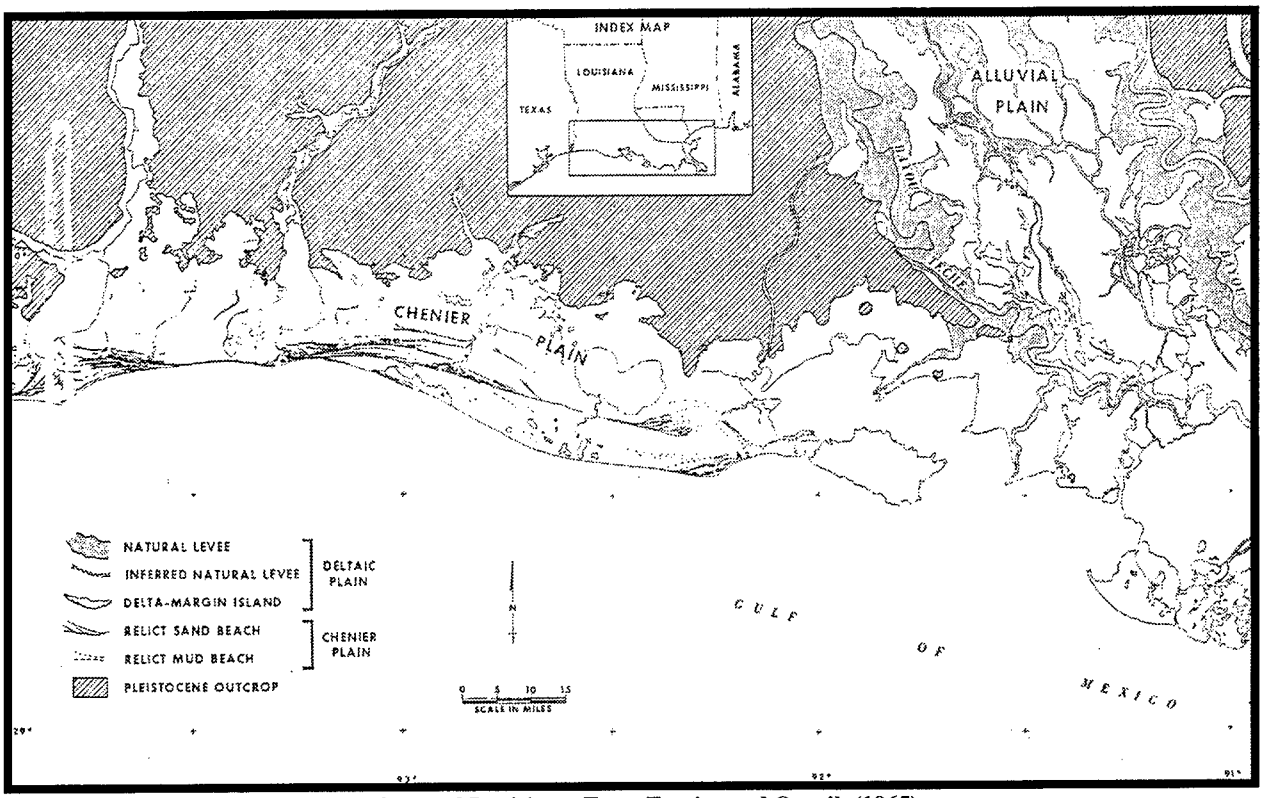


Figure 3. Physiographic features of coastal Louisiana. From Frazier and Osanik (1965).

approximately 9.1 m (30 ft) in thickness, represents sediments laid down by fluvial processes in terrestrial and paludal environments, while the lower half represents sediments laid down by both fluvial and marine processes in paludal to nearshore Gulf environments.

The prism of Holocene deltaic deposits represents a series of distinctive sedimentary cycles initiated by upstream diversions of Mississippi River flow, with each cycle correlating with a discrete delta complex. Each of these cycles resulted in sediments being laid down in multiple environments ranging from freshwater to saline in the dynamic zone of interaction where the river empties into the Gulf. The cumulative result of these cycles has been the net buildup and seaward extension of the deltaic plain. Each delta complex in turn consists of a series of delta lobes, a lobe being defined as that portion of a complex that forms during a relatively short period of time (a matter of centuries) and that can be attributed to a single or discrete set of deltaic distributaries (Saucier 1994). Because of the prevailing influence of subsidence and sea level rise, each lobe typically has experienced a constructional or progradational phase in which fluvial processes dominate, and a subsequent destructional or transgressive phase in which marine processes become progressively more important.

Basic Geologic Controls

Geologic controls that affect the Holocene deltaic plain of the Lower Mississippi River Valley take the form of two prevailing, regional, and interrelated processes: subsidence and sea level rise. These processes are integral factors in the major cyclical landscape and environmental changes that have taken place in this dynamic deltaic plain setting. They are described below.

Subsidence involves five basic factors or natural processes (Kolb and VanLopik 1958). It can be defined simply as the relative lowering of the land surface with respect to sea level and it may involve one or more processes. These include: a) true or actual sea level rise, b) sinking of the basement (Paleozoic) rocks due to fluctuations in the earth's crust, c) consolidation of

the thousands of meters of sediments in the Gulf Basin, d) local consolidation of deposits near the surface due to desiccation and compaction, and/or e) tectonic activity such as faulting. All five processes have been active in southern Louisiana during the Quaternary period (Pleistocene and Holocene epochs) and they have continued into the modern era.

Until the early 1960s, most Gulf Coast geologists believed that the rapid rate of postglacial sea level rise (the Holocene transgression) abruptly slowed some 5,000 years ago when sea level had attained essentially its present level. Since that time, the rate of rise has been relatively slow and it does not represent a major component of subsidence. Calculations of subsidence rates have been made in several portions of the deltaic plain using radiocarbon dates and observations of geologic structures (e.g., Kolb and VanLopik 1958). These calculations indicate that subsidence rates increase sharply from north to south and reach their maximum in the modern delta southeast of New Orleans, whereas they increase less sharply to the north of that point. It is estimated that the rate of subsidence in the region of the proposed project reach for at least the last few centuries has been about 1.0 mm/yr (0.04 in/yr), and it may be accelerating.

Within the last several decades, most geologists have come to realize that sea level did not attain its essentially present level (±1 m) until approximately 3,500 years ago, and about 5,000 years ago, the level was perhaps a meter or more lower than at present. Consequently, the subsidence rate mentioned above is valid for no more than the last 3,500 years; prior to that time, a higher rate for the sea level rise component of subsidence would have made the total subsidence rate much higher. It is now becoming more widely accepted that the rate of sea level rise during the Holocene has been episodic rather than steady, producing a step shape to the sea level rise curve (Penland et al. 1987). Penland et al. (1987), for example, have postulated that between 3,000 and 4,000 years ago, the rate of sea level rise was about 6.0 mm/yr whereas sea level was relatively stationary for about 2,000 years prior to that period.

Geomorphic Processes and Depositional Environments

The proposed project reach lies along the trunk course of the Mississippi River as it cuts through the deltaic plain. Over the past half century, various geologists (see Saucier 1994) have offered several models of deltaic plain stratigraphy and chronology. While the ages of certain of the numerous distributaries and their associations with certain delta complexes have not been firmly established and remain speculative, a basic widely accepted model outlining the overall framework of the deltaic plain and its major components is available (Frazier 1967) (Figure 4).

The Mississippi River trending through the proposed project reach has been the trunk course responsible for the development of six recognized delta lobes of the St. Bernard Complex (Figure 4). While the river discharged through the project reach at least a 4,800-yr period (see discussion below), its discharge has waxed and waned as lobes were being formed in other complexes such as the Lafourche Complex. This means that active sedimentation and natural levee growth have not been continuous in the project reach.

Three environments of deposition are represented in the upper several meters of the Holocene sedimentary sequence in the vicinity of the project reach. Each is discussed below in order of their relative importance. A fourth environment (or series of related environments) is present in the subsurface deposits in the vicinity of the proposed project reach. Although the environment is not directly related to the human occupancy of the project reach, its presence and characteristics are important in understanding the Holocene land-use history of the area.

Natural Levees

Natural levees form along streams or rivers that carry high suspended sediment loads and that periodically overtop their banks. Most natural levee deposits are laid down during floods by sediment-carrying sheet flow that is filtered by heavy vegetation. During times of major flooding, however, overbank flow may become channelized, forming crevasses. Scour pools and in-

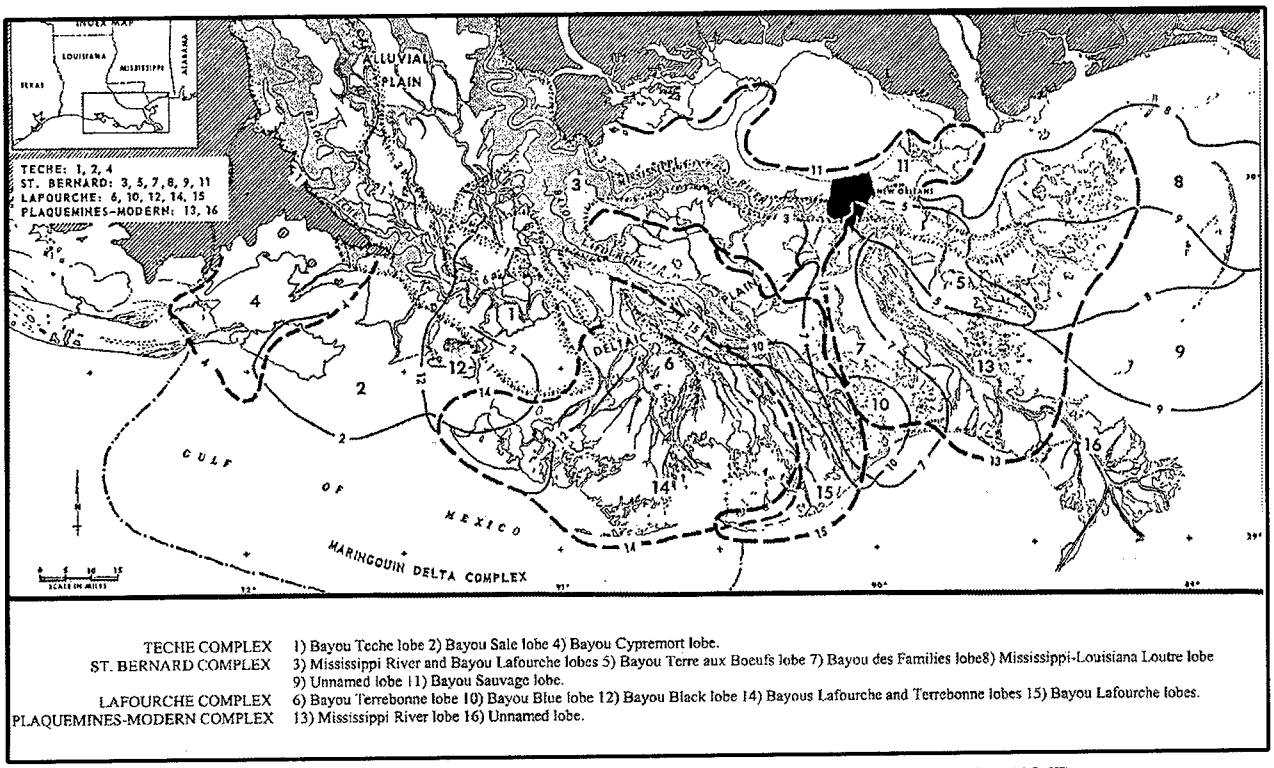


Figure 4. Delta lobes formed by the Mississippi River in the past 6,000 years. From Frazier (1967).

cised channels may form across the natural levee crests and they will be backfilled naturally with silt and fine sand as the flood waters recede. Consequently, either one or both of two depositional patterns may result across the distal natural levee. The first is a fan-shaped crevasse splay that radiates outward from the point of crevassing and that consists of a thin veneer of mostly silts with some clays. The second is a small distributary-like channel (sometimes called a crevasse channel) that extends into the backswamp area flanking the natural levee. The crevasse channel is conspicuous because of a small, downstream-narrowing, flanking natural levee ridge. Flow through the crevasse channel may last no longer than a single major flood event or it may persist over several successive floods. With both the splays and the crevasse channels, a net effect is an unusual widening of the natural levee ridge near the point of crevassing.

According to the published soil survey report on the project area, soils of the higher natural levees are classified as the Commerce series (Spicer et al. 1976, 1977). More distal parts of the natural levees have finer-grained deposits and they exhibit soils classified as Convent series. Before being cleared for agriculture, the vegetation assemblage of the natural levees consisted of mixed, deciduous, hardwood species such as oaks (*Quercus* sp.), bitter pecan (*Carya illinoensis*), red maple (*Acer rubrum*), and green ash (*Fraxinus pennsylvanica*) with an understory dominated by dwarf palmetto (*Sabal minor*).

Backswamps

Backswamps (or inland swamps) are flood basin areas situated between natural levee ridges that receive only the finest sediments (mostly clays) during times of overbank flooding and basin inundation. Backswamps are flat, poorly drained, forested tracts underlain by tens of meters of largely unoxidized gray clays mixed with some silt layers. Considerable organic matter is present throughout the deposits, but layers of pure peat are infrequent and they are restricted to the deeper swamp areas. Backswamp soils are classified as Sharkey or Barbary association and

they support a swamp forest vegetation assemblage characterized by cypress (*Taxodium distichum*) and tupelo (*Nyssa aquatica*).

Point Bar

Areas of point bar accretion result from the process of stream meandering, which involves the erosion and caving of outer banks in bends and the corresponding formation of point bars along inner banks. In the subsurface, point bar deposits extend to the maximum depth of scouring in the migrating channel. The deeper deposits consist of the bed load of the river, which is mostly gray and brown silts and fine to medium sands. They become slightly finer grained in the upper several meters, with laminated clays, silts, and sands present.

Areas of relatively recent point bar accretion are characterized by distinctive sequences of linear, parallel, low, sandy ridges and clay-filled swales. Many of these occur on the batture along the project reach. The orientation of the ridge/swale sequences indicates the direction of movement of the parent channel. Above the lower water plane of the river, point bar deposits grade upward into natural levee deposits, i.e., where vertical accretion becomes dominant over lateral accretion after the channel migrates away from a given point. Where the rate of channel migration is slow, as it has been in the project reach, subsequent natural levee growth can be considerable and it often completely obscures the underlying point bar accretion topography.

Undifferentiated Deltaic Plain

Beneath the natural levee and associated backswamp deposits located in the vicinity of the project reach is a thick sequence of heterogeneous Holocene deposits referred to simply as undifferentiated deltaic plain (Kolb 1962). The sequence directly overlies the Pleistocene erosional surface. Based on subsurface information recovered from elsewhere in southeastern Louisiana (Kolb 1962; Kolb and VanLopik 1958); the sequence conceptually should consist of sediments laid down in several discrete depositional environments. The deepest of these should be a zone of nearshore Gulf deposits representing the transgression of the post-glacial rising sea level across the eroded Pleistocene land surface. Typically these deposits consist mostly of silts and sands with varying amounts of clay and organic debris. Fine-grained sediments are quite limited since the area did not experience Mississippi River sedimentation at that time. The remainder of the Holocene sequence should consist dominantly of Mississippi River marginal deltaic sediments laid down in a shallow prodelta and/or interdistributary environment. These consist of layers of clays, silty clays, and fine sands with abundant shells that represent the formation of the initial delta lobe of the St. Bernard complex. That was a time of slowly rising sea level, considerable subsidence, and a landscape dominated by intratidal marshes, tidal channels, and shallow lakes and bays.

Physiography and Geomorphology in the Vicinity of the Proposed Project Items

The proposed project items are situated in the deltaic plain along the crest of the natural levee ridge of the modern (No. 1) meander belt of the Mississippi River (Figure 5). The backslope of the natural levee extends landward for several kilometers from the proposed project items. A batture ranging from approximately 50 m (164 ft) to 1,200 m (3,937 ft) in width separates the proposed project items from the present river channel. Elevations in the vicinity range from slightly below to just above 6.1 m (20 ft) NGVD and the terrain is flat along the levee crest. In contrast, the batture, which is composed almost entirely of historic period point bar accretion with a minimal natural levee veneer, is up to 1.5 m (5 ft) higher than the surrounding area and it exhibits pronounced ridges and swales that trend parallel to the river channel.

Natural levee deposits, averaging approximately 4.5 m (15 ft) in thickness, overlie older Holocene *deltaic* deposits (e.g., backswamp) within the vicinity of the proposed project items (Saucier 1969, 1994). Where backswamp is present, it averages about 30 m (100 ft) in thickness and it is underlain by a thick mass of coarse-grained substratum deposits. Where point bar is present, the deposits extend to a depth of 30 to 40 m (100 to 131 ft) and they also are underlain by substratum deposits.

Soils of the natural levee backslopes, and presumably beneath the project items per se, have been mapped as a mixture of Commerce silt loam, Commerce silty clay loam, Vacherie

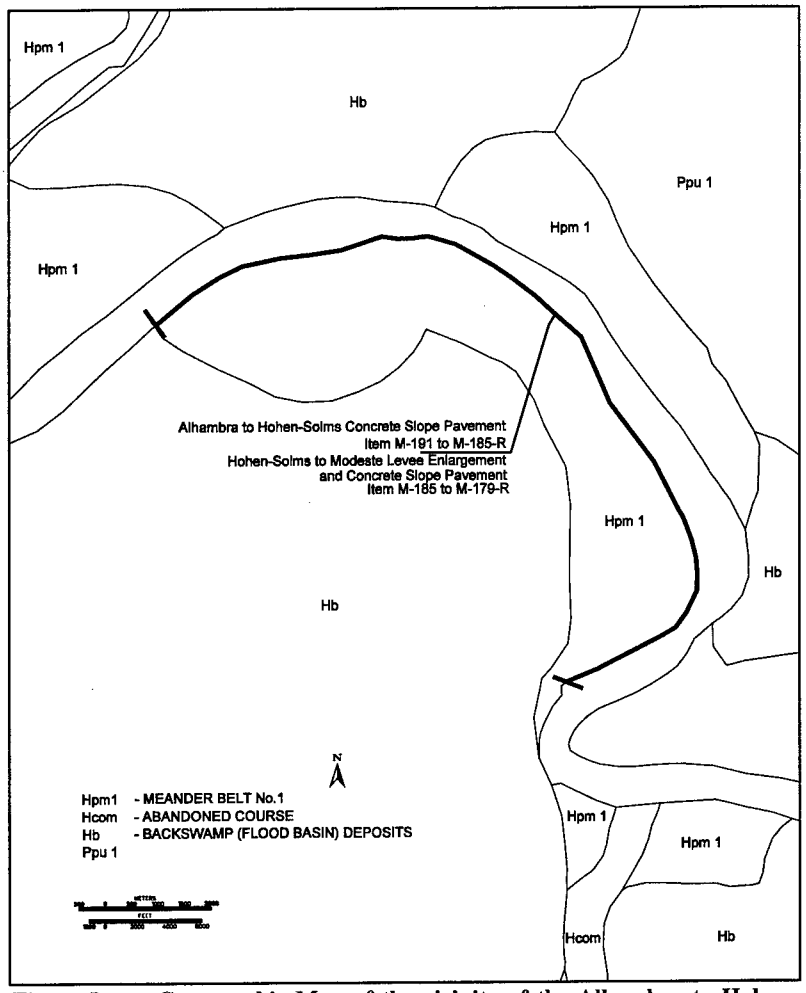


Figure 5. Geomorphic Map of the vicinity of the Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items. Modified from Saucier (1994).

silt loam, Mhoon silty clay loam, Sharkey silty clay loam, and Sharkey clay. These are somewhat poorly drained and moderately to slowly permeable soils that have formed in loamy sediments on natural levees and the alluvial plain. A description of the soil profile in this area is as follows. The surface layer consists of a dark grayish brown silt that measures approximately 25.4 cm (10 in) in thickness. It is underlain by a 71 cm (28 in) thick subsoil; it consists of a grayish brown silty clay loam. Most of the area characterized by these soils is used for agriculture (Spicer et al. 1976, 1977).

On the batture areas, the soils have been mapped only as Convent association or loamy alluvial land and they are described as somewhat poorly drained and frequently flooded soils that have developed between the bankline and the flood control levees. The soil profile on the batture is described as follows. The surface layer measures approximately 35 cm (14 in) in thickness and it consists of a dark grayish brown silt. The subsoil in this area extends to a depth of approximately 127 cm (50 in) below the surface layer and it is characterized by a grayish brown and/or a gray very fine sandy loam mottled with shades of brown clay (Spicer et al. 1976, 1977).

Geologic History and Chronology of the Proposed Project Items

The proposed project items are situated above the entrenched valley of the Mississippi River. The entrenched valley incised into the Pleistocene deposits (Prairie complex) during one or more glacial-stage low sea level stands. The overlying substratum deposits represent glacial outwash laid down during rising sea level, terminating about 12,000 to 11,000 years ago. At that time, the Mississippi River switched from a braided to a meandering regime, marking the beginning of the accumulation of sediments in a backswamp environment. Until about 4,800 years ago, backswamp deposits accumulated across the area. Only minor valley tributaries may have extended onto the floodplain and they flowed south to the Gulf of Mexico.

Beginning with an upstream diversion about 4,800 years ago, the river began enlarging a course through the project reach and constructing a meander belt (No. 2) (Saucier 1994). As the meander belt developed, lateral shifting of the river channel began replacing backswamp deposits with point bar deposits (Figure 5). For perhaps a thousand years, the process was relatively slow because some river flow also was being discharged through the Teche trunk channel (No. 3) into the Teche delta complex to the west.

Approximately 3,800 years ago, the Teche system became inactive and full-flow conditions developed in the channel past the proposed project reach. Certainly, this increased significantly the rate of meandering and probably a majority of point bar deposits post-date that event. An exception may be a somewhat anomalous zone of point bar deposits along the left descending bank between River Miles 182 and 187. The morphology of the ridges and swales and these unusual fineness of these deposits (Saucier 1969) suggest deposition by a smaller channel such as may have existed between approximately 4,800 and 3,800 years ago. Approximately 3,000 to 2,800 years ago, another upstream diversion triggered the abandonment of the No. 2 meander belt and the formation of the No. 1 meander belt. While this had important implications upstream, it was not significant in the proposed project reach since no channel changes took place.

As pointed out above, the batture is essentially coincident with channel migration (and hence point bar accumulation) in historic times. In most of the proposed project reach, the flood-control levee was constructed immediately adjacent to the 1830 bankline. While the batture has not been modified artificially with bank protection, point bar growth has probably effectively ceased because revetments on the opposite banks have prevented further channel migration.

Archaeological Considerations

Initial human presence in the proposed project reach probably coincided with the end of Mississippi River glacial outwash deposition and the beginnings of widespread backswamp conditions. Thus, it is believed that very few locations for permanent settlement were available and that conditions were not suitable for Paleo-Indian subsistence. Similar conditions probably prevailed throughout the Archaic Stage. The first landscapes suitable for significant habitation probably formed about 3,000 years ago when natural levees along the Mississippi River meander belt reached modest sizes. Any sites that may have been occupied earlier than about 1,500 years ago, however, likely will be buried by subsequent levee growth. Sites dating from the late Prehistoric Stage could be present at or near the surface, especially in situations where the flood-control levees lie adjacent to a cutbank and historic-period point bar accretion is absent.

Historic Impacts to the Proposed Project Reach

Within southern Louisiana, historic period use of the Mississippi River meander belts have impacted severely the archeological deposits that lie within them. Agricultural, urban, and industrial developments have disturbed extensive portions of the natural levees and point bars within the meander belts of the Mississippi River. In addition, construction of artificial levees for flood control has led to the destruction of archeological sites along almost the entire length of the modern course of the Mississippi River. The current project reach is located in the vicinity of these types of impacts. The area was farmed heavily throughout the eighteenth, nineteenth, and twentieth centuries. In addition, the construction of numerous access roads, as well as pipelines and buried powerlines, that cross the proposed project reach also have impacted portions of the study area.

Residential and Industrial Development

Obviously, the construction of housing, commercial buildings, and/or industrial facilities has impacted directly the surface and subsurface of portions of both modern and relict Mississippi River natural levees; however, these constructions are confined largely to the landward side of the proposed project reach. As mentioned above, several buried power lines and pipelines cross the Area of Potential Effect from the batture side to the landward side of the proposed project reach. These have impacted relatively narrow, linear corridors located within the Area of Potential Effect in several locations. In addition, shoreline industrial operations also have impacted those areas situated adjacent to the proposed project reach.

Agricultural Disturbance

The natural levees in the vicinity of the project reach are fertile and well drained and have been for the last 150 to 200 years. As a result, they were developed extensively for the production of sugar cane and rice throughout the eighteenth, nineteenth, and twentieth centuries. It is

likely, therefore, that because prior to levee construction the batture was used for sugar cane and rice production.

Construction of Artificial Levees

Artificial levees have been constructed all along the course of the Mississippi River to control annual flooding. The construction of these levees has impacted severely the natural levee and associated archeological deposits buried within it or resting on its surface. Artificial levees associated with the current project items line the southern edge of the Area of Potential Effect. These levees were constructed from fill removed from the batture. As a result, numerous borrow pits line the northern edge of the Area of Potential Effect. The excavation of these borrow pits, sometimes to a depth of several meters, undoubtedly impacted some of the cultural deposits found within the Area of Potential Effect.

Bankline Erosion

The abandoned courses, as well as the present course, of the Mississippi River have carried substantial recreational and commercial traffic. This traffic ranges from small recreation boats to large commercial vessels, including oil tankers and barges. The constant use of the river creates substantial wave action from the wakes of this river-borne traffic. Wave action generated from river traffic, wind, and river currents combine to cause extensive erosion of the unprotected banks of the Mississippi River; thus, archeological sites located along the current, as well as historic, banklines have eroded into the river in many cases. A brief examination of the Louisiana Division of Archaeology files demonstrates that bankline erosion is a serious threat to archeological deposits in the vicinity of the proposed project reach. Many of the previously recorded archeological sites located within the vicinity of the proposed project reach have been damaged significantly by bank erosion. Archeological sites in the vicinity that have suffered from erosion include Sites 16IV147 – 16IV151

Flora in the Vicinity of the Proposed Project Reach

The floral community found on the flood plains of the Mississippi River within southeastern Louisiana consists of a complex mosaic of tree species that form the bottomland hardwood forests (Table 1). Prior to being cleared for agricultural

Table 1. Trees in the Vicinity of the Project Reach.

COMMON NAME	SCIENTIFIC NAME
Florida Maple	*Acer barbatum*
Chalk Maple	*Acer leucoderme*
Ashleaf Maple (Box-Elder)	*Acer negundo*
Red Maple	*Acer rubrum*
Silver Maple	*Acer saccharinum*
Red Buckeye	*Aesculus pavia*
Downy Juneberry	*Amelanchier arborea*
Hercules-Club	*Aralia spinosa*
Common (Tall) Pawpaw	*Asimina triloba*
Groundsel-Tree	*Baccharis halimifolia*
River Birch	*Betula nigra*
Gum (Woolly) Bumelia	*Bumelia lanuginosa*
Buckthorn Bumelia	*Bumelia lycioides*
Ironwood	*Carpinus caroliniana*
Water Hickory (Bitter Pecan)	*Carya aquatica*
Bitternut Hickory	*Carya cordiformis*
Pignut Hickory	*Carya glabra*
Pecan	*Carya illinoenis*
Mockernut Hickory	*Carya tomentosa*
Allegheny (Eastern) Chinkapin	*Castanea pumila*
Southern (Lowland) Hackberry	*Celtis laevigata*
Dwarf (Upland) Hackberry	*Celtis tenuifolia*
Buttonbush	*Cephalanthus occidentalis*
Redbud	*Cercis canadensis*
Fringetree	*Chionanthus virginicus*
Roughleaf Dogwood	*Cornus drummondii*
Flowering Dogwood	*Cornus florida*
Common Persimmon	*Diospyros virginiana*
Southeastern Coralbean	*Erythrina herbacea*
Beech	*Fagus grandifolia*
Swamp Forestiera	*Forestiera acuminata*
Green Ash	*Fraxinus pennsylvanica*
Pumpkin Ash	*Fraxinus profunda*
Water Locust	*Gleditsia aquatica*
Honey Locust	*Gleditsia triacanthos*
Two-wing Silverbell	*Halesia parviflora*
Common Witch-Hazel	*Hamamelis virginiana*
Carolina Holly	*Ilex ambigua*
Possumhaw (Deciduous) Holly	*Ilex decidua*
Largeleaf Holly	*Ilex montana*
American Holly	*Ilex opaca*
Common Winterberry Holly	*Ilex verticillata*
Yaupon Holly	*Ilex vomitoria*
Southern Redcedar	*Juniperus silicicola*
Sweetgum	*Liquidambar styraciflua*
Tuliptree	*Liriodendron tulipifera*
Cucumber Magnolia	*Magnolia acuminata*
Southern Magnolia	*Magnolia grandiflora*
Pyramid Magnolia	*Magnolia pyramidata*
Sweetbay Magnolia	*Magnolia virginiana*
Red Mulberry	*Morus rubra*
Southern Bayberry	*Myrica cerifera*
Water Tupelo	*Nyssa aquatica*
Sourgum	*Nyssa sylvatica*
Devilwood	*Osmanthus americanus*
Sourwood	*Oxydendrum arboreum*
Hornbeam	*Oystrya virginiana*

Table 1, continued

COMMON NAME	SCIENTIFIC NAME
Redbay	*Persea borbonia*
Shortleaf Pine	*Pinus echinata*
Spruce Pine	*Pinus glabra*
Longleaf Pine	*Pinus palustris*
Lobolly Pine	*Pinus taeda*
Water-Elm	*Planera aquatica*
Eastern Sycamore	*Platanus occidentalis*
Eastern (Common) Cottonwood	*Populus deltoides*
Swamp Cottonwood	*Populus heterophylla*
Chickasaw Plum	*Prunus angustifolia*
Carolina Laurelcherry	*Prunus caroliniana*
Mexican Plum	*Prunus mexicana*
Black Cherry	*Prunus serotina*
Flatwoods Plum	*Prunus umbellata*
Hoptree	*Ptelea trifoliata*
White Oak	*Quercus alba*
Southern Red (Spanish) Oak	*Quercus falcata*
Cherrybark Oak	*Quercus falcata var. pagodaefolia*
Laurel (Darlington) Oak	*Quercus laurifolia*
Overcup Oak	*Quercus lyrata*
Blackjack Oak	*Quercus marilandica*
Basket Oak	*Quercus michauxii*
Chinkapin Oak	*Quercus muehlenbergii*
Water Oak	*Quercus nigra*
Nuttall Oak	*Quercus nuttallii*
Willow Oak	*Quercus phellos*
Northern Red Oak	*Quercus rubra*
Shumard Oak	*Quercus shumardii*
Post Oak	*Quercus stellata*
Black Oak	*Quercus velutina*
Virginia Live Oak	*Quercus virginiana*
Carolina Buckthorn	*Rhamnus caroliniana*
Winged Sumac	*Rhus copallina*
Smooth Sumac	*Rhus glabra*
Dwarf Palmetto	*Sabal minor*
Sandbar Willow	*Salix exigua*
Black Willow	*Salix nigra*
Common Elderberry	*Sambucus canadensis*
Western Soapberry	*Sapindus drummondii*
Sassafras	*Sassafras albidum*
Virginia Stewartia (Silky Camellia)	*Stewartia malachodendron*
American Snowbell	*Styrax americanus*
Bigleaf Snowbell	*Styrax grandifolius*
Sweetleaf	*Symplocos tinctoria*
Baldcypress	*Taxodium distichum*
Pondcypress	*Taxodium distichum var nutans*
Carolina Basswood	*Tilia caroliniana*
Poison-Sumac	*Toxicodendron vernix*
Winged Elm	*Ulmus alata*
American Elm	*Ulmus americanus*
Cedar Elm	*Ulmus crassifolia*
Sparkleberry (Farkleberry)	*Vaccinium arboreum*
Rusty Blackhaw	*Viburnum rufidulum*
Southern Prickly-Ash	*Zanthoxylum clava-herculis*

development, forest vegetation along the natural levees of the proposed project reach consisted of mixed, deciduous, hardwood species such as oaks (*Quercus* sp.), bitter pecan (*Carya illinoensis*), red maple (*Acer rubrum*), and green ash (*Fraxinus pennsylvanica*). These areas were cleared for agricultural crops in the late eighteenth and nineteenth centuries, and they are now used for the production of sugar cane and rice. The remaining tree stands line the edges of the agricultural fields. Large forested areas are lacking in the immediate vicinity of the project reach. Those trees located adjacent to the proposed project reach include species well-adapted to disturbed environments impacted by seasonal inundation.

Within the older, non-swampy portions of the alluvial plain, forest types vary in composition. Tree species typical of this area include various oaks (*Quercus* sp.), hackberry (*Celtis laevigata*), boxelder (*Acer negundo*), and American sycamore (*Platanus occidentalis*). Where disturbed, the bottomland hardwood forest of the alluvial plain is dominated by ash (*Fraxinus* sp.), boxelder, hackberry, and American sycamore, and, less commonly, oak. In the backswamp areas situated away from the natural levee, forest vegetation, where it has not been cleared, consists of cypress (*Taxodium distichum*) and tupelo (*Nyssa aquatica*). In general, the bottomland hardwood forests of the Mississippi River meander belts have been altered severely by modification of the floodplain for commercial development, borrow pits, revetment construction, and modification of flood characteristics by artificial levees.

Fauna in the Vicinity of the Proposed Project Reach

In both prehistoric and historic times, the vicinity of the proposed project reach supported a large and varied faunal community; however, some of these species have been eliminated by historic and modern development practices. The following discussion lists those species that probably were present during late prehistoric and historic times.

Game animals common to the study area included white-tailed deer (*Odocoileus virginianus*), swamp rabbit (*Sylvilagus aquaticus*), eastern gray squirrel (*Sciurus carolinensis*), eastern fox squirrel (*Sciurus niger*), swamp rabbit, eastern cottontail (*Sylvilagus floridanus*) and black bear (*Ursus americanus*) (Table 2). Predatory mammals found

Table 2. Mammals in the Vicinity of the Project Reach.

COMMON NAME	SCIENTIFIC NAME
Shorttail Shrew	*Blarina brevicauda*
Coyote	*Canis latrans*
Beaver	*Castor canadensis*
Least Shrew	*Cryptotis parva*
Armadillo	*Dasypus novemcinctus*
Opossum	*Didelphis virginiana*
Big Brown Bat	*Eptesicus fuscus*
Mountain Lion (Puma)	*Felis concolor*
Southern Flying Squirrel	*Glaucomys volans*
Red Bat	*Lasiurus borealis*
Hoary Bat	*Lasiurus cinereus*
Eastern Yellow Bat	*Lasiurus intermedius*
Seminole Bat	*Lasiurus seminolus*
River Otter	*Lutra canadensis*
Bobcat	*Lynx rufus*
Striped Skunk	*Mephitis mephitis*
House Mouse (Introduced)	*Mus musculus*
Longtail Weasel	*Mustela frenata*
Mink	*Mustela vison*
Nutria (Introduced)	*Myocastor coypus*
Mississippi Myotis	*Myotis austroriparius*
Eastern Woodrat	*Neotoma floridana*
Shrew-Mole	*Neurotrichus gibbsi*
Evening Bat	*Nycticeius humeralis*
Whitetail Deer	*Odocoileus virginianus*
Muskrat	*Ondatra zibethica*
Rice Rat	*Oryzomys palustris*
Cotton Mouse	*Peromyscus gossypinus*
White-footed Mouse	*Peromyscus leucopus*
Golden Mouse	*Peromyscus nuttalli*
Eastern Pipistrel	*Pipistrellus subflavus*
Pine Vole	*Pitymys pinetorum*
Eastern Big-eared Bat	*Plecotus refinesquei*
Raccoon	*Procyon lotor*
Norway Rat (Introduced)	*Rattus norvegicus*
Black Rat (Introduced)	*Rattus rattus*
Fulvous Harvest Mouse	*Reithrodontomys fulvescens*
Eastern Harvest Mouse	*Reithrodontomys humulis*
Eastern Mole	*Scalopus aquaticus*
Eastern Gray Squirrel	*Sciurus carolinensis*
Eastern Fox Squirrel	*Sciurus niger*
Hispid Cotton Rat	*Sigmodon hispidus*
Southeastern Shrew	*Sorex longirostris*
Spotted Skunk	*Spilogale putorius*
Swamp Rabbit	*Sylvilagus aquaticus*
Eastern Cottontail	*Sylvilagus floridanus*
Mexican Freetail Bat	*Tadarida brasiliensis*
Gray Fox	*Urocyon cinereoargenteus*
Black Bear	*Ursus americanus*
Red Fox	*Vulpes fulva*

in the bottomland hardwood environments also included the gray fox (*Urcyon cinereoargenteus*), raccoon (*Procyon lotor*), long-tailed weasel (*Mustela frenata*), mink (*Mustela vison*), and bobcat (*Lynx rufus*), as well as the endangered and regionally extinct Eastern panther (*Felis concolor*) and red wolf (*Canis niger*), respectively. In addition, the mink, raccoon, beaver (*Castor canadensis*), and opossum (*Didelphis virginiana*) all were important fur bearers that lived in the bottomland hardwood environments. These animals provided not only important sources of food, but furs used in the production of clothing, as well as for trade.

Bottomland hardwood forests and swamps also were home to a variety of amphibians, including salamanders, toads, tree frogs, and true frogs (Table 3). These amphibians typically require very moist soils, temporary pools, or permanent ponds. In addition, the numerous reptiles found within the bottomland hardwood forests included not only the American alligator (*Alligator mississippiensis*), but also a number of iguanids, skinks, lizards, snakes, pit vipers, and turtles. Like the amphibians, most of the reptiles prefer either moist or aquatic habitats. Reptiles specific to the Mississippi River in southeastern Louisiana included the Mississippi diamondback terrapin (*Malaclemys terrapin pileata*), Gulf Coast box turtle (*Terrapene carolina* major), and the Gulf salt marsh snake (*Nerodia clarkii clarkii*) (Conant and Collins 1991).

The Mississippi River in the vicinity of the proposed project reach also was home to a number of fresh water fish species. These included the shovelnose sturgeon (*Scaphirhynchus platorynchus*), alligator gar (*Attactosteus spatula*), large mouth bass (*Micropterus salmoides*), and bluegill (*Lepomis macrochirus*). In addition, carp (*Cyprinus carpio*), blue catfish (*Ictalurus punctatus*), channel catfish (*Ictalurus furcatus*), white crappie (*Poxomis annularis*), freshwater drum (*Aplodinotus grunniens*), garfish (*Lepisosteus* sp.), shad (*Dorosoma* sp.), and various suckers (*Catostomidae*) also were common (Conner 1977) (Table 4).

Finally, over 100 species of birds either were permanent or seasonal residents of the bottomland hardwood forests (Table 5). These included major game birds such as the wood duck (*Aix sponsa*) and wild turkey (*Meleagris gallopavo*) (Gulf States Utilities Company 1974a, 1974b; Lowery 1974a, 1974b). Bird species found year round within the vicinity of the project reach included the red-winged blackbird (*Agelaitus phoeniceus*), red-tailed hawk (*Buteo platypterus*), great egret (*Bubulcu ibis*), great blue heron (*Ardea herodias*) and great horned owl (*Bubo virginianus*). Numerous bird species only represent spring, summer and winter inhabitants of the proposed project reach. Notable bird species that

Table 3. Reptiles and Amphibians in the Vicinity of the Project Reach.

COMMON NAME	SCIENTIFIC NAME
Northern Cricket Frog	*Acris crepitans crepitans*
Southern Cricket Frog	*Acris gryllus gryllus*
Southern Copperhead	*Agkistrodon contortrix contortrix*
Western Cottonmouth	*Agkistrodon piscivorus leucostoma*
American Alligator	*Alligator mississippiensis*
Spotted Salamander	*Ambystoma maculatum*
Marbled Salamander	*Ambystoma opacum*
Mole Salamander	*Ambystoma talpoideum*
Smallmouth Salamander	*Ambystoma texanum*
Three-toed	*Amphiuma Amphiuma tridactylum*
Green Anole	*Anolis carolinensis*
Midland Smooth Softshell Turtle	*Apalone mutica mutica*
Gulf Coast Spiny Softshell Turtle	*Apalone spinifera aspera*
Eastern Spiny Softshell Turtle	*Apalone spinifera spinifera*
Eastern American Toad	*Bufo americanus americanus*
Southern Toad	*Bufo terrestris*
Gulf Coast Toad	*Bufo valliceps valliceps*
Fowler's Toad	*Bufo woodhousii fowleri*
Woodhouse's Toad	*Bufo woodhousii woodhousii*
Eastern Worm Snake	*Carphophis amoenus amoenus*
Common Snapping Turtle	*Chelydra serpentina*
Southern Painted Turtle	*Chrysemys picta dorsalis*
Bronze Frog *Rana*	*clamitans clamitans*
Blackmask Racer	*Coluber constrictor latrunculus*
Timber Rattlesnake	*Crotalus horridus*
Eastern Chicken Turtle	*Deirochely reticularia reticularia*
Western Chicken Turtle	*Deirochelysreticularia miaria*
Southern Dusky Salamander	*Desmognathus auriculatus*
Spotted Dusky Salamander	*Desmognathus fuscus conanti*
Mississippi Ringneck Snake	*Diadophis punctatus stictogenys*
Corn Snake	*Elaphe guttata guttata*
Texas Rat Snake	*Elaphe obsoleta lindheimerii*
Gray Rat Snake	*Elaphe obsoleta spiloides*
Five-lined Skink	*Eumeces fasciatus*
Southeastern Five-lined Skink	*Eumeces inexpectatus*
Broadhead Skink	*Eumeces laticeps*
Southern Two-lined Salamander	*Eurycea cirrigera*
Three-lined Salamander	*Eurycea longicauda guttolineata*
Dwarf Salamander	*Eurycea quadridigitata*
Western Mud Snake	*Farancia abacura reinwardtii*
Rainbow Snake	*Farancia erytrogramma*
Eastern Narrowmouth Toad	*Gastrophryne carolinensis*
Mississippi Map Turtle	*Graptemys kohnii*
Ouachita Map Turtle	*Graptemys pseudogeographica ouachitensis*
Four-toed Salamander	*Hemidactylium scutatum*
Mediterranean Gecko (Introduced)	*Hemidactylus turcicus*
Eastern Hognose Snake	*Heterodon platirhinos*
Bird-voiced Treefrog	*Hyla avivoca*
Green Treefrog	*Hyla cinerea*

Table 3, continued

COMMON NAME	SCIENTIFIC NAME
Pine Woods Treefrog	*Hyla femoralis*
Barking Treefrog	*Hyla gratiosa*
Squirrel Treefrog	*Hyla squirella*
Gray Treefrogs	*Hyla versicolor* and *Hyla chrysoscelis*
Mississippi Mud Turtle	*Kinosternon subrubrum hippocrepis*
Speckled Kingsnake	*Lampropeltis getula holbrooki*
Louisiana Milk Snake	*Lampropeltis triangulum amaura*
Scarlet Kingsnake	*Lampropeltis triangulum elapsoides*
Alligator Snapping Turtle	*Macroclemys temminckii*
Mississippi Green Water Snake	*Nerodia cyclopion*
Yellowbelly Water Snake	*Nerodia erythrogaster flavigaster*
Broad-banded Water Snake	*Nerodia fasciata confluens*
Diamondback Water Snake	*Nerodia rhombifer*
Midland Water Snake	*Nerodia sipedon pleuralis*
Central Newt	*Notophthalmus viridescens louisianensis*
Eastern Slender Glass Lizard	*Ophisaurus attenuatus longicaudus*
Eastern Glass Lizard	*Ophisaurus ventralis*
Mississippi Slimy Salamander	*Plethodon mississippi*
Webster's Salamander	*Plethodon websteri*
Northern Spring Peeper	*Pseudacris crucifer crucifer*
River Cooter	*Pseudemys concinna*
Bullfrog	*Rana catesbeiana*
Pig Frog	*Rana grylio*
Pickerel Frog	*Rana palustris*
Southern Leopard Frog	*Rana utricularia*
Graham's Crayfish Snake	*Regina grahamii*
Delta Crayfish Snake	*Regina rigida deltae*
Gulf Crayfish Snake	*Regina rigida sinicola*
Queen Snake	*Regina septevittata*
Southern Redback	*Salamander Plethodon serratus*
Eastern Spadefoot	*Scaphiopus holbrookii holbrookii*
Southern Fence Lizard	*Sceloporus undulatus undulatus*
Ground Skink	*Scincella lateralis*
Western Lesser	*Siren Siren intermedia nettingi*
Western Pigmy Rattlesnake	*Sistrurus miliarius streckeri*
Rough Green	*Snake Opheodrys aestivus*
Razorback Musk Turtle	*Sternotherus carinatus*
Common Musk Turtle	*Sternotherus odoratus*
Marsh Brown Snake	*Storeria dekayi limnetes*
Midland Brown Snake	*Storeria dekayi wrightorum*
Florida Redbelly Snake	*Storeria occipitomaculata obscura*
Three-toed Box Turtle *i*	*Terrapene carolina baur*
Gulf Coast Ribbon Snake	*Thamnophis proximus orarius*
Western Ribbon Snake	*Thamnophis proximus proximus*
Eastern Garter Snake	*Thamnophis sirtalis sirtalis*
Red-eared Slider	*Trachemys scripta elegans*
Rough Earth Snake	*Virginia striatula*
Western Earth Snake	*Virginia valeriae elegans*

Table 4. Freshwater Fishes in the Vicinity of the Project Reach.

COMMON NAME	SCIENTIFIC NAME
Lake Sturgeon	*Acipenser fulvescens*
Alabama Shad	*Alosa alabamae*
Skipjack Herring	*Alosa chrysochloris*
Black Bullhead	*Ameiurus melas*
Yellow Bullhead	*Ameiurus natalis*
Bowfin	*Amia calva*
American Eel	*Anuilla rostrata*
Pirate Perch	*Aphredoderus sayanus*
Freshwater Drum	*Aplodinotus grunniens*
Alligator Gar	*Attactosteus spatula*
Central Stoneroller	*Campostoma anomalum*
River Carpsucker	*Carpiodes carpio*
Quillback	*Carpiodes cyprinus*
Highfin Carpsucker	*Carpiodes velifer*
Flier	*Centrarchus macropterus*
Bluntface Shiner	*Cyprinella camura*
Red Shiner	*Cyprinella lutrensis*
Blacktail Shiner	*Cyprinella venusta*
Gizzard Shad	*Dorosoma cepedianum*
Threadfin Shad	*Dorosoma petenense*
Banded Pygmy Sunfish	*Elassoma zonatum*
Creek Chubsucker	*Erimyzon oblongus*
Lake Chubsucker	*Erimyzon sucetta*
Grass or Redfin Pickerel	*Esox americanus*
Chain Pickerel	*Esox niger*
Mud Darter	*Etheostoma asprigene*
Naked Sand Darter	*Etheostoma beani*
Rainbow Darter	*Etheostoma caeruleum*
Bluntnose Darter	*Etheostoma chlorosomum*
Swamp Darter	*Etheostoma gracile*
Slough Darter	*Etheostoma gracile*
Harlequin Darter	*Etheostoma histrio*
Brighteye Darter	*Etheostoma lynceum*
Goldstripe Darter	*Etheostoma parvipinne*
Cypress Darter	*Etheostoma proeliare*
Scaley Sand Darter	*Etheostoma vivax*
Redfin Darter	*Etheostoma whipplei*
Speckled Chub	*Extrarius aestivalis*
Western Starhead Minnow	*Fundulus blairae*
Golden Topminnow	*Fundulus chrysotus*
Blackstripe Topminnow	*Fundulus notatus*
Blackspotted Topminnow	*Fundulus olivaceus*
Mosquito Fish	*Gambusia affinis*
Goldeye	*Hiodon alosoides*
Mooneye	*Hiodon tergisus*
Cypress Minnow	*Hybognathus hayi*
Mississippi Silvery Minnow	*Hybognathus nuchalis*
Pallid Shiner	*Hybopsis amnis*
Clear Chub	*Hybopsis winchelli*
Northern Hog Sucker	*Hypentelium nigricans*
Chestnut Lampray	*Ichthyomyzon castaneus*
Southern Brook Lampray	*Ichtyomyzon gagei*
Blue Catfish	*Ictalurus furcatus*
Channel Catfish	*Ictalurus punctatus*
Smallmouth Buffalo	*Ictiobus bubalus*
Bigmouth Buffalo	*Ictiobus cyprinellus*
Black Buffalo	*Ictiobus niger*
Spotted Gar	*Lepisosteus oculatus*

Table 4, continued

COMMON NAME	SCIENTIFIC NAME
Longnose Gar	*Lepisosteus osseus*
Shortnose Gar	*Lepisosteus platostomus*
Orangespotted Sunfish	*Lepomia humilis*
Dollar Sunfish	*Lepomia marginatus*
Green Sunfish	*Lepomis cyanellus*
Warmouth	*Lepomis gulosus*
Bluegill	*Lepomis macrochirus*
Longear Sunfish	*Lepomis megalotis*
Redear Sunfish	*Lepomis microlophus*
Spotted Sunfish	*Lepomis punctatus*
Bantam Sunfish	*Lepomis symmetricus*
Rainwater Killfish	*Lucania parva*
Striped Shiner	*Luxilus chrysocephalus*
Ribbon Shiner	*Lythrurus femeus*
Redfin Shiner	*Lythrurus umbratilis*
Sturgeon Chub	*Macrhybopsis gelida*
Silver Chub	*Macrhybopsis storeriana*
Inland Silverside	*Menidia beryllina*
Spotted Bass	*Micropterus punctulatus*
Largemouth Bass	*Micropterus salmoides*
Spotted Sucker	*Minytrema melanops*
White Bass	*Morone chrysops*
Yellow Bass	*Morone mississippiensis*
Bluehead Chub	*Nocomis leptocephalus*
Ironcolor Shiner	*Nostropis chalybaeus*
Golden Shiner	*Notemigonus crysoleucas*
Emerald Shiner	*Notropis atherinoides*
River Shiner	*Notropis blennius*
Ghost Shiner	*Notropis buchanani*
Longnose Shiner	*Notropis longirostris*
Chub Shiner	*Notropis potteri*
Silverband Shiner	*Notropis shumardi*
Weed Shiner	*Notropis texanus*
Mimic Shiner	*Notropis volucellus*
Tadpole Madtom	*Noturus gyrinus*
Speckled Madtom	*Noturus leptacanthus*
Brindled Madtom	*Noturus miurus*
Freckled Madtom	*Noturus nocturnus*
Brown Madtom	*Noturus phaeus*
Pugnose Minnow	*Opsopoeodus emiliae*
Logperch	*Percina caprodes*
Blackside Darter	*Percina maculata*
Saddleback Darter	*Percina ouachitae*
Dusky Darter	*Percina sciera*
Southern Redbelly Dace	*Phoxinus erythrogaster*
Bluntnose Minnow	*Pimephales notatus*
Bullhead Minnow	*Pimephales vigilax*
Flathead Chub	*Platygobio gracilis*
Sailfin Molly	*Poecilia latipinna*
Paddlefish	*Polyodon spathula*
White Crappie	*Pomoxis annularis*
Black Crappie	*Pomoxis nigromaculatus*
Flathead Catfish	*Pylodictis olivaris*
Pallid Sturgeon	*Scaphirhynchus albus*
Shovelnose Sturgeon	*Scaphirhynchus platorynchus*
Creek Chub	*Semotilus atromaculatus*
Sauger	*Stizostedion canadense*

Table 5. Birds in the Vicinity of the Project Reach.

COMMON NAME	SCIENTIFIC NAME
WINTER SEASON	
Sharp-skinned Hawk	*Accipiter striatus*
Spotted Sandpiper	*Actitis macularia*
Western Grebe	*Aechmophorus occidentalis*
Henslow's Sparrow	*Ammodramus henslowii*
Le Conte's Sparrow	*Ammodramus leconteii*
Grasshopper sparrow	*Ammodramus savannarum*
Northern Pintail	*Anas acuta*
Northern Shoveler	*Anas clypeata*
American Wegeon	*Anas penelope*
Mallard	*Anas platyrhynchos*
Gadwall	*Anas strepera*
American Pipit	*Anthus rubescens*
Ruddy Turnstone	*Arenaria interpres*
Short-eared Owl	*Asio flammeus*
Lesser Scaup	*Aythya affinia*
Redhead	*Aythya americana*
Ringed-neck Duck	*Aythya collaris*
Canvasback	*Aythya valisineria*
Cedar Waxwing	*Bombycilla cedrorum*
American Bittern	*Botaurus lentiginosus*
Canada Goose	*Branta canadensis*
Buffelhead	*Bucephala albeola*
Common Goldeneye	*Bucephala clangula*
Sanderling	*Calidris alba*
Dunlin	*Calidris alpina*
Red Knot	*Calidris canutus*
Western Sandpiper	*Calidris mauri*
Least Sandpiper	*Calidris minutilla*
Pine Sisken	*Carduelis pinus*
American Goldenfinch	*Carduelis tristis*
Purple Finch	*Carpodacus purpureus*
Hermit Thrush	*Catharus guttatus*
Brown Creeper	*Certhia americana*
Semipalmated Plover	*Charadrius semipalmatus*
Snow Goose	*Chen caerulescens*
Lark Sparrow	*Chondestes grammacus*
Northern Harrier	*Circus cyaneus*
Marsh Wren	*Cistothorus palustris*
Yellow Rail	*Coturnicops noveboracensis*
Double	*Crested Cormorant*
Yellow-rumped Warbler	*Dendroica coronata*
Gray Catbird	*Dumetella carolinensis*
Rusty Blackbird	*Euphagus carolinus*
Brewer's Blackbird	*Euphagus cyanocephalus*
Merlin	*Falco columbarius*
Peregrine Falcon	*Falco peregrinus*
Common Snipe	*Gallinago gallinago*
Common Loon	*Gavia immer*
Bald Eagle	*Haliaeetus leucocephalus*
Dark-eyed Junco	*Junco hyemalis*
Herring Gull	*Larus argentatus*
Ring-billed Gull	*Larus delawarensis*
Short-billed Dowitcher	*Limnodromus griseus*
Long-billed Dowitcher	*Limnodromus scolopaceus*
Marbled Godwit	*Limosa fedoa*
Hooded Merganser	*Lophodytes cucullatus*
Swamp Sparrow	*Melospiza georgiana*
Lincoln's Sparrow	*Melospiza lincolnii*
Song Sparrow	*Melospiza melodia*
Common Merganser	*Mergus merganser*

Table 5, continued

COMMON NAME	SCIENTIFIC NAME
Black-and-white Warbler	*Mniotilta varia*
Whimbrel	*Numenius phaeopus*
Ruddy Duck	*Oxyura jamaicensis*
Savannah Sparrow	*Passerculus sandwichensis*
Fox Sparrow	*Passerella iliaca*
American White Pelican	*Pelecanus erythrorhynchos*
Eared Grebe	*Podiceps nigricollis*
Vesper Sparrow	*Pooecetes gramineus*
Sora	*Porzana carolina*
Virginia Rail	*Rallus limicola*
Ruby-crowned Kinglet	*Regulus calendula*
Golden-crowned Kinglet	*Regulus satrapa*
Eastern Phoebe	*Sayornis phoebe*
Red-breasted Nuthatch	*Sitta canadensis*
Yellow-bellied Sapsucker	*Sphyrapicus varius*
Western Meadowlark	*Sturnella neglecta*
Green Winged	*Teal Anas crecca*
Bewick's Wren	*Thryomanes bewickii*
Lesser Yellowlegs	*Tringa flavipes*
Greater Yellowlegs	*Tringa melanoleuca*
House Wren	*Troglodytes troglodytes*
Oranged-crowned Warbler	*Vermivora celata*
Solitary Vireo	*Vireo solitarius*
White-throated Sparrow	*Zonotrichia albicollis*
White-crowned Sparrow	*Zonotrichia leucophrys*
SUMMER AND SPRING SEASONS	
Purple Martin	*Progne subis*
Roseate Spoonbill	*Ajaia ajaia*
Anhinga	*Anhinga anhinga*
Ruby-throated Hummingbird	*Archilochus colubris*
Broad-winged Hawk	*Buteo platypterus*
Green-backed Heron	*Butorides striatus*
Chuck-will's-widow	*Caprimulgus carolinensis*
Chimney Swift	*Chaetura pelagica*
Wilson's Plover	*Charadrius wilsonia*
Common Nighthawk	*Chordeiles minor*
Yellow-billed Cookoo	*Coccyzus americanus*
Eastern Wood-Pewee	*Contopus virens*
Yellow-throated Warbler	*Dendroica dominica*
Reddish Egret	*Egretta rufescens*
American Swallow-tailed Kite	*Elanoides forficatus*
Acadian Flycatcher	*Empidonax virescens*
Blue Grosbeak	*Guiraca caerulea*
Black-necked Stilt	*Himantopus mexicanus*
Barn Swallow	*Hirundo rustica*
Wood Thrush	*Hylocichla mustelina*
Yellow-breated Chat	*Icteria virens*
Orchard Oriole	*Icterus spurius*
Mississippi Kite	*Ictinia mississippiensis*
Least Bittern	*Ixobrychus exilis*
Swainson's Warbler	*Limnothlypis swainsonii*
Wood Stork	*Mycteria americana*
Great Crested Flycatcher	*Myiarchus crinitus*
Kentucky Warbler	*Oporornis formosus*
Northern Parula	*Parula americana*
Painted Bunting	*Passerina ciris*
Indigo Bunting	*Passerina cyanea*
Summer Tanager	*Piranga rubra*
Glossy Ibis	*Plegadis falcinellus*
White-faced Ibis *Plegadis chihi*	*Plegadis falcinellus*
Purple Gallinule	*Porphyrula martinica*

Table 5, continued

COMMON NAME	SCIENTIFIC NAME
Prothonotary Warbler	*Prorononotaria citrea*
Dickcissel	*Spiza americana*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Least Tern	*Sterna antillarum*
Eastern Kingbird	*Tyrannus tyrannus*
Yellow-throated *Vireo*	*Vireo flavifrons*
Warbling Vireo	*Vireo gilvus*
Red-eyed Vireo	*Vireo olivaceus*
Hooded Warbler	*Wilsonia citrina*
YEAR ROUND PRESENCE	
Anhinga	*Anhinga anhinga*
Coopers Hawk	*Accipiter cooperii*
Red-winged Blackbird	*Agelaius phoeniceus*
Bachman's Sparrow	*Aimophila aestivalis*
Wood Duck	*Aix sponsa*
Great Blue Heron	*Ardea herodias*
Great Horned Owl	*Bubo virginianus*
Cattle Egret	*Bubulcus ibis*
Red-tailed Hawk	*Buteo jamaicensis*
Red-shouldered Hawk	*Buteo platypterus*
Northern Cardinal	*Cardinalis cardinalis*
Great Egret	*Casmerodius albus*
Turkey Vulture	*Cathartes aura*
Willet	*Catoptrophorus semipalmatus*
Belted Kingfisher	*Ceryle alcyon*
Killdeer	*Charadrius vociferus*
Northern Flicker	*Colaptes auratus*
Northern Bobwhite	*Colinus virginianus*
Rock Dove	*Columbia livia*
Common Ground-Dove	*Columbina passerina*
Black Vulture	*Coragyps atratus*
Amerian Crow	*Corvus brachyrhynchos*
Fish Crow	*Corvus ossifragus*
Blue Jay	*Cyanocitta cristata*
Pine Warbler	*Dendroica pinus*
Pileated Woodpecker	*Dryocopus pileatus*
Little Blue Heron	*Egretta caerulea*
Snowey Egret	*Egretta Thula*
Horned Lark	*Eremophila alpestris*
White Ibis	*Eudocimus albus*
American Kestrel	*Falco sparverius*
American Coot	*Fulica americana*

Table 5, continued

COMMON NAME	SCIENTIFIC NAME
Common Morehen	*Gallinula chloropus*
Common Yellowthroat	*Geothlypis trichas*
Loggerhead Shrike	*Lanius ludovicianus*
Laughing Gull	*Larus atricilla*
Red-bellied Woodpecker	*Melanerpes carolinus*
Red-headed Woodpecker	*Melanerpes erythrocephalus*
Wild Turkey	*Meleagris gallopavo*
Northern Mockingbird	*Mimus polyglottos*
Brown-headed Cowbird	*Molothrus ater*
Yellow-crowned Night-Heron	*Nyctanassa violacea*
Black-crowned Night-Heron	*Nycticorax nycticorax*
Eastern Screech-Owl	*Otus asio*
Tufted Titmouse	*Parus bicolor*
Carolina Chickadee	*Parus carolinensis*
House Sparrow	*Passer domesticus*
Red-cocaded Woodpecker	*Picoides borealis*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Rufous-sided Towhee	*Pipilo erythrophthalmus*
Pied-billed Grebe	*Podilymbus podiceps*
Blue-gray Gnatcatcher	*Polioptila caerulea*
Great-tailed Grackle	*Quiscalus mexicanus*
Common Grackle	*Quiscalus quiscula*
King Rail	*Rallus elegans*
Clapper Rail	*Rallus longirostris*
American Woodcock	*Scolopax minor*
Eastern Bluebird	*Sialia sialis*
White-breasted Nuthatch	*Sitta carolinensis*
Brown-headed Nuthatch	*Sitta pusilla*
Chipping Sparrow	*Spizella passerina*
Field Sparrow	*Spizella pusilla*
Forster's Tern	*Sterna forsteri*
Gull-billed Tern	*Sterna nilotica*
Eastern Medowlark	*Sturnella magna*
European Starling (Introduced)	*Sturnus vulgaris*
Carolina Wren	*Thryothorus ludovicianus*
Brown Thrasher	*Toxostoma rufum*
American Robin	*Turdus migratorius*
Barn Owl	*Tyto alba*
White-eyed Vireo	*Vireo griseus*
Mourning Dove	*Zenaida macroura*

inhabited the area during these seasons include the barn swallow (*Hirundo rustica*), Mississippi kite (*Ictinia mississippiensis*), ruby-throated hummingbird (*Archilochus colubris*), and the reddish egret (*Egretta rufescens*). Bird species present during the winter season included the sparrow (*Ammodramus* sp.), sandpiper (*Calidris* sp.), American bittern (*Botaurus lentiginosus*), and the common loon (*Gavia immer*).

Climate in the Vicinity of the Proposed Project Reach

Ascension and Iberville Parishes, Louisiana, enjoy a humid subtropical climate. The mean annual temperature of the area attains a high of 78° F (26° C) and a low of 58° F (14° C). July and August are the hottest months, with an average daily temperature of 91° F (33° C). During winter, the mean daily minimum temperature

declines to a low of 42° F (5.5° C) in January. Approximately 14 days of the year experience temperatures below 32° F (0° C). The winter is characterized by alternating cool and warm periods, as cold air fronts from Canada displace warmer air masses derived from the Gulf of Mexico.

The precipitation role in the Ascension and Iberville Parish area averages 145.2 cm (57.2 in) annually and it is relatively evenly distributed throughout the year. During the cooler months, precipitation occurs typically as a result of movement along the periphery of cool and warm fronts and also as a result of cyclonic storms that originate over the Gulf of Mexico. In contrast, precipitation during the summer months occurs usually as a result of afternoon thunderstorms. October and November are the driest months of the year, with average precipitation totals of less than 10 cm (3.9 in) per month; July typically is the wettest month, with an average of 8.6 cm (3.4 in) of rainfall. The average relative humidity in Ascension and Iberville Parishes measures approximately 75 percent. During the late fall, winter, and early spring months, however, humidity may drop to as low as 25 percent, as cold air masses from Canada displace warm, moist air from the Gulf of Mexico.

CHAPTER III

PREHISTORIC SETTING

Introduction

This chapter briefly describes the prehistoric cultural setting of the proposed Alhambra to Hohen-Solms and Hohen-Solms to Modeste Levee Enlargement and Concrete Slope Paving Project Items located in Ascension and Iberville, Louisiana. The two project items are along the right descending bank of the Mississippi River between River Miles 191 and 179, and within Management Unit V as defined by *Louisiana's Comprehensive Archaeological Plan* (Smith et al. 1983).

While the prehistory of Management Unit V extends from ca. 10,000 B.C. to European Contact, i.e., from the Paleo-Indian to Protohistoric stages, the near surface landforms and deposits present within the project reach date from no earlier than 5,000 to 3,500 years ago. Consequently, and as outlined previously in Chapter II, only sites dating from the Late Archaic period or later are anticipated within the project area. None-the-less, this chapter includes a discussion of the entire prehistoric period in order to provide the reader with a comprehensive account of the prehistoric cultural setting of Management Unit V; in addition, while it is unlikely that permanent habitation of the project region took place during the Paleo-Indian and Early to Middle Archaic periods, it is possible that the project area may have been used for occasional and/or temporary resource exploitation during those time periods.

A total of eight major cultural units are used to characterize the prehistoric cultural sequence of Management Unit V. These include: the Paleo-Indian (10,000 - 6000 B.C.), Archaic (6000 - 1000 B.C.), Poverty Point (2000 - 500 B.C.), Tchefuncte (500 B.C. - A.D. 0), Marksville (100 B.C. - A.D. 400), Troyville-Coles Creek (A.D. 400 - 1200), Plaquemine (A.D. 1000 - 1200), and Mississippian (A.D. 1200 - 1700) units. Each cultural unit is described in turn below. Both the quantity and quality of the information currently known about each of these units are reflected in this discussion. Since some of these units are only poorly understood, pertinent data collected from throughout the Southeast have been utilized to supplement this discussion.

Paleo-Indian Stage (10,000 - 6000 B.C.)

The initial human occupation of the southeastern United States generally is believed to have occurred sometime between 10,000 and 12,000 years ago (8000 - 10,000 B.C.). The earliest inhabitants to occupy this region have been termed the Paleo-Indians. Archeological sites dating from this time period are characterized by a distinctive assemblage of lithic tools that include fluted and unfluted lanceolate projectile points/knives, unifacial end- and side-scrapers, gravers, and spokeshaves. In Louisiana, evidence of human occupation dating from this time period largely has been confined to the upland areas (tertiary uplands or floodplain bluffs) in the northwestern part of the state. Furthermore, it is unlikely that Paleo-Indians occupied the project area since habitable landforms did not exist in the project reach during this time. As a result, the probability of identifying evidence of Paleo-Indian occupation within the confines of the current project items is extremely low.

The earliest Paleo-Indian culture identified in North America has been named "Clovis," after the type-site in New Mexico. In the western United States, Clovis sites date from a relatively narrow period, i.e., between 8900 and 9500 B.C. (Haynes 1991; Story et al. 1990:178). The lithic tool assemblage of the Clovis Culture, and the similar Folsom Culture of the Great Plains and Southern Plains, generally is referred to as the Llano complex. While the Folsom Culture initially was believed to postdate the Clovis Culture, radiocarbon dates from Folsom component sites in Texas have produced dates ranging from ca. 8000 to 9000 B.C. (Largent et al. 1991:323-332; Story et al. 1990:189). These dates suggest that the Folsom Culture may be partially contemporaneous with Clovis Culture.

Paleo-Indian peoples are considered by some researchers to have been mobile hunter-gatherers organized in small bands or extended family groups. Many models suggest that Paleo-Indian peoples were specialized big game (megafauna) hunters. This interpretation, however, has been modified as additional data have been recovered from excavations at newly identified Paleo-Indian sites. While sufficient evidence exists to document the exploitation of large mammals (e.g., mammoth, mastodon, bison, caribou, and elk) at sites in the western and northern United States, kill sites in the Southeast are rare. One exception is the Coats-Hines Site (40WM31), located in the Central Basin of Tennessee. Recent excavations at Coats-Hines (Breitburg and Broster 1995) produced 34 lithic tools, including 10 formal tools and tool fragments along with resharpening flakes, recovered in direct association with the articulated remains of an adult mastodon (*Mammut americanum*). All of this lithic material originated from within the thoracic cavity of the mastodon or in its immediate vicinity. The association of these tools with the skeletal material, along with the presence of distinct butchering marks on a number of the mastodon bones, indicates that Paleo-Indian peoples were butchering the mastodon at the site.

The co-occurrence of Pleistocene megafauna and several Paleo-Indian projectile points (see Brush and Smith 1994; Clausen et al. 1979; Webb et al. 1984) has led most researchers to accept the interpretation that southeastern Paleo-Indian peoples fulfilled at least a portion of their subsistence requirements by hunting and/or scavenging megafauna, including bison, mammoth and mastodon, that were present on the North American continent at the end of the Pleistocene (Anderson et al. 1996). Data such as those derived from the Coats-Hines Site provide unequivocal evidence that Paleo-Indian groups in the Southeast consumed certain Pleistocene megafauna. Current discussions among archeologists, however, have focused on the relative amount of food that these animals provided to the Paleo-Indian groups.

Some researchers (e.g., Meltzer and Smith 1986; Smith 1986) suggest that Pleistocene megafauna comprised only a small portion of the subsistence regime for Paleo-Indian peoples; others argue that megafauna provided a substantial portion of the Paleo-Indian diet (Anderson 1995; Anderson et al. 1996). Anderson (1995:151), for example, stated that "modern fauna (i.e., deer and smaller mammalian species like rabbits, raccoons, opossums, etc.) were taken only when megafauna were not readily available, and comprised second-line resources." It is likely that until more associations of Pleistocene megafauna and Paleo-Indian cultural materials and features are identified, that the role these megafauna played in the Paleo-Indian diet will not be understood clearly. Although there is little data upon which to base a firm dietary model, Paleo-Indian subsistence throughout the Southeast is believed to have encompassed a broad spectrum of resources, including fish, fowl, deer, small mammals, nuts, and gathered plants, as well as megafauna (Smith 1986:9-10; Steponaitis 1986:369; Walthall 1980:36).

Most of the archeological evidence associated with the Paleo-Indian occupation of the southeastern region is limited to surface finds of diagnostic projectile points/knives (Mason 1962). In the Lower Mississippi Valley, Paleo-Indian projectile points/knives have been recovered along valley margins but rarely in the alluvial valley or along the coastal plain. Distributional studies indicate that Paleo-Indian sites in the eastern United States tend to be located on eroded terrace and plateau surfaces (Walthall 1980).

The presence of Paleo-Indian peoples in the Lower Mississippi Valley is best documented

from Macon Ridge in northeast Louisiana. Hillman (1985) provided a prehistoric overview of the Paleo-Indian stage at Maçon Ridge that suggested that continuous human occupation of the ridge began sometime around 8000 B.C. Diagnostic projectile points/knives identified at Maçon Ridge date from the Early Paleo-Indian period (Clovis, Sandia II, and unfluted lanceolate points), the Middle Paleo-Indian period (Plainview, Scottsbluff, Quad, Hell Gap, and Pelican), and the later, transitional, "Epipaleoindian" period (Dalton, Hardin, and San Patrice projectile points). The latter period, i.e., the Epipaleoindian, originally was used by Gibson (1982) to discuss the transitional period between the Late Paleo-Indian and Early Archaic periods.

The distribution of recorded sites on Maçon Ridge suggests that this area was occupied more intensively during the Late Paleo-Indian period. Sites dating from the Late Paleo-Indian period, like hunting camps and base camps, typically occur very close to streams, ponds, or sloughs, and on landforms that generally are no more than 1 m (3.3 ft) above the water source. This pattern may indicate a preference for the wooded fringes along the waterways rather than open grasslands. In contrast, Early Archaic period sites usually occur on higher elevations; this shift may reflect a transformation in the natural setting of Maçon Ridge from an open grassland to an open woodland (Hillman 1990).

Brain (1983) states that Paleo-Indian projectile points/knives have been recovered along some of the relict channels of the Mississippi River and from remnant Pleistocene surfaces in the floodplain that pre-date ca. 7000 B.C. In Louisiana, Paleo-Indian sites generally are found along Tertiary upland ridges and uplands/floodplain bluffs (Guy and Gunn 1983). Projectile points/knives such as Clovis, Folsom, Scottsbluff, and Plainview have been recovered from these sites. Although the majority of these projectile points/knives have been found in northern Louisiana, a few have been found on late Pleistocene age Prairie Terrace deposits in southern Louisiana.

Louisiana's Comprehensive Archaeological Plan indicates that no Paleo-Indian sites thus far have been recorded in Iberville Parish. This is not surprising given the erratic nature of Mississippi River meandering. Paleo-Indian sites may once have existed within this parish, but they probably have been destroyed by river scouring or deeply buried by alluvial deposition.

Archaic Stage (6000 - 1000 B.C.)

The term "Archaic" first was coined as a descriptor for the pre-ceramic cultures that succeeded the Paleo-Indian stage. A new combination of technological and social developments is associated with the beginning of this stage. These developments are believed to have resulted from a warming trend, a drier climate, and a rise in sea level that occurred at the end of the Pleistocene Epoch (Willey and Phillips 1958). These changes have been correlated with the development of highly diverse and localized resource and food procurement strategies (Haag 1971). Caldwell (1958), for example, described the new hunting and gathering specializations of the Archaic stage as "maximum forest efficiency." Brain (1971) modified this phrase to "maximum riverine efficiency" in reference to the exploitation of southeastern riverine and coastal environments during this time period.

Current data suggest that Archaic stage peoples moved on a seasonal basis within more restricted ranges to exploit nuts, fruits, fish, game, shellfish, and other natural resources (Muller 1978). Muller suggested that Archaic societies were characterized by a macro/micro band system of organization in order to maximize the exploitation of these resources. Under the macro/micro band model, macrobands coalesced during the spring and summer months, while microbands splintered off and exploited the upland ranges during winter (Muller 1978). Archeological data also indicate that Archaic stage populations exploited a greater variety of terrestrial and marine species than their Paleo-Indian predecessors. Archeological evidence also suggests that Archaic stage peoples developed the first semi-permanent settlements yet identified in the archeological record (Neitzel and Perry 1977). Finally, the increased number of sites dating from the Archaic stage indicates a probable increase in population throughout the Southeast.

The Paleo-Indian to Archaic stage transition was accompanied by a change in projectile point/knife morphology. These changes included

the emergence of a wide variety of notched and stemmed projectile point/knife forms and the disappearance of the fluted projectile point/knife type. Nevertheless, archeological evidence suggests that there was some continuity between the adaptations of the Paleo-Indian and the later Archaic peoples who occupied the Southeast (Smith 1986). Archaic stage projectile point/knife sequences follow a general trend in haft morphology that progresses from side notched to corner notched to stemmed basal forms. Other Archaic stage flaked stone artifact types included adzes, scrapers, and choppers. During the latter half of this time period, granitic rock, chert, jasper, sandstone, slate, steatite, and scoria were ground and polished into a variety of stone ornaments and tools, which included beads, gorgets, bowls, and celts/axes.

The Archaic stage generally is divided into three subdivisions or periods: Early Archaic, Middle Archaic, and Late Archaic. Each of these periods is discussed below.

Early Archaic Period

In the Southeast, the Early Archaic period generally begins ca. 6000 - 8000 B.C. Because of regional cultural variation and the temporal overlapping of stages, however, a number of researchers view cultural developments in the early portion of this period as transitional in nature between the Late Paleo-Indian and Early Archaic cultures. As mentioned above, Gibson (1982) used the term "Epipaleoindian" to describe this transition. Hillman (1985) included the Dalton, Hardin, and San Patrice projectile point/knife types in his review of the transitional period at Maçon Ridge. Dalton projectile points/knives temporally succeeded Clovis projectile points/knives and they have been dated between 8550 - 7950 B.C. from contexts in both Arkansas and Missouri (Goodyear 1982:328). At the Stanfield-Worley Bluff Shelter (1CT125) in northwestern Alabama, the Dalton component dated from ca. 7750 - 7050 B.C. (DeJarnette et al. 1962; Griffin 1974). Dalton projectile points/knives dating from 6700 to 6450 B.C. also have been recovered in association with Kirk Notched, LeCroy, Rice Stemmed, and Graham Cave projectile points/knives in Horizon 11 at the Koster Site (11GE4) in southern Illinois. This date range suggests that Dalton projectile points/knives may extend later in time than initially was assumed.

Dalton projectile points/knives also have been recovered in association with bifacially chipped stone adzes that may have been used as woodworking tools. Chipped and ground stone celts, probably the functional equivalent of Dalton adzes, have been recovered from the Kirk Horizon in Zone 16 at the St. Albans Site (46WV27) in West Virginia and from Early Archaic sites in the Little Tennessee River Valley (Smith 1986:14). In Louisiana, artifacts associated with the Dalton Culture usually are restricted to the northern portion of the state.

Some of the earliest recognized Terminal Paleo-Indian/Early Archaic projectile point/knife types identified in Louisiana are the San Patrice, Keithville, and Pelican forms (Webb et al. 1971). San Patrice projectile points/knives originally were ascribed to an area encompassing northwest Louisiana, northeast Texas, and southern Arkansas. More recently, however, San Patrice projectile points/knives have been recovered from sites ranging from central Texas to southwest Alabama, and from southern Louisiana to central Arkansas (Brain 1983:32; Cantley et al. 1984).

The San Patrice Culture is believed to represent a regional adaptation of hunter-gatherers to the natural resources of the area. A hallmark of San Patrice is the almost exclusive use of local lithic materials for tool production. Tool assemblages include San Patrice *var. Hope* and St. John projectile points/knives, hafted scrapers, Albany side-scrapers, unifacial scrapers, burins, and engravers (Webb et al. 1971). Recently, Keithville *var. A* and *B*, San Patrice *var. Geneill*, and New River projectile point/knife types also have been recognized in this assemblage (Brain 1983). Unfortunately, reliable radiocarbon dates for these types virtually are non-existent. Estimates based on tool morphology and stratigraphic position, however, range from ca. 8050 to 6050 B.C. (Brain 1983:25; Story et al. 1990:202; Turner and Hester 1985:147; Webb 1981). While Ensor (1986) suggested that the San Patrice projectile point/knife type, and related forms in the Southeast, may have developed from the earlier Dalton projectile point/knife forms, Story et al.

(1990:197) argued that both Dalton and San Patrice types evolved from the earlier fluted point traditions.

Subsistence strategies associated with the Early Archaic period probably resembled those of the preceding Paleo-Indian stage. Early Archaic peoples probably traveled seasonally in small groups between a series of base camps and extractive sites, hunting game and collecting seasonally available edible plants (Chapman and Shea 1981; Lentz 1986; Parmalee 1962; Parmalee et al. 1976). The earliest examples of tools associated with food processing, including manos, milling stones, and nutting stones, have been recovered from Early Archaic period sites. Commonly utilized plant foods, such as walnuts, hickory nuts, and white oak acorns, could be hulled and eaten without cooking or additional processing (Larson 1980). Herbaceous seeds, which became an important food source later in the Archaic stage, generally were not utilized during the early Archaic period (Chapman 1977; Lentz 1986). While living floors associated with hearths, shallow pit features, and milling tools are known from the Early and Middle Archaic periods, there is little evidence of subterranean food storage or of substantial dwelling structures (Steponaitis 1986:371).

Much of our knowledge regarding early prehistoric lifeways is limited by deficiencies related to preservation. Lithic tools often are the only surviving artifacts, and they provide only limited information about a narrow range of activities (e.g., manufacture and maintenance of tools, the processing of meat and hides, and the working of wood and bone). Although rarely preserved in the archeological record, clothing, baskets, and other artifacts made from perishable materials such as bone, wood, antler, shell, hair, hide, plant fiber, or feathers undoubtedly were an important part of the Archaic cultural tradition. Impressions of woven mats and net bags preserved in fired clay hearths from Kirk strata at the Icehouse Bottom Site (40MR23) in Tennessee provide a rare insight into the richness of the Early Archaic period material culture (Chapman and Adavasio 1977).

The Early Archaic cultures immediately preceding San Patrice are understood only poorly in Louisiana. To date, diagnostic projectile points/knives dating from the Early Archaic period, including Cache River, Calf Creek, Kirk, and Palmer, have been recovered largely from questionable contexts, and only in limited numbers. In the larger region, however, several Early Archaic period sites have been identified. One such site, the Claiborne Site (22HA501) located in Hancock County, Mississippi, has produced Early Archaic projectile points/knives including Morrow Mountain and Kirk types (Bruseth 1991). Although Site 22HA501 primarily is known for its Poverty Point affiliation, Greenwell (1984:133) reportedly recovered "a large variety of 'unspecified' Paleo-Indian - Archaic transition and Archaic points . . ." from a singe stratum located beneath cultural features dating from the later Poverty Point occupation. Additional work at this site by Bruseth (1991) also produced Kirk and Morrow Mountain projectile points/knives. Finally, work by Gagliano (1963:12) at "preceramic" sites in southern Louisiana and Mississippi found that Kirk Serrated projectile points/knives were not uncommon in the southeastern portion of the state.

Middle Archaic Period

During the Middle Archaic period, new social developments, possibly resulting from widespread environmental changes, affected the trajectory of prehistoric cultures. First, the effects of continental glaciation subsided, resulting in a warmer and drier climate with modern climatic and environmental conditions prevailing. Second, technological improvements, including the use of groundstone, bone, and antler implements, may have been related to adaptations to the changing environment. And finally, in some areas, there is evidence of an increased number of ranked societies.

The Middle Archaic period in the Southeast is marked by several technological advances and by changes in subsistence patterns. Temporally diagnostic Middle Archaic projectile points tend to be stemmed rather than notched. In Louisiana, they include Morrow Mountain, Johnson, Edgewood, and possibly Calcasieu types (Campbell et al. 1990:96; Green 1991; Perino 1985:195). Excavations at Site 16VN791 in Vernon Parish, in western Louisiana, produced evidence of a long tradition of corner notched projectile points/knives beginning in the late Middle Archaic pe-

riod. It has been suggested that these points, and others in the region, were derived from types indigenous to central Louisiana (Campbell et al. 1990). Other technological innovations include the appearance of ground, pecked, and polished stone tools, as well as the use of celts and grooved axes for heavy woodworking, such as dugout canoe manufacture. The *atl atl*, or spear thrower, also first appeared during the Middle Archaic period.

The widespread occurrence of plant processing tools such as milling slabs, manos, and nutting stones, suggests an increase in the utilization of plant foods. Comparisons of floral and faunal assemblages recovered from Early and Middle Archaic period sites, however, indicate little change in the diversity or relative importance of the species utilized. The Middle Archaic period rough milling tools used in plant processing all have Early Archaic antecedents (Smith 1986:21).

Acorns and hickory nuts continued to be the dominant plant foods consumed during the Middle Archaic period. The remains of *Cucurbita pepo* (squash) and bottle gourds (*Lagenaria siceraria*), however, appear for the first time during the Middle Archaic. The earliest occurrence of the bottle gourd was reported from the Windover Site (8BR246) in Florida and it dated from 5340 ± 120 B.C. (Doran et al. 1990). "Squash" rinds dating from 5050 B.C. were recovered from the Napoleon Hollow and Koster sites in west-central Illinois. Although initially identified as the cultivar *C. pepo*, these remains are now thought to consist of the Texas wild gourd, *C. texana*, rather than cultivated squash. Although the seeds of these plants are edible, it appears that their rinds were thin, woody, and inedible; the gourds probably were collected primarily for use as containers rather than as sources of protein. Stronger evidence for the domestication of squash gourds occurs after 2350 B.C. (Smith 1987).

A significant increase in the utilization of fish and shellfish also occurred in many areas during the Middle Archaic period. The increasing importance of aquatic resources can be seen in the development of extensive shell middens found along many southeastern rivers. Shell middens first appeared between 4550 and 4050 B.C. during the Hypsithermal climatic episode. At that time, rivers entered a phase of aggradation and low flow that promoted the development of oxbow lakes and shallow water shoals. These habitats were favorable for mollusk growth and shellfish collection (Stein 1982). Although the food value of mollusks is low, they can be collected efficiently in bulk and they appear to have formed the foundation of the subsistence base for many semi-sedentary Archaic stage groups that resided in the southeastern United States (Russo et al. 1992).

Extensive, deep shell midden sites presumably represent locations that seasonally were reoccupied by small social groups with band-type sociopolitical organization. Excavation at other site types likewise suggests the seasonal reoccupation of areas by Middle Archaic period peoples. Large cemeteries at some Middle Archaic period sites, such as Carleston Annis (15BT5) in Kentucky, as well as Windover (8BR246) and Little Salt Spring (8SO18) in Florida, included interments established over long periods of time by groups seasonally returning to those locations (Clausen et al. 1979; Milanich 1994). These patterns may have resulted from increasing population levels during the Middle Archaic that may have led to more circumscribed territories. This is indicated by the repeated occupation of favored locations, the development of thick shell middens, and the increased emphasis on locally available raw materials utilized in stone tool production.

Evidence for social stratification during the Middle Archaic was recovered at the Indian Knoll Site (15OH2) in Kentucky (Webb 1946), in the form of grave goods being recovered in association with a child's burial. Because status in egalitarian societies usually was acquired rather than inherited, and because buried children probably did not live long enough to acquire much status, exotic grave objects associated with child burials are seen as one of the earliest indications of inherited social rank.

Late Archaic Period

The Late Archaic represents a time of population growth as demonstrated by an increased number of sites dating from this time period in the eastern United States. Hallmarks of the

Late Archaic period include the introduction of steatite stone vessels, fiber-tempered pottery, and groundstone artifacts. Each of these artifact classes has been recovered from Late Archaic period sites throughout the Southeast. In Louisiana, projectile point/knife types dating from this time period include both corner notched and stemmed forms.

Throughout the eastern United States, Late Archaic subsistence strategies focused on a few wild resources, including deer, mussels, fish, and nuts. Jenkins (1979) recognized a seasonal procurement strategy in Middle Tennessee dating from the Late Archaic period. In the spring, macrobands formed to exploit forested riverine areas. In late fall and winter, however, the Late Archaic groups fissioned into microbands and subsisted on harvested and stored nut foods and on faunal species commonly found in the upland areas. A similar seasonal procurement strategy may have existed in Louisiana.

Late Archaic period projectile point/knife types are commonly found throughout Louisiana. Very few discrete and intact archeological deposits dating from this time period, however, have been excavated systematically, analyzed, and comprehensively reported (Neuman 1984). Late Archaic sites in the west-central and northern parts of the state that have been studied systematically have produced projectile point/knife types that include Bulverde, Carrollton, Delhi, Ellis, Ensor, Epps, Gary, Kent, Macon, Marcos, Palmillas, Pontchartrain, Sinner, and Yarbrough types. Groundstone objects recovered from these sites include celts/axes, plummets, and steatite bowl fragments (Campbell et al. 1990; Jeter et al. 1989; Smith 1975). In addition, there is evidence for widespread trade in shell, copper, slate, greenstone, and jasper ornaments, including carved stone zoomorphic locust beads, during Late Archaic times (Blitz 1993; Brose 1979; Smith 1986:31; Steponaitis 1986:374).

Mounds appear for the first time in the Late Archaic some time before 2000 B.C. (Gibson and Shenkel 1988:9-10). Saunders et al. (1992) believe that mounds constructed during this time period are datable based on the age of the landforms, the eluviation of fill clays from the A and E horizons to the Bt Horizon, and a lack of post Archaic stage artifacts. Currently, only four possibly Late Archaic mounds or mound complexes have been identified in northern Louisiana (Saunders et al. 1992). These include the Hedgepeth Mounds (Site 16LI7), the Watson Brake Mounds (Site 16OU175), the Frenchman's Bend Mounds (Site 16OU259), and Hillman's Mound (Site 16MA201).

More recently, Saunders (1994, 1996) hypothesized that mound building began as early as the Middle Archaic period. The Watson Brake Mound Site (16OU175), located near Monroe, Louisiana was identified by Northeast Louisiana University student Reca Jones in the 1970s. The site was described as circular in configuration with a diameter of approximately 275 m (900 ft); it encompassed 11 separate mounds, with each mound measuring between 1 and 6 m (3 and 20 ft) in height. Well preserved food remains recovered from the site, indicate that the Watson Brake mound group was occupied seasonally for fishing purposes. Recent research by Saunders strongly suggests that the earthworks on the Watson Brake Site are older than previously suspected, and that the mounds were constructed approximately 5,400 years ago. If this date is accurate, the mounds at the Watson Brake Site would represent the earliest example of a prehistoric earthwork in North America. This recent discovery contradicts the assumption that Middle Archaic hunting and gathering societies could not achieve the level of social organization necessary for the construction of the earthen mounds.

Poverty Point Culture (2000 - 500 B.C.)

Poverty Point represents a transitional culture that originated as early as ca. 2000 B.C., but it did not exert its full influence until much later (Neuman 1984). It is best known for exhibiting several fundamental and distinguishing characteristics of a complex society, including massive public architecture and long distance trade, while still maintaining a hunting and foraging economy. The Poverty Point type site (16WC5) is located adjacent to Bayou Maçon and near several major rivers, including the Mississippi, Tensas, Ouachita, and Boeuf, in West Carroll Parish, Louisiana. This riverine location was ideal for exploiting the flow of trade goods from other regions (Jeter and Jackson 1990:142; Muller 1978; Neitzel and Perry 1977). Evidence for long dis-

tance trade recovered at Poverty Point includes ceramics similar to those collected from the St. Johns River region of Florida, and lithic materials from deposits in Arkansas, Illinois, Indiana, Missouri, Ohio, Oklahoma, and Tennessee (Connaway et al. 1977:106-119; Gibson 1974:26, 1979, 1994; Jeter and Jackson 1990; Lehmann 1982:11-18; Webb 1982:13-14). These data suggest that Poverty Point Culture may represent the first chiefdom-level society to develop in the eastern United States (Gibson 1985a; Muller 1978).

The Poverty Point type site (16WC5) is distinguished primarily by its large earthworks and its complex microlithic industry. The earthwork includes six, 15 to 46 m (50 to 150 ft) wide, segmented ridges that formed five sides of an octagon, and several other mounds scattered throughout the site area. The largest mound, Mound A, resembles a bird, and this mound may represent a large-scale earthen effigy (Webb 1982). At the time of its construction, Poverty Point was the largest mound site in the Americas.

The material culture associated with the Poverty Point Culture is quite distinctive. Typical Poverty Point Culture projectile points include Carrollton, Delhi, Epps, Gary, Kent, Motley, and Pontchartrain types (Smith et al. 1983:152; Webb 1982:22, 47). Although these point types were in use during the Archaic stage, they also were manufactured during Poverty Point times (Gibson 1994). Other artifacts associated with the Poverty Point Culture include *atl atl* weights, plummets, two hole gorgets, red jasper beads and owl pendants, Jaketown perforators, finger-impressed baked clay cooking balls, clay figurines and fetishes, thin micro flints/blades, and food storage and preparation containers (Webb 1982). Container types included sandstone and steatite vessels, basketry, and ceramic vessels. Most ceramic vessels were sand tempered, although a minority contained grit, clay, or fiber temper or no temper at all. Webb (1982) also reported the recovery of seed processing implements, stone hoes, nutting stones, and milling stones from Poverty Point sites.

While Brain (1971) argued that Poverty Point sites tended to be located in the bottomlands, Webb (1982) suggested that they occurred across four different landform types. These included: (1) Quaternary terraces or older land forms that overlook major stream courses; (2) major river levees of active or relict river channels; (3) river-lake confluences; and (4) coastal estuaries or older land form located within a coastal marsh area. These areas were ideal for exploiting forest-edge resources and for transporting exotic materials. Sites on these landforms ranged in size from large ceremonial centers to small hamlets or foraging stations. According to Smith et al. (1983:96), only four Poverty Point Culture sites have been recorded in Management Unit V; two of theses sites have been identified in Iberville Parish.

Woodland Stage (1000 B.C. - A.D. 1100)

The emergence of the Woodland stage in Louisiana prehistory was characterized by a combination of the introduction of horticulture, the initial use of the bow and arrow, and the widespread adoption of ceramic containers. The Woodland stage includes three divisions or periods: Early Woodland, Middle Woodland, and Late Woodland. In Louisiana, the Early Woodland period (ca. 500 B.C - A.D.) is represented by the Tchefuncte Culture, the Middle Woodland period (ca. 100 B.C. - A.D. 400) is associated with the Marksville Culture and to a lesser extent with the Troyville Culture, and the Late Woodland period (ca. A.D. 400 - 1200) originated with the Troyville Culture, but later was dominated by the Coles Creek Culture. A discussion of each of these cultures is presented below.

Tchefuncte Culture (500 B.C. - A.D. 0)

While the Tchefuncte Culture is characterized by the first widespread use of pottery, its tool inventory otherwise resembled that of a Late Archaic period hunter-gatherer tradition (Byrd 1994; Neuman 1984; Shenkel 1981:23). The Tchefuncte Culture first was identified at the type site (16ST1) located on the north shore of Lake Pontchartrain in St. Tammany Parish, Louisiana (Ford and Quimby 1945; Weinstein and Rivet 1978). Later, the Tchefuncte Culture was defined by Ford and Quimby (1945) based on Works Progress Administration (WPA) excavations at Big Oak Island (16OR6) and the Little Woods Site (16OR15) in Orleans Parish during the 1930s and 1940s. While the Tchefuncte Culture initially

was thought to represent a local adaptation by an indigenous population in the southern Louisiana coastal region (Ford and Quimby 1945), Tchefuncte or Tchefuncte-like ceramics have been recovered from southeast Missouri, northwest Mississippi, the Yazoo Basin, coastal Alabama, and east Texas (Brookes and Taylor 1986:23-27; Mainfort 1986:54; Neuman 1984; Webb et al. 1969:32-35; Weinstein 1986:102).

A date range from ca. 500 B.C. - A.D. 100 generally has been accepted for the Tchefuncte Culture; however, recent research indicates that dates for the Tchefuncte Culture differ widely from region to region and occasionally even within the same area (Byrd 1994; Gibson 1976a, 1976b:13; Webb et al. 1969:96; Weinstein 1986). Most archeologists agree that the Tchefuncte Culture dates from as early as 700 B.C. in the south, that it diffused to the north where it is known as the Tchula Culture, and that it terminated around A.D. 100 (Gibson and Shenkel 1988:14; Perrault and Weinstein 1994:48-49; Shenkel 1974:47; Toth 1988:19). Recent evidence suggests that coastal Tchefuncte sites may have survived until ca. A.D. 300 (Byrd 1994:23; Neuman 1984:135). These dates suggest that the last remaining coastal Tchefuncte communities were coeval with sites associated with the late Marksville Culture (Toth 1988:27-28).

Tchefuncte/Tchula ceramics usually are characterized by a soft, chalky paste, and a laminated appearance in cross-section. They were fired at low temperatures and they were tempered either with sand or clay (Phillips 1970). Vessel forms consisted of bowls, cylindrical and shouldered jars, and globular pots that sometimes exhibited podal supports. While many vessels were plain, some were decorated with punctations, incisions, simple stamping, drag and jab, and rocker stamping. Punctated types usually were more numerous than the stamped types, but parallel and zoned banding, stippled triangles, chevrons, and nested diamonds also occur. During the later part of this period, red filming also was used to decorate some vessels (Perrault and Weinstein 1994:46-47; Phillips 1970; Speaker et al. 1986:38). Tchefuncte/Tchula ceramic types included Alexander Incised, Wheeler Simple Stamped, Wheeler Punctated, Jaketown Simple Stamped, three Tchefuncte types (Plain, Stamped, and Incised), and Lake Borgne Incised (Ford et al. 1955). In addition, Ford et al. (1955) identified a variety of fiber-tempered and fiber impressed ceramic types.

For the most part, the stone and bone tool assemblages characteristic of the Tchefuncte Culture remained nearly unchanged from the preceding Poverty Point times. Stone tools included boat stones, grooved plummets, chipped celts, and sandstone saws; bone tools included awls, fish hooks, socketed antler points, and ornaments. In addition, containers, punches, ornamental artifacts, and some tools such as chisels, were manufactured from shell. Projectile point/knife types characteristic of Tchefuncte Culture include Gary, Ellis, Delhi, Motley, Pontchartrain, Macon, and Epps types (Ford and Quimby 1945; Smith et al. 1983:163). Bone and antler artifacts, such as points, hooks, awls, and handles, also became increasingly common during this period.

Interior Tchefuncte/Tchula sites generally are classified as villages or hamlets, although shell middens also have been identified. Settlement usually occurred along the slack water environments of slow, secondary streams that drained bottomlands and floodplain lakes (Neuman 1984; Toth 1988:21-23). Both burials and artifacts recovered at Tchefuncte period sites suggest an egalitarian social organization. Tchefuncte/Tchula peoples probably were organized at the band level, with as many as 25 to 50 individuals per band. The widespread distribution of similar ceramic types and motifs may imply a patrilocal residence pattern with exogamous band marriage arrangements (Speaker et al. 1986:39). Social organization probably remained focused within macrobands, and hunting, collecting, and fishing remained integral to the Tchefuncte/Tchula way of life.

Data recovered from Tchefuncte sites document the wide variety of food resources utilized during the period. Faunal remains recovered from these sites include deer, opossum, muskrat, raccoon, otter, bear, fox, dog, ocelot, wildcat, alligator, bird, fish, shellfish, and turtle (both aquatic and terrestrial). Recovered plant remains (all nondomesticated) include squash, gourds, plums, nuts, grapes, and persimmons (Neuman 1984; Smith et al. 1983). Neuman (1984) noted that the remains of crustaceans such as crabs, shrimp, and

crawfish do not appear within Tchefuncte/Tchula middens.

According to Smith et al. (1983:96), only 22 Tchefuncte Culture sites have been documented in Management Unit V. Of these 22 sites, the majority of them (n=17 [77 percent]) are located in Jefferson and Orleans Parishes. Only one Tchefuncte Culture site has been recorded in Iberville Parish, Louisiana.

Marksville Culture (100 B.C. - A.D. 400)

The Marksville Culture, named for the Marksville Site (16AV1) in Avoyelles Parish, Louisiana, often is viewed as a local manifestation of the midwestern Hopewellian Culture, which extended down the Mississippi River from Illinois (Toth 1988:29-73). Complex geometric earthworks, conical burial mounds for elites, and unique mortuary ritual systems indicate a highly organized social structure during Marksville times. Some items, such as elaborately decorated ceramics, were manufactured primarily as mortuary objects. Burial items included pearl beads, carved stone effigy pipes, copper ear spools, copper tubes, galena beads, and carved coal objects. Hopewellian influences declined and mortuary practices became less complex, however, toward the end of the Marksville period (Smith et al. 1983; Speaker et al. 1986).

Ceramic decorative motifs such as cross-hatching, U-shaped incised lines, zoned dentate rocker stamping, cord-wrapped stick impressions, stylized birds, and bisected circles were shared by potters in the Marksville and Hopewell Cultures (Toth 1988:45-50). Other Marksville traits include a stone tool assemblage of knives, scrapers, celts, drills, ground stone *atl atl* weights, plummets, medium to large stemmed projectile points, bone awls and fishhooks, and baked clay balls. In addition, a variety of non-local artifacts commonly found at Marksville sites suggests the existence of extensive trade networks and possibly a ranked, non-egalitarian society. Some commonly recovered items include imported copper earspools, panpipes, platform pipes, figurines, and beads (Neuman 1984; Toth 1988:50-73).

Little currently is known about Marksville subsistence. Presumably, Marksville peoples employed a hunting, fishing, and gathering subsistence strategy much like those associated with earlier periods. Oily seeds, such as marshelder (*Iva annua*), sunflower (*Helianthus annus*), and squash (*Cucurbita pepo*), and starchy seeds, such as goosefoot (*Chenopodium* sp.), maygrass (*Phalaris caroliniana*), knotweed (*Polygonum* sp.), and little barley (*Horduem pusillum*), also were consumed (Fritz and Kidder 1993:7; Smith 1986:51). At the Reno Brake Site (16TE93) in Tensas Parish, Kidder and Fritz (1993) recovered the remains of deer, squirrel, rabbit, bird, and fish, as well as acorns, persimmon, palmetto, grapes, blackberries, and very minor amounts of *Chenopodium* and marshelder. Although maize has been identified and dated from Middle Woodland contexts at sites in Tennessee and Ohio (Ford 1987), it probably was not important in Louisiana until Mississippian times (Fritz and Kidder 1993:7, 294; Smith 1986:50-51).

A total of 23 Marksville Culture sites have been recorded in Management Unit V. Only two of those sites, however, have been documented in Iberville Parish (Smith et al. 1983:46).

Troyville-Coles Creek Period (ca. A.D. 400 - 1200)

Troyville Culture, elsewhere described as Baytown, was named after the Troyville mound group (16CT7) in Jonesville, Catahoula Parish, Louisiana. It represents a transition from the Middle to Late Woodland period that culminated in the Coles Creek Culture (Gibson 1984). Though distinct, Troyville and Coles Creek cultures are sufficiently similar that many researchers interpret them as a single prehistoric cultural unit. According to Neuman (1984:169), 23 C^{14} dates from 14 Troyville sites in Louisiana place the beginning of the period at approximately A.D. 395. Continuing developments in agriculture and the technological refinement of the bow and arrow during this time period (reflected by the appearance of Alba, Catahoula, Friley, Hayes, and Livermore projectile point types), radically altered prehistoric life. During the Troyville cultural period, bean (*Phaseolus vulgaris*) and squash agriculture may have became widespread. This shift in subsistence practices probably initiated the development of more complex settlement patterns and social organization.

The Late Woodland Coles Creek Culture emerged from the Troyville Culture around A.D.

750, and it represented an era of considerable economic and social change in the Lower Mississippi Valley. By the end of the Coles Creek period, communities were larger and more socially and politically complex. Large-scale mound construction occurred and there is evidence for the resumption of long-distance trade on a scale not seen since Poverty Point times. These changes imply chiefdoms were reemerging in the Lower Mississippi Valley (Muller 1978). The possible diffusion of material and sociopolitical concepts from the Midwest may be indicated by the fact that Coles Creek ceramics have been recovered from early Cahokian contexts dating from ca. A.D. 900 in southeastern Missouri (Kelly 1990:136). These changes probably initiated the transformation of Coles Creek cultural traits into what now is recognized as the Plaquemine Culture sometime before A.D. 1200 (Jeter et al. 1989; Williams and Brain 1983).

Coles Creek ceramic vessels are distinguished by their grog and grog/sand tempering. Decorative motifs include cord marking, red filming, and simplified zoned rocker-stamping, as well as decorations with incised lines and curvilinear lines. Coles Creek peoples continued to use Troyville wares, with some elaborations (McIntire 1958). For instance, the Churupa Punctated and the Mazique Incised designs, both of which are characteristic of the Troyville Culture, were used by Coles Creek and later Plaquemine pottery makers (McIntire 1958). Similarly, French Fork Incised, which formed the basis for many Troyville classifications, continued to be used well into the Coles Creek period (Phillips 1970).

Coles Creek peoples also developed a new ceramic complex that included larger vessels and a wider range of decorative motifs, usually positioned on the upper portion of the vessel (Neuman 1984). Coles Creek Incised, Beldeau Incised, and Pontchartrain Check Stamped are typical examples of these wares (Phillips 1970; Weinstein et al. 1979). One distinctive decorative type, Coles Creek Incised, contains a series of parallel incised lines placed perpendicular to the rim of the vessel, often accompanied underneath by a row of triangular impressions (Phillips 1970:70; Phillips et al. 1951:96-97). Several of the ceramic motifs reflect external cultural influences. French Fork Incised motifs and decorative techniques, for example, mimic almost exactly Weeden Island Incised and Weeden Island Punctated types from the Gulf Coast of northwest Florida (Phillips 1970:84; Phillips et al. 1951:101; Willey 1949:411-422). Pontchartrain Check Stamped ceramics also appear at the same time as the resurgence of the check stamped ceramic tradition during Weeden Island III in northwest Florida (Brown 1982:31).

Sites from the Coles Creek cultural period primarily were situated along stream systems where soil composition and fertility were favorable for agriculture. Natural levees, particularly those situated along old cutoffs and inactive channels, appear to have been the most desired locations (Neuman 1984). Most large Coles Creek sites contain one or more pyramidal mounds. Coles Creek mounds typically are larger and they exhibit more building episodes than the earlier Marksville burial mounds. While burials occasionally are recovered, the primary function of the Coles Creek mounds appears to have been ceremonial. At some Coles Creek sites, mounds are connected by low, narrow causeways; plazas occasionally are associated with these multiple mound sites (Gibson 1985b). According to Williams and Brain (1983), these traits reflect Mesoamerican influences.

The complexity of the Coles Creek mound system suggests a social structure capable of supporting a centralized authority with a sizable labor force to construct and maintain the mounds. The non-elite population probably occupied the region surrounding the large ceremonial centers (Gibson 1985b; Neuman 1984; Smith et al. 1983). In general, small Coles Creek sites consist mostly of hamlets and shell middens, and they normally do not contain mounds.

Recent work has dispelled the theory that an intensification of agriculture, particularly maize and squash cultivation, comprised the subsistence base of the Coles Creek Culture. Although Coles Creek populations exhibit tooth decay rates consistent with a diet based on starchy foods such as maize, the limited archeobotanical evidence for maize in Coles Creek midden deposits suggests that consumption of some other starchy foods may have been the cause (Kidder 1992; Steponaitis 1986). While researchers speculate that cultigens, especially squash species, were har-

vested by Coles Creek peoples, evidence of dependence on domesticated plants has been lacking at early Coles Creek sites (Kidder 1992; Kidder and Fritz 1993). The preponderance of evidence now available indicates that the cultivation and consumption of maize was not widespread in the lower Mississippi Valley until after the Coles Creek period, ca. A.D. 1200 (Kidder 1992:26; Kidder and Fritz 1993).

Earlier assumptions about the nature and extent of social and political differentiation during Coles Creek also must be re-examined. Square-sided, flat-topped mounds that are believed to have served as platform bases for elite structures first appeared during the Coles Creek period. Evidence for elite residential or mortuary structures often said to be associated with these mounds, however, remains elusive prior to A.D. 1000 (Kidder and Fritz 1993; Smith 1986; Steponaitis 1986). Nevertheless, both the form of the platform mounds and their arrangement around plazas may be indicative of Mesoamerican influence (Willey and Phillips 1958; Williams and Brain 1983).

A total of 112 Troyville/Coles Creek sites have been recorded in Management Unit V, more than any other prehistoric period. Significant numbers of these sites are located in almost every parish within the Management Unit. In Iberville Parish, only seven Coles Creek period sites have been identified (Smith et al. 1983:96).

Mississippian Stage (A.D. 1200 - 1700)

The Mississippian stage represents a cultural climax both in population growth and social and political organization for those cultures occupying the southeastern United States (Dye and Cox 1990; Phillips 1970; Williams and Brain 1983). The advent of the Mississippian stage is represented at sites throughout the lower Mississippi Valley and along the northern Gulf Coast. Mississippian period sites are recognized by a distinctive complex of traits that include shell tempered ceramics, triangular arrow points, copper-sheathed wooden earspools, and maize/beans/squash agriculture (Williams and Brain 1983). Mississippian sites containing large "temple mounds" and plazas have been recorded throughout the Southeast at such places as Winterville, Transylvania, Natchez, Moundville, Bottle Creek, and Etowah (Hudson 1978; Knight 1984; Walthall 1980; Williams and Brain 1983).

In the lower Mississippi Valley, the Mississippian stage includes the Plaquemine or Emergent Mississippian period (ca. A.D. 1200 - 1450) and the Late Mississippian period (ca. A.D. 1450 - 1700). Each of these periods is described below.

Emergent Mississippian Period (A.D. 1200 - 1450)

The Emergent Mississippian period - Plaquemine Culture appears to represent a transitional phase from the Coles Creek Culture to a pure Mississippian Culture (Kidder 1988). The emerging Mississippian Cultures of the Middle Mississippi Valley probably exerted enough influence during the latter part of the Coles Creek period to initiate the cultural changes that eventually defined the Plaquemine Culture. Plaquemine Culture peoples continued the settlement patterns, economic organization, and religious practices established during the Coles Creek period; sociopolitical structure and religious ceremonialism, however, were intensified. This suggests, among other things, a complex social hierarchy. Large ceremonial sites, which typically contained multiple mounds surrounding a central plaza, were constructed. Smaller dispersed villages and hamlets also formed part of the settlement hierarchy (Neuman 1984).

Although Plaquemine Culture ceramics are derived from the Coles Creek tradition, they display distinctive features that mark the emergence of a new cultural tradition. In addition to incising and punctating pottery, Plaquemine Culture craftsmen also brushed and engraved their vessels (Phillips 1970). Plaquemine Culture ceramic types include Plaquemine Brushed, Leland Incised, Hardy Incised, L'Eau Noire Incised, Anna Burnished Plain, and Addis Plain. Plaquemine Brushed appears to have been the most common ware type (Kidder 1988:75).

Gregory (1969) reports that Plaquemine Culture sites in the Catahoula basin demonstrate a propensity toward settlement in lowland areas, including swamps and marshes. This position is supported by both Jeter (1982) and Schambach (1981) in reference to southeast Arkansas and the Felsenthal region of that state. In contrast, Neuman (1984) cites Hall's observation that

Plaquemine Culture sites in the upper Tensas Basin were located most frequently on well-drained natural levees characterized by sandy soils. In the Boeuf Basin, Kidder and Williams (1984) note that Plaquemine Culture components frequently overlie earlier Coles Creek period occupations.

A total of 57 Plaquemine period sites have been recorded in Management Unit V. Only seven Plaquemine Culture sites have been documented in Iberville Parish (Smith et al. 1983:96).

Late Mississippian Period (A.D. 1450 - 1700)

As early as A.D. 1450, several traits that now are definitive of the Mississippian period were widespread across most of the Southeast. These diagnostic traits include well-planned mound groups, a wide distribution of sites and trade networks, a revival in ceremonial burial of the dead, and production of shell tempered ceramics (Griffin 1990:7-9), an innovation that enabled potters to create larger vessels (Brain 1971; Steponaitis 1983). Ceramic vessel forms include globular jars, plates, bottles, pots, and salt pans. Additionally, the loop handle appeared on many Mississippian vessels. Although utilitarian plainware was common, decorative techniques included engraving, negative painting, and incising; modeled animal heads and anthropomorphic images also adorned these ceramic vessels. Other Mississippian artifacts included chipped and groundstone tools; shell items such as hairpins, beads, and gorgets; mica and copper items; and projectile point types such as Alba and Bassett.

Mississippian subsistence was based on the cultivation of maize, beans, squash, and pumpkins, the collection of local plants, nuts, and seeds, and fishing and hunting of local species. Major Mississippian sites were located on fertile bottomlands of major river valleys, in terrain characterized by sandy and light loam soils. A typical Mississippian settlement consisted of an orderly arrangement of village houses surrounding a truncated pyramidal mound. These mounds served as platforms for temples or as houses for the elite. A highly organized and complex social system undoubtedly existed to plan these intricate communities.

A total of 50 Mississippian period sites have been identified in Management Unit V. Only five Mississippian period sites have been identified in Iberville Parish (Smith et al. 1983:96.)

Protohistoric and Early Historic Period (ca. 411 - 220 B.P. [A.D. 1539 - 1730])

An understanding of protohistoric and historic Native American cultures of the southeastern United States is limited by our frequent inability to recognize the prehistoric cultures from which these historic groups were derived. This is due partially to the waning influence of Mississippian and, to a lesser degree, Plaquemine Culture, but primarily it is a result of the social disruption initiated by the legacy of the Hernando de Soto entrada of 1539 - 1543, and the subsequent French and Spanish exploration and colonization of the Southeast. Native American population upheavals and depletions were related to warfare, disruptive migrations, and epidemics introduced by European contact (Davis 1984; Smith 1987).

Villages apparently remained similar to those observed previously at Plaquemine and Mississippian sites. The larger villages generally featured one or more truncated pyramidal mounds surmounted by chiefs' houses and temples; the remainder of the population lived in the area surrounding the mounds and in satellite hamlets. Houses were rectangular in shape and were constructed of poles placed in the ground, with wattle and daub walls and thatched roofs (Swanton 1946).

According to *Louisiana's Comprehensive Archaeological Plan* (Smith et al. 1983), the major Native American languages spoken in the northwestern portion of Management Unit V at the time of European contact belonged to the Muskhogean family. These linguistic groups were comprised of the Houma, Bayougoula, Acolapissa, Mugulasha, Tangipahoa, Okelousa, Washa, and Chawasha. While many of these groups lived in the southern portion of the Management Unit, the Bayougoula were associated most closely with the parishes that contain the proposed project reach.

According to Kniffen et al. (1987:50), the Bayougoula (the Bayou or River People) resided on the west bank of the Mississippi River. They established a small community housing some 400 to 500 people near the Town of Plaquemine

in Iberville Parish, Louisiana. On his expedition up the Mississippi River, Iberville visited a Bayougoula village located approximately one quarter of a mile from the right descending bank of the river and situated adjacent to a small creek utilized as a source of fresh water (Kniffen et al. 1987:50). Soon after the arrival of the French, the Bayougoula and the other Muskogean-speaking groups of the area, including the Acolapissa, Quinapisa, Mugulasha, and Tangipahoa, lost their separate identities as tribes. These groups simply became referred to as the Colapissas by French settlers. By the nineteenth century, there was no longer any mention of the Bayougoula tribe in Iberville Parish. Some scholars have suggested that tribe merged with the Houma (Kniffen et al. 1987:90), but evidence demonstrating this hypothesis is lacking.

CHAPTER IV

HISTORICAL PERSPECTIVE

Introduction

The proposed Alhambra to Hohen-Solms and Hohen-Solms to Modeste project reach extends along the west bank of the Mississippi River as it runs through western Ascension and Iberville Parishes, Louisiana. Historically, this portion of the "Acadian Coast" has been agricultural in nature; in fact, several major sugar plantations are located within the vicinity of the Areas of Potential Effect. While much of the area remains planted in sugar cane today, the region has undergone significant industrialization in recent years. This chapter presents a general overview of the history of the riverbank portions of Iberville and Ascension Parishes, with an emphasis placed on the two proposed project reaches.

Early Exploration and Initial Settlement

Hernando de Soto, the Spanish conquistador, was the first European to view the Mississippi River. He visited the area during his explorations in 1541. De Soto and his men traveled through the area that later became known as Louisiana, and they reached the Gulf of Mexico in 1543. More than a century passed before another European set out to explore the Mississippi River Valley. In 1682, Robert Cavelier de La-Salle sailed down the river to its mouth and he claimed all the land for King Louis XIV of France, he named it Louisiana in his honor.

The first extensive exploration of the Louisiana territory began in 1698 by Pierre LeMoyne, Sieur d'Iberville. This "Mississippi Expedition" was designed to help keep the British out of the region (Riffel 1985:2). In part, because the Spanish had established a settlement at Pensacola in 1697, the French feared an expansion of British colonial interests southward into the Gulf region. Iberville sought to establish alliances between the French and the Native Americans who lived along the river, to serve as a bulwark against other European intrusions.

Together with his brother, Jean Baptiste LeMoyne, Sieur de Bienville, Iberville began his upriver voyage in 1699. They entered the mouth of the river from the open sea in two small boats. After a six week journey, Iberville arrived in the vicinity of what later would become Iberville Parish, named in his honor. On the east bank of the river, Iberville encountered the village of the Houma or (*Oumas*), and on the west bank the village of the Bayougoula (Figure 6). Iberville notes that the Houma were better provisioned than their neighbors, the Bayougoula; the former lived in a neatly ordered village of some 140 huts, with a population of 350 men and an unknown number of women and children.

Of the Bayougoula, Iberville observes:

> In this village there were 107 huts and 2 temples; and there were possibly about 200 to 250 men and few women and children. The smallpox, which they still had in the village, had killed one-fourth of the people . . . . These Indians are the most beggarly I have yet seen, having no conveniences in their huts and engaging in no work (McWilliams 1981:63)

Iberville describes the land as hilly, having "fairly good black soil" (McWilliams 1981:69). Iberville assigned Father Du Ru, a Jesuit priest, to the Bayougoula village, to organize a mission.

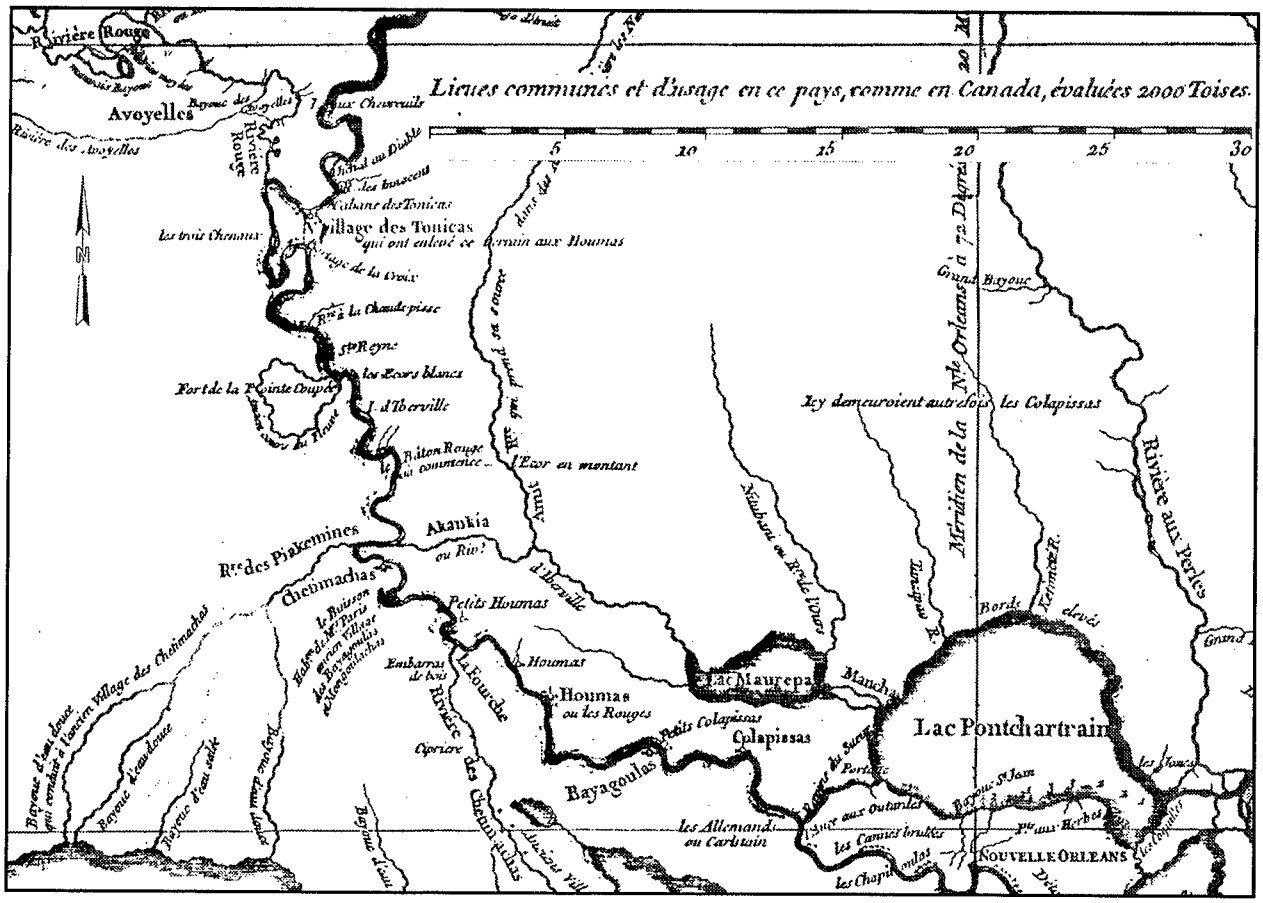


Figure 6. **D'Anville map, ca. 1732-1752, depicting the village of the Bayougoula, west bank of the River, and the village of the Petit Houmas on the east bank.**

Due to its involvement with European conflicts and concerns, France paid only slight attention to its fledgling colony. As a result, there was little assistance available for the Louisiana colonists during the early eighteenth century. The historian Alcee Fortier comments:

> Most of the early settlers had come to America imbued with the idea that it was a land of vast wealth, which was easily to be obtained, and they spent their time in vain searching for mines or pearl fisheries instead of opening up plantations (Fortier 1914:303).

During the winter of 1710, supplies were so scarce that the colonists were sent to live among the neighboring Native American groups just to survive.

To lessen the economic burden of managing the colony, the French government changed its policy and decided to privatize the administration and development of the colony through a series of concessions (Riffel 1985:4). The first such concession was granted to Antoine Crozat in 1712. Crozat and his Company of Louisiana was given a full monopoly over all potential production and cash-crop exports from the colony, as well as mineral rights to the land. Unfortunately, the lure of gold led Crozat on the same fruitless search as his predecessors, while efforts at settlement, agriculture, and trade languished. After only five years had elapsed from his 15 year concession, the losses seemed insurmountable, and Crozat surrendered his charter in 1717.

Later that same year, France granted the Company of the West the Louisiana charter. John Law understood that the colony could not profits with such a small population. Therefore, to attract settlers to the territory, Law offered tracts of land to colonists who promised to es-

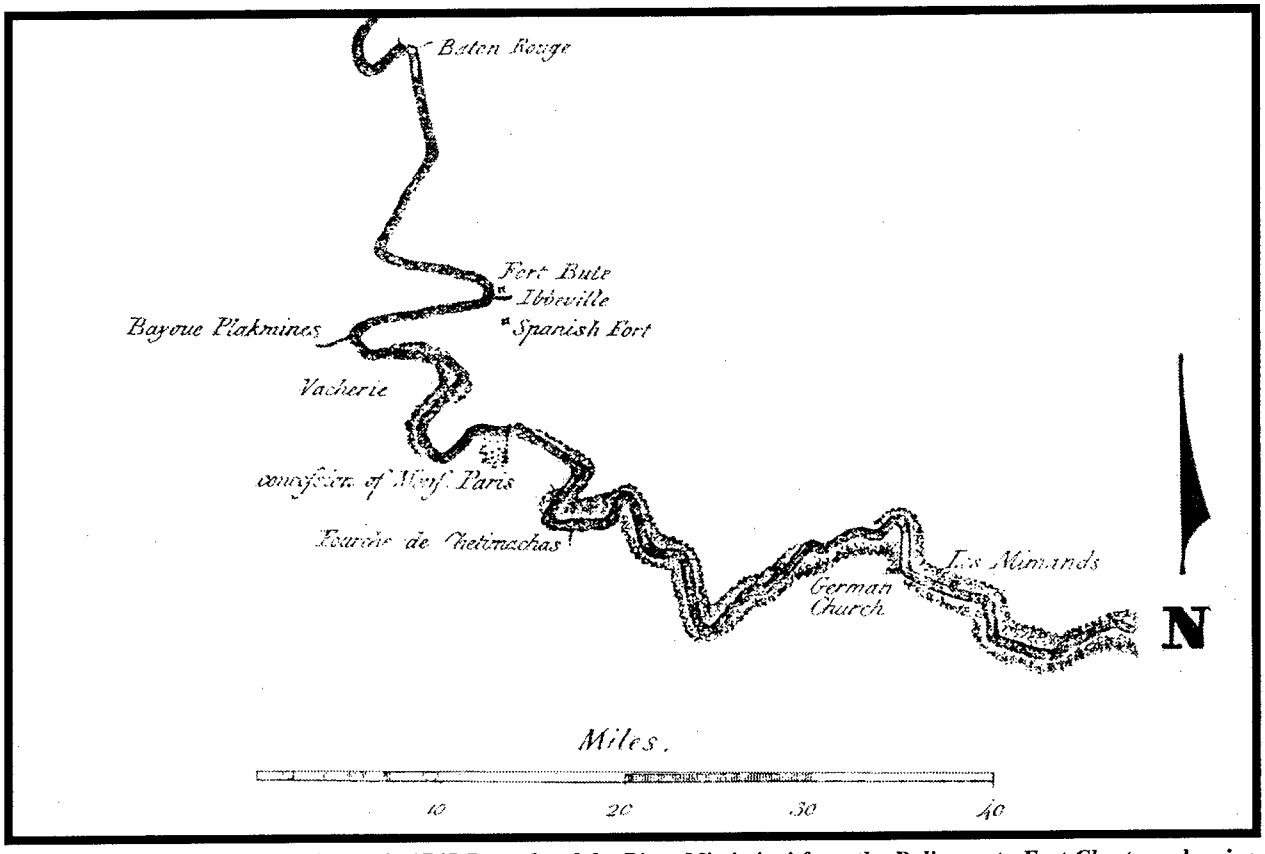


Figure 7. **Excerpt from Pittman's 1765 *Draught of the River Mississippi from the Balize up to Fort Chartres*, showing Paris Duvernay's concession (Louisiana Collection, Tulane University).**

tablish agricultural settlements within the struggling colony. Colonization began in 1718. M. Paris, *dit* (called) Duvernay, a director of the Company of the West, was granted a concession near the proposed project reach (Figure 7). Penicaut, writing in 1722, describes this concession:

> The first concession established was that of M. Paris, managed by M. Dubuisson, who had brought his brother and his two sisters with him, with twenty-five persons and many personal possessions. It was located twenty-eight leagues above New Orleans on the left bank of the Missicipy (sic) going upstream, in the old village of the Bayogoula. In addition to the tilling of fields, they established a silkworm factory there; for that reason they planted a great many mulberry seedlings (McWilliams 1953:211-212).

Although the Bayougoula Indians apparently had abandoned this land, within the last year, Dubuisson complained, in a letter to Sieur de Bienville, of daily raids made on the concession by the Chitimacha. Bienville sent an emissary to speak to the Chitimacha chief and found that the Chitimacha were willing to make peace with the French. The Chitimacha agreed to abandon their village and to settle along the Mississippi River, approximately one league below the Duvernay concession. An inventory conducted in 1726 recorded a settlement comprised of "4 square leagues containing about seventy arpents cleared and which are at present planted in rice, potatoes, etc." (Pritchard 1938:979-994) Although Paris Duvernay transported 25 laborers, many of them skilled artisans, to his concession in 1724, there was no account of them in the 1726 population tally. In 1731, the census recorded DuBuisson [sic] Monferier and his family of seven (besides himself, his wife and five children), one worker, and six Negroes on the Duvernay concession. Another colonist, La Garde, was listed with 5 workers and 48 Negroes. Although it was beset by administrative problems, the Paris Duvernay

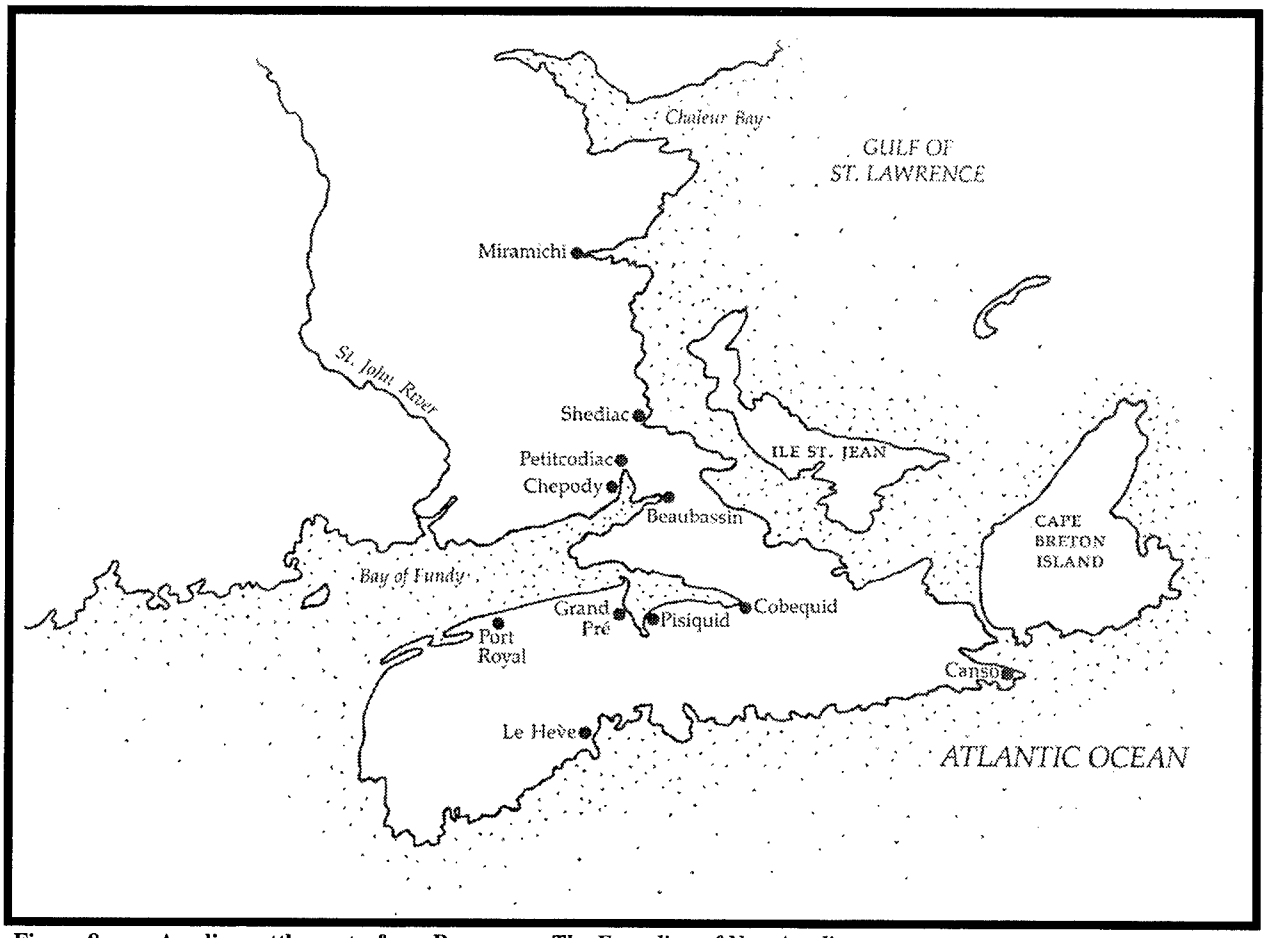


Figure 8. **Acadian settlements, from Brasseaux, *The Founding of New Acadia*.**

concession represented a successful early attempt at upriver settlement.

The European wars of the mid-eighteenth century, which culminated in the Seven Years' War (1756 - 63), proved disastrous for France. Financially and militarily unable to support the colony any longer, France ceded Louisiana to Spain in 1762 in the secret Treaty of Fontainebleau. It was not until 1766, however, that a Spanish governor, Don Antonio Ulloa, arrived in Louisiana to administer the Spanish territory.

The Acadians

Throughout the eighteenth century, European powers struggled for colonial dominance in the New Americas. France and Great Britain, in particular, fought over New France (Canada) and control of the Mississippi River. In 1713, France ceded "Acadie" – Nova Scotia and New Brunswick – to Britain in the Treaty of Utrecht. These lands, populated by French colonists known as Acadians, were important strategically, located half-way between Boston and the mouth of the St. Lawrence River. Britain required the Acadians to swear an oath of allegiance to the royal crown. Independent, largely Catholic, and convinced of their right to participate in the political process, the Acadians refused, and they struggled with British authorities for decades. On September 5, 1755, approximately 6,000 - 7,000 Acadians, half of the total Acadian population, were imprisoned, and shortly thereafter deported to dozens of different colonial settlements. This mass deportation became known as *Le Grand Dérangement*, i.e., The Great Deportation (Figure 8) (Brasseaux 1987:25-27; Encyclopedia of Cajun Culture 2000:1).

These emigrées anticipated a reunion with other exiled Acadian immigrants and they believed that a "New Acadia" would emerge in Louisiana. Another group of Acadian refugees already had settled a few years earlier in the Atta-

kapas (Opelousas) r[illegible] of the colony. Insufficient support from t[illegible]nch colonial government, however, prevented other Acadians from settling in the Attakapas region. During the Spanish reign, a second wave of Acadians arrived (between 1765 and 1770) and they were forced to settle along the lower Mississippi coast, to protect the area against Native American raids and to encourage disperse settlement (Brasseaux 1987:76-77).

In the Summer of 1767, a group of 200 Acadian emigrants arrived in New Orleans. The Spanish government, recognizing the need for settlers to cultivate the land in order to establish a strong economic base in Louisiana, welcomed the Acadians to the colony. Governor Ulloa selected St. Gabriel, positioned along the east bank of Iberville Parish, as the primary location for the Acadian settlement. The settlers then were equipped with enough tools, weapons, medicine, supplies, and food to tide them over until their first harvest.

In his decree of August 6, 1767, Ulloa establishes the guidelines for the allocation of this land to the Acadians:

> These people are to be located down river from the fort of St. Gabriel in Iberville in the direction of New Orleans, settling the shore of the river that extends toward the capital, and it is to be accomplished in the following way . . . . A stretch of land measuring no more than three thousand yards along the shore of the river downward from the fort of St. Gabriel shall be left vacant so that the Spaniards . . . who in the future shall come with a job or occupation and shall want to establish themselves there may settle on it . . . . From the place where the above mentioned distance reserved for Spaniards ends will begin the lands that are to be distributed to the Acadians, the first settlers of that shore (Chandler 1973:74)

Ulloa demonstrates great concern for the Acadians, expressing his desire that "the first settlers of that shore" be given every chance to succeed and prosper along the river.

Pittman describes this early Acadian settlement and the colonists who lived there ca. 1770:

> The new settlements of the Acadians are on both sides of the river, and reach from the Germans to within seven or eight miles of the river Ibberville (*sic*) [Bayou Manchac]. These are the remainder of the families which were sent by General Lawrence from Nova Scotia to our southern provinces; where by their industry, they did and might have continued to live very happy, but that they could not publicly enjoy the Roman Catholic religion, to which they are greatly bigoted. They took the earliest opportunity, after the peace, of transporting themselves to St. Domingo where the climate disagreed with them so much, that they in a few months lost near half their numbers; the remainder, few only excepted, were in the latter year 1763, removed to New Orleans, at the expense of the King of France (Pittman 1906:60-61).

The 1765 Pittman map of the area (see Figure 7) depicts the Spanish Fort (St. Gabriel) and the "Acadian Coast." The Acadian settlement of St. Gabriel was not successful. Disease, food shortages, raids by Native Americans, and a lack of communication between French-speaking Acadians and the Spanish military contributed to its demise (Perkins 1985).

Besides the Acadians, the Spanish brought Islenos colonists from the Canary Islands to settle in Iberville and Ascension Parishes. Between 1765 and 1775, Governor Galvez sent Islenos to a post located below the confluence of the Iberville (Bayou Manchac) and Amite Rivers. This military outpost, named Galveztown, was a strategically important, however, the population never exceeded 250 people. The area, first settled by British refugees from West Florida, was abandoned during the early decades of the nineteenth century. Several factors contributed to Galveztown's decline. The Islenos settlers had been subjects of a paternalistic government for centuries and were ill-equipped for pioneer settlement. The Spanish-speaking colonists had difficulty adjusting to the new language and new independence. Finally, after expelling the British from West Florida, Spanish officials abandoned riverine traffic on Bayou Manchac, concentrating on the Mississippi. By 1816, William Darby wrote that, though Galveztown was the only village in the parish, it was "of little consequence, consisting of a few ruined wooden houses" (Riffel 1985:7).

Census statistics from the Spanish period indicate that the Acadian Coast developed fairly rapidly. The first Spanish census of 1769 listed

only 379 persons in the Iberville district; of these, 78 resided near the aforementioned Paris concession (Fortier 1914:524). The population of the district decreased to 277 in 1771 (Kinnaird 1945:196). By 1785, a number of Acadian families had settled along both sides of the Mississippi River near what is now the town of Plaquemine, Louisiana, i.e., several kilometers upriver of the proposed project reach. The arrival of additional Acadian refugees increased the population of the area from 673 in 1785 to 944 in 1788 (Martin 1882:240, 242). Similarly, development in Ascension Parish moved rapidly. In 1770, 25 to 50 Acadian families lived near the Mississippi River in Ascension Parish. By 1777, the population of the newly-titled "Acadian Coast" numbered 786 residents; 289 of the settlers lived in what is now Ascension Parish (Brasseaux 1985:35; 1987:91, 93, 97, 106-07).

The Acadians who colonized the region settled in widely scattered communities, rather than in a town. This pattern was in keeping with their tradition, and it aided in the establishment of livestock areas, as well as the development of farm acreage. Within these scattered communities, most of these Acadian families settled on lands positioned adjacent to one another, so that extended family structures remained intact, and grew through intermarriage (Brasseaux 1987). Unlike the wealthier French European planters who bought large concessions and used large contingencies of slaves to work their plantations, most of the immigrant Acadians were "petite habitants," or small farmers. Like the German Rhinelanders who settled the "Des Allemands," the German Coast (in the present day parishes of St. Charles and St. John the Baptist), the Acadians worked their own fields (Kniffen 1968). During this early colonial period, the Acadian settlers in Iberville and Ascension Parishes lived on small parcels of land, three to six arpents front, and often less than 40 arpents in depth. Hogs were the most common livestock; however, the Acadians also kept cattle, horses, and sheep (Voorhies 1973). The economy of the Acadians living throughout the project reach probably was similar to that of both their German and Acadian neighbors.

During these early years, both the French and Spanish provisional governments refused to honor the French-Canadian paper currency held by the Acadians. As a result, few of these settlers could afford to purchase slaves. This, in turn, prevented most first-generation farmers from cultivating cash crops such as cotton, tobacco and sugar, all of which were labor-intensive forms of agriculture. Within a generation, however, the Acadians began purchasing bondsmen to work their lands. Throughout the late eighteenth century, most of the Acadian settlers held only two to four slaves. Consequently, most practiced subsistence farming and cattle ranching (Brasseaux 1987:192-93).

Already accustomed to living in the New World, e.g., at colonial establishments in Nova Scotia, the French Acadians who settled the outlying frontier learned from the indigenous inhabitants of the region and they adapted quickly to their surroundings. For example, the new settlers learned to build the log canoes called "peroques" (pirogues). This adaptation was crucial, since the first boats used regularly by the French and Spanish in the lower valley were "chaloupes" and "canots." These deep rafted and wind powered boats sat low in the water, making movement upstream arduous (Walker 1965). In contrast, the largest pirogues could hold 30 passengers or 40 to 50 tons of cargo, and because they were hewn from cypress, they were remarkably buoyant (Walker 1965).

Acadians continued to arrive during the 1780s; many settled in what is now Iberville and Ascension Parishes. Berguin-Duvallion, whose impressions of Louisiana and her inhabitants generally were unfavorable, wrote of the Acadians of 1802:

> The Acadians are the descendants of French colonists, transported from the province of Nova Scotia. The character of their forefathers is strongly marked in them; they are rude and sluggish, without ambition, living miserably on their sorry plantations where they cultivate Indian corn, raise pigs, and get children. Around their houses one sees nothing but hogs, and before their doors great rustic boys, and big strapping girls, stiff as bars of iron, gaping for want of thought, or something to do, at the stranger who is passing (Davis 1806:77-78).

Not every contemporary observer was so cynical. Paul Alliot, who also visited the "Acadian

Coast" during the first decade of the eighteenth century, wrote more favorably of the inhabitants:

> As the traveler leaves New Orleans by the gate St. Louis, to ascend the river . . . he finds . . . that (parish) of Cantrelle . . . . Each of those four communities (the parishes of Clesets Rouges, Cote des Allemands, Bonnet Carre, and Cantrelle) has a priest and a commandant. They are very well populated. Their inhabitants are very industrious, very sober, and very economical. Few of them are married. Almost all of them live with their slaves or with women of color. They cultivate their fields excellently. They raise sugar, indigo, cotton, rice, maize, and many vegetables. The potatoes which they take from the earth are very good. The melons gathered by them are fine, and have an excellent taste and exquisite perfume. Their kitchen gardens are full of fruit trees, the fruit of which they gather from the month of July. They do not keep their fruit more than three months, and the fruits are not very good to the taste. The oranges which they gather are delicious. Their barnyards are full of hogs, cattle, and fowls of all kinds. If those inhabitants had more hands at their disposal, they would become rich in a very short period of time (Robertson 1911:111).

Similarly, C. C. Robin, writing in 1807, was favorably impressed:

> Twenty leagues above the city the Acadian coast begins and runs about another twenty up from there. Like the Germans they work their own farms. Only a few of them have Negroes. Already the population has risen so that the farms are subdivided into strips of two or three arpents frontage. You must remember that each plot ran back forty arpents from the river. Only about half of that depth, however, is under cultivation, the rest being inundated and covered with cypress and similar swamp vegetation. Rice, corn, several kinds of beans, melon (in season), pumpkin, salted pork and beef make up their principal diet. Their customs can be compared to those of our farmers of Beauce and Brie Good fellows! They do not show the zeal in their work that their European confreres would, for on the one hand, they are not pressed by necessity, and on the other hand, the lack of outlets for their products discourages them from quarter efforts. However, they are still Frenchmen, passionately loving their country, proud to work for it, and showing a great predilection for its products (Landry 1966:114-115).

Colonial Settlement within the Project Area

During the late eighteenth century, the Spanish government granted several patents within the vicinity of the proposed project reach (Figures 9 and 10). In Iberville Parish, Don Louis Andry surveyed two parcels in 1772; they correspond to Sections 8 and 9 of Township 10S, Range 13E. Louis Dardenne owned one parcel, measuring 6 arpents front by 40 arpents in depth; it was located in Section 10, of Township 10S, Range 13E (Lowrie and Franklin 1834: 242; Blas (Blais) Lejeune owned the other which measured 5 arpents front by 40 arpents in depth (Lowrie and Franklin 1834:228). These men obtained formal grants for the parcels in 1774 from Governor Unzaga, who issued three additional patents in the same year for other land within the proposed project reach. Athanase Daiden (Dardenne?) was granted a parcel with 6 arpents front; it was located in Section 10 in Township 10S, Range 13E (Lowrie and Franklin 1834:272). Anthony Belas received a patent for 7 arpents front by 40 arpents in depth, and five years later he received a patent for 40 additional arpents adjacent to the rear of his initial holding. His riverfront parcel corresponds to present day Section 14 in Township 10S, Range 13E (Lowrie and Franklin 1834: 276-277). Finally, Pedro Priamo was granted a 6 arpent front located in Section 11 and the downriver portion of Section 12 in Township 10S, Range 13E; Joseph Mollere acquired the lands corresponding to Section 12 sometime prior to 1790 (Lowrie and Franklin 1834:248). The original patents for land located in the Ascension Parish portion of the proposed project reach is included in Table 6.

Many of the above-mentioned Iberville Parish grantees probably were Acadians. "Lejeune" and "Dardennell" are both Acadian names; although "Priamo" and "Belas" do not appear to be French surnames, names of immigrants in this period often were translated into Spanish (Arsenault 1966: 203). In the Ascension Parish portion of the proposed project corridor, the names Landry, LeBlanc, Braud, Babin, Melanson, Gaudin and others all appear on the manifest of Acadian settlers, entitled "Distribution of Lands For the Acadian Families That Have Gone to the Settlement of St. Gabriel," recorded by Governor Ulloa in 1767 (Chandler 1973:80-87). This document offers proof that

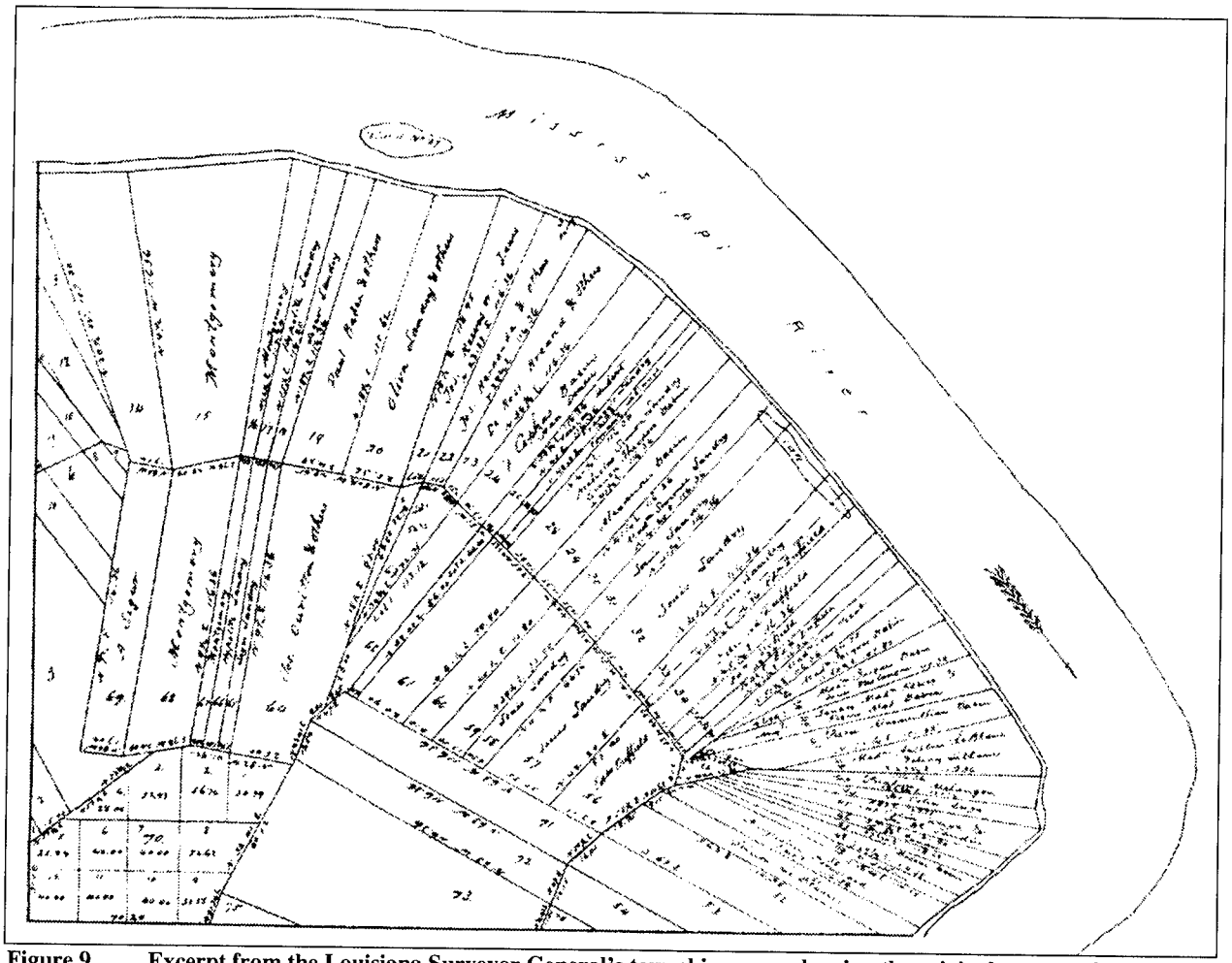


Figure 9. **Excerpt from the Louisiana Surveyor General's township maps, showing the original owners of the project area (Iberville Parish Court House, Plaquemine, Louisiana).**

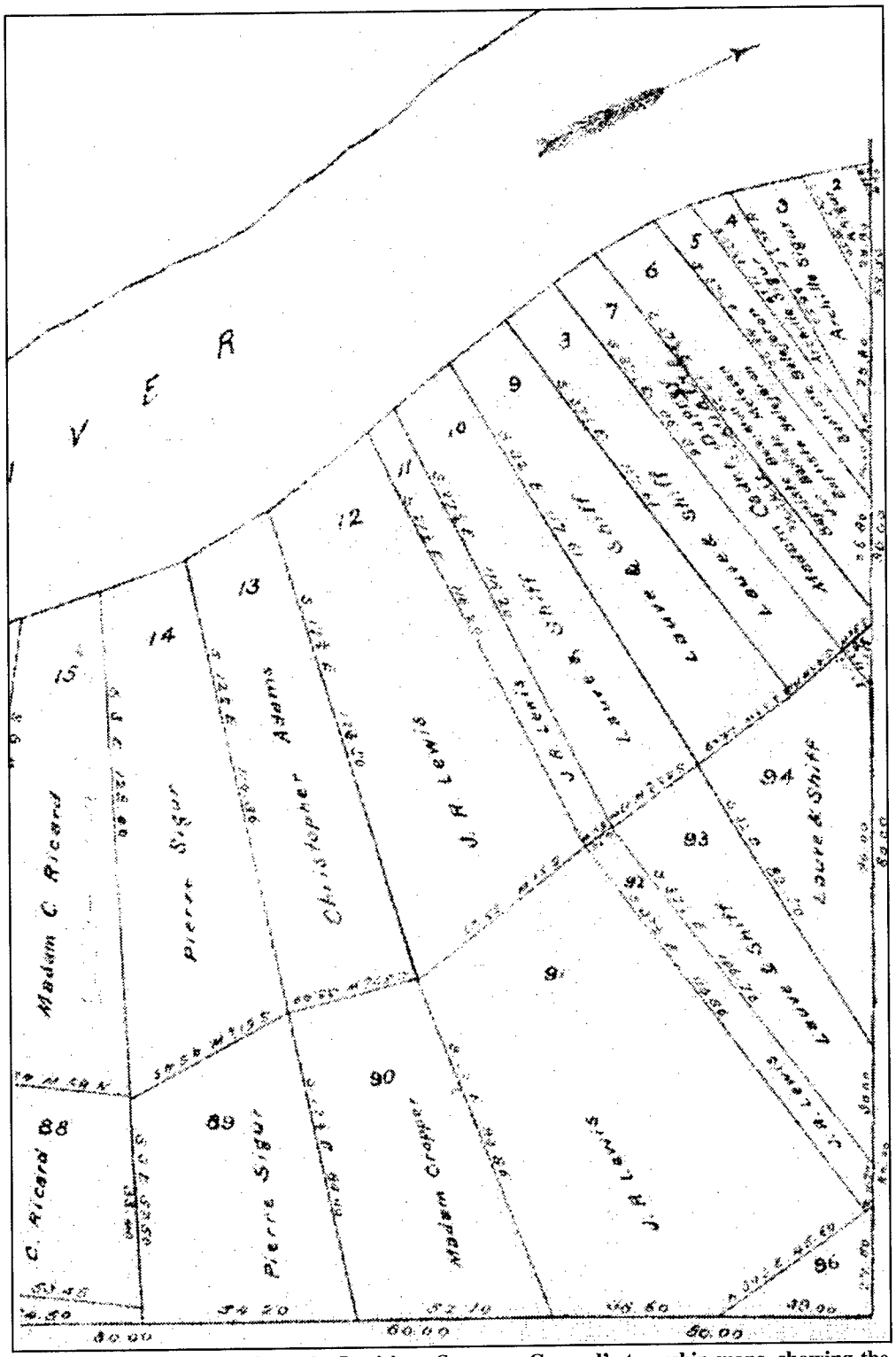

R
E
V
I
Madam C. Ricard
Pierre Sigur
Christopher Adams
J. H. Lewis
Lewis & Conner
Lewis & Conner
Lewis & Conner

Table 6. Original Colonial Concessionaires in the Proposed Project Area.

NAME	PLANTATION	SIZE OF PLANTATION (IN ARPENTS)
E. Lauve and H. M. Shiff	Celeste	719
Achille Sigur	Old Hickory	305
Montgomery	Claiborne	657
Hypolite Landry	Claiborne	107
Leger Landry	Claiborne	106
Paul Babin and others	Chatham	282
Olivier Landry and others	Chatham	291
Jos. Reeves or Lewis	Chatham	154
Jos. Hernandez and others	Dominique Store/Germania	153
De Rosi Braud and others	Germania	181
Cephas Babin and Jean Denau	Germania	181
Asinas Hubert	Melancon/ Germania	83
Francois Landry	Duffel/Mulberry Grove/Germania	67
Corrant LeBlanc	Duffel/Mulberry Grove/Germania	33
Nicholas Simon Landry and Simon Theodore LeBlanc	Duffel/Mulberry Grove/Germania	187
Alex. Babin	Cuba	133
Mad. S. Babin	Cuba	133
Louis Landry	Home	420
Louis Landry and Edward Duffield	Home/Woodstock	104
Edward Duffield	Woodstock	278
Mad. Zena (Zenon) Picot	Little's Store	84
Mad. Jacques Babin	?	85
Mad. J. Babin and L. Melange	Modeste	91
Aug. Landry Mad. Henry	Landry cooper shop	109
Pierre M. Babin	Babin	122
Mad. Angeline Leblanc	Babin	135
Pauline Melancon	Home Place	84
Joseph Colin Duga	School house	54
Jos. C. Duga and M.Blandin	Alligator	98
Jno. Bt. Gaudin	Des Marias	72
Beloni Babin	Gaudin Place	70
Marchlina LeBlanc	Pelico	44
Augustin Broussard	Pelico	113
Simon LeBlanc	Pelico	108
Marianne LeBlanc, widow of Traismond Landry	Pelico	4
Joseph Boudreaux	?	40
Joseph and Jerome Melanson	Arlington? Chicken Roost?	216
Joseph Babin	Ascension	344
Joseph Landry	New Hope	449

many of the first colonial inhabitants of the project reach were Acadian refugees.

Territorial Era

As part of the negotiations leading to the 1803 Louisiana Purchase, Spain restored western Louisiana and the Isle of Orleans to France, which shortly thereafter conveyed the Louisiana Territory to the United States. On March 26, 1804, that portion of the Louisiana Purchase located below the thirty-third parallel was designated the Territory of Orleans. The following year, Orleans was partitioned into 12 counties, including the counties of Iberville and Acadia, which encompassed present-day Ascension Parish and portions of neighboring parishes (Figure 11). The area containing the Ascension Parish project item was contained primarily within Acadia County; the westernmost acreage may have extended slightly into Iberville County, as it was configured at that time. In 1807, the territorial legislature reorganized the county system, further dividing the Territory of Orleans into 19 parishes. Iberville and Acadia Counties were superseded by the parishes of Iberville, As-

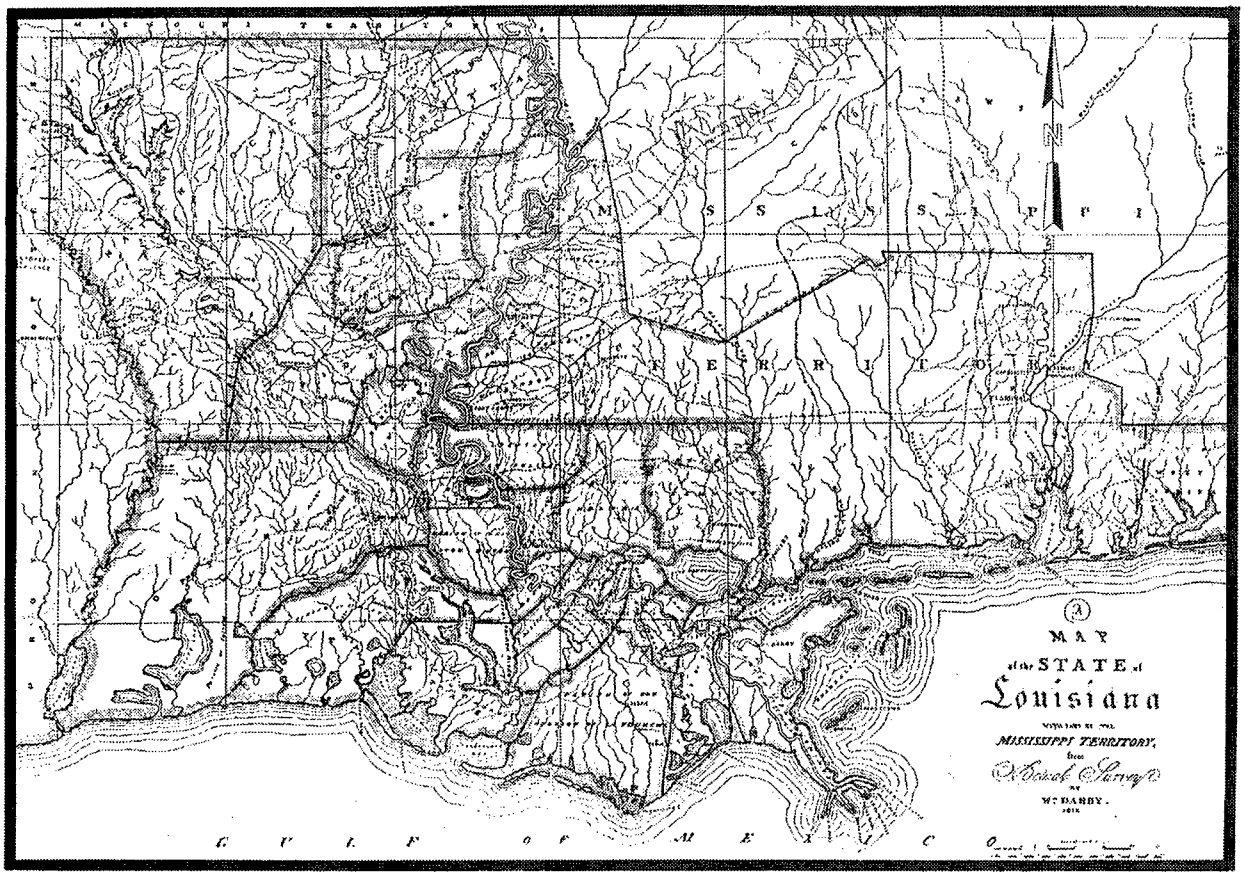


Figure 11. **[1816] Darby's *Map of the State of Louisiana, with Part of the Mississippi Territory* (Darby 1921:416). Map depicts the early territorial divisions of the state.**

cension, and St. James, which encompassed the modern parishes of those denominations, as well as adjacent areas. Five years later, on April 30, 1812, the State of Louisiana was admitted to the Union (Davis 1971:157-164, 167-169, 176; Goins and Caldwell 1995:41-42; Thorndale and Dollarhide 1985).

In 1806, an American named William Donaldson purchased a tract of land from the widow of Pierre Landry (an Acadian exile), for $12,000.00. This was the origin of present-day Donaldsonville. Donaldson subdivided the tract and laid out a grid of streets and public areas (Marchand 1949:5; Rushton 1979:83). From this strategic point, i.e., at the juncture of the Mississippi River and Bayou Lafourche, "La ville de Donaldson" promised to become a busy shipping and trading center within the region.

From the time of its founding, Donaldsonville proved to be an important communication and shipping hub both for the river planters and for those who lived along Bayou Lafourche. A post office was established at "Donaldson Town" in 1808; the mail was scheduled to arrive every other Monday, but undoubtedly the reliance on flatboats and early overland routes made delivery haphazard at best (Marchand 1949:13-14).

By ca. 1816, Donaldsonville hosted a population of approximately 200 people. It had accommodations for travelers, as well as all of the support services that the surrounding community required. By 1830, the population of Donaldsonville numbered 494 people; these included 261 whites, 76 free persons of color, and 155 slaves. In addition, for a very brief period, between 1830 and 1831, Donaldsonville served as the seat of government for the state of Louisiana (Ascension Parish Planning Board 1947:13).

By 1860, Donaldsonville remained an important regional center, and it had grown consid-

erably, with a population of approximately 2,000 people. An eyewitness offered this account of Donaldsonville in 1860:

> [Donaldsonville] is laid out with right-angular regularity , and the streets are very pleasant, handsome residences being not infrequent among them, and handsome trees everywhere .... The population of Donaldsonville is almost exclusively Creole....
>
> ... The principal business of the town is done by N. Maurin, J. R. Fayette and J. Gourdan, wholesale and retail grocers and dealers in plantation supplies; A. M. Templet, Schender & Landry and B. Mollere, general merchandise; and L. Lion, Murx & Ellie, L. Kahn and S. Sterne, dry goods. There are a number of small shops, and a full assortment of barrooms, from the large concerns which retail at a dime a drink to the small ones which wholesale at a picayune a dose, thus "doing for" unwary, reckless or suicidally disposed flatboatmen on the easiest terms.
>
> Donaldsonville has a finely and substantially constructed wharf, the first this side of New Orleans on the right bank, and boasts two hotels – Jarry's House, a quiet, well conducted establishment, and the Planters' Hotel, a roaring concern if there ever was one, with a popular five cent bar, a popular cock-pit in the yard and a popular rush of all sorts of populace playing "kino" all day Sunday in the bar-room, a cock-fight coming off in the pit at stated intervals of one hour from morn till night. There is a spacious and handsomely built market house in the town, two churches and an institution conducted as a school by the Sisters of Charity . . . (Pritchard 1938:1122-1123).

The traveler went on to describe the impressive public buildings, including the courthouse, armory and drill-room buildings for the militia. Among the four large-scale sugar refiners mentioned in the parish, the traveler included Mr. McCall, who owned McManor Plantation, which was located adjacent to New Hope Plantation, i.e., at the downriver end of the proposed project corridor. Among the "most magnificent sugar estates" listed were those of Narcisse Landry, Trasimond Landry, and Valery Landry, all situated within the limits of the proposed project corridor (Pritchard 1938:1124-1125). Although Donaldsonville is located several kilometers downriver from the Hohen-Solms to Modeste project item, the growth of the town certainly affected the fortunes of the families who established their sugar plantations in Ascension Parish.

The Louisiana Purchase and Antebellum Economic Development

In the 1790s and the early 1800s, the Louisiana economy underwent several major changes. Regardless of their agrarian successes, both French and Spanish colonial settlers struggled to find a staple crop to sustain the colony. The first cash crop planted in the area was indigo; it was economically important during the Spanish colonial period. Indigo was a particularly labor-efficient crop; a single slave could plant and tend 0.8 ha (2.0 ac) of the crop and still have time to attend to his own provisions (Holmes 1967:340). In addition, each plantation or farm usually had its own indigo processing facility, since the manufacture of dye from indigo required little expensive machinery. The cut plant simply was placed in a vat called a "steeper," and the indigo then was covered with water until fermentation occurred. The liquid byproduct was subsequently drawn off into another vat, called a "beater," where it was agitated much like the churning of butter (Figure 12). A precipitate was formed in the solution by adding lime water. The water was again drawn off, and the indigo solids were placed in cloth bags to dry (Holmes 1967:344). Because indigo was fairly easy to cultivate, it could be produced with equal efficiency on large plantations and small farms.

While the cultivation of indigo was easier than that of cotton or sugar, the process described above was not. Indigo as a staple thrived in the young colony largely because many slaves from the Senegambia region of Africa brought with them the knowledge of how to build the vats, beat the leaves, and gauge the timing of the process. No other ethnic group in the area – French, Spanish or Native American – had any experience in indigo manufacturing. Unlike failed tobacco crops, which were unsuited to the soil, planters knew indigo would grow in the marshy Louisiana land, since it grew wild throughout the colony. While the indigo produced locally was inferior to that produced in the West Indian colonies, it became one of the

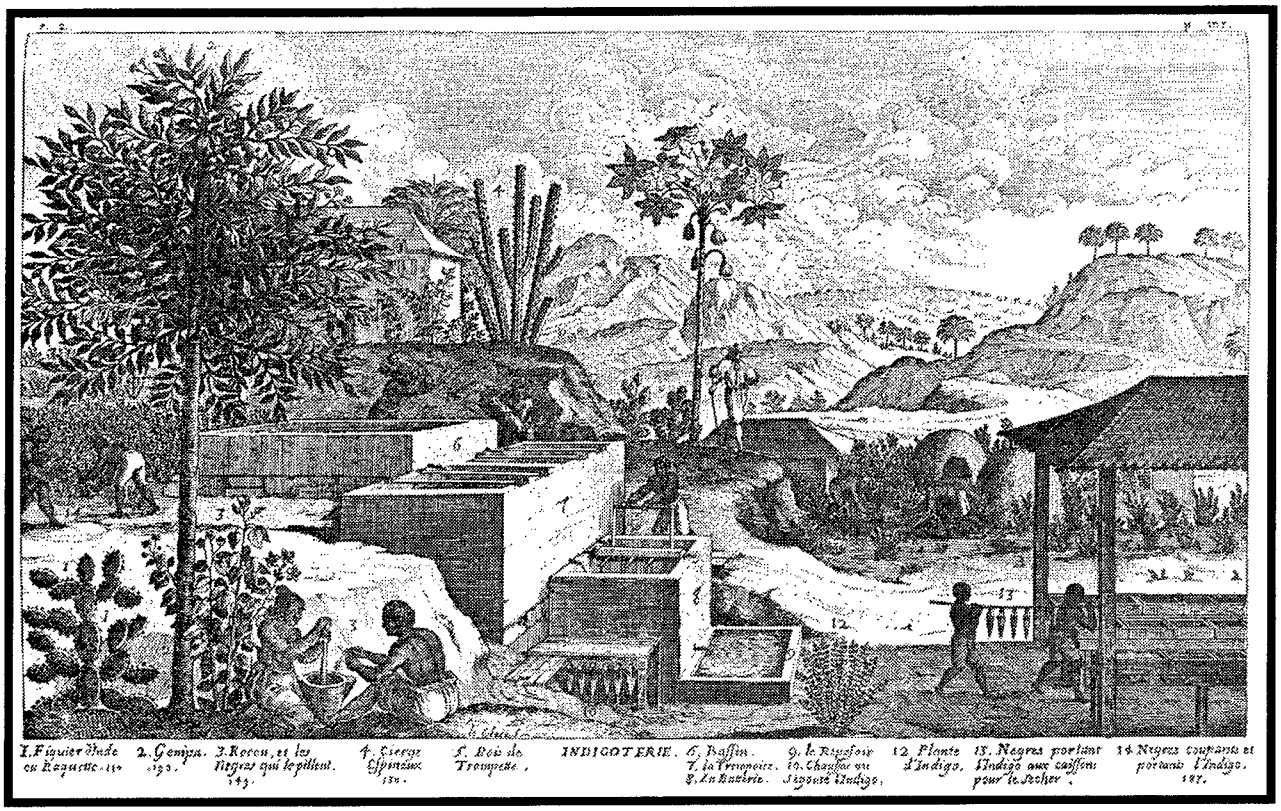


Figure 12. This drawing of a seventeenth-century Indigotiere in the French West Indies depicts the process used in Louisiana. Adapted from Hall, *Africans in Colonial Louisiana*.

few export staples of eighteenth century Louisiana (Hall 1992).

The size of the land holdings suggests that by the early nineteenth century farming and livestock raising had increased in scale. These changes were spurred partly by the economic failure of the indigo crop. In terms of quality, indigo grown in Louisiana could not compete in the world market with indigo produced in the West Indies. It also was susceptible to insect blights and fluctuations in weather conditions. Consequently, crop losses could be severe. Furthermore, the crop exhausted the soil. In addition, an increase in the price of slaves made it difficult to obtain the labor necessary for large scale indigo production on the plantations. Finally, the terrible smell associated with indigo production attracted disease-carrying insects, and the production of indigo polluted streams (Holmes 1967:346-348). This toxicity may have contributed to the high death rates witnessed among young male slaves, traditionally the cohort who worked the indigo fields (Hall 1992:301).

Geopolitical and technological advances also contributed to the decline of indigo, and the subsequent rise of the cotton and sugar industries. Economic success, absent under the French and Spanish governments, finally was achieved by Louisianians as citizens of the United States. With the acquisition of the territory by the United States in 1803, citizens from the north began trekking southward to try their luck as planters:

> Rich and poor, slaveholder and nonslaveholder, large planter and small farmer . . . all poured into this rapidly developing region. Among the newcomers were planters with the capital necessary to undertake sugar culture and the initiative and imagination to foresee the possibilities of the development of the new industry (Sitterson 1953:23).

Other factors in the changing economy included the invention of the cotton gin and the development of a commercial process for extracting sugar from immature cane. Cotton and sugar cane cultivation rapidly replaced indigo as the crop of choice.

Changes in land use and distribution occurred very quickly. Substantial capital was required to acquire the large tracts of land, sugar mills, cotton gins, and slaves. Small farmers and landowners increasingly sold their holdings to large plantation owners and wealthy speculators (White 1944:352). When a small farm was offered for sale on the owners death, the high valuation of the land kept prices above the reach of other small farmers (Sitterson 1953:48). Under the United States administration, backlands were offered for sale, enabling wealthy landowners to add an additional 40 arpents of land to the rear of their holdings. Furthermore, cane cultivation was only profitable on a large scale, requiring large land holdings and investments that could exceed $200,000.00 (Taylor 1976:65). These factors all tended to encourage the assimilation of the smaller farms into the larger plantations.

During the 1790s, Eli Whitney invented the cotton gin, significantly reducing the time and labor involved in processing the fiber. In addition, the Haitian sugar maker Morin introduced Louisiana colonists to new refining processes and equipment in 1795; this helped to make the sugar industry more profitable. Berguin-Duvallon, in his 1802 narrative on the status of agriculture in Louisiana, states that "sugar and cotton are the staple commodities of the colony" (Davis 1806:131).

Although the best areas for cotton cultivation were along the river north of Baton Rouge and in the Attakapas and Opelousas districts, cotton was grown as far south as St. James Parish during the early nineteenth century. Berguin-Duvallon described the area at that time:

> The parish of Iberville then commences, and is bounded on the east side by the river of the same name, which, though dry a great part of the year, yet when the Mississippi is raised, it communicates with the lakes Maurepas and Ponchartrain, and through them with the sea; thus forming what is called the island of New Orleans. Except on the point just below Iberville [Bayou Manchac], the country from New Orleans is settled the whole way along the river, and presents a scene of uninterrupted plantations in sight of each other, whose fronts are all cleared to the Mississippi, and occupy on that river from five to twenty-five acres with a depth of forty; so that a plantation of five acres in front contains two hundred. A few sugar plantations are formed in the parish of Cabahanose, but the remainder is devoted to cotton and provisions, and the whole is an excellent soil incapable of being exhausted. The plantations are but one deep on the island of New Orleans, and on the opposite side of the river as far as the mouth of the Iberville, which is thirty-five leagues above New Orleans (Davis 1806:167-168, sic throughout).

The average yield of a superficial arpent of land was approximately 400 pounds of cotton, which was worth approximately $100.00 during the early nineteenth century. One skilled slave could cultivate three arpents of land planted with cotton (Robertson 1911:155).

The cultivation of sugar cane and the manufacture of cane-related products such as syrup, molasses, rum and granulated sugar began in Louisiana during the early eighteenth century. From its inception, sugar cane was considered by the French as a likely domestic cultigen for the subtropical regions of south Louisiana. Iberville himself unsuccessfully attempted to grow sugar cane at Fort de Mississippi before 1720 (Sitterson 1953:6); According to Gardeur (1980:4), "the poor quality of the plants and the lack of capable farm workers caused this project to fail." There is no further documentation concerning the cultivation of sugar cane in Louisiana until the 1740s, when the Jesuits brought cuttings to New Orleans from Saint Domingue. During the early 1750s, Claude Joseph Villars Dubreuil, an important builder, inventor, planter, and commander of the local militia, successfully planted Jesuit sugar cane cuttings, and he constructed his own sugar mill to experiment with the granulation of cane juice (Gardeur 1980:4; Goodwin et al. 1987:118). Dubreuil realized through his experiences that he could bring the Louisiana cane to artificial maturity. It is uncertain how Dubreuil managed to purify the cane juice and achieve granulization. It is clear, however, that Sieur Dubreuil, and the men who purchased his estate and sugar equip-

ment after his death, Jacques Delachaise and Sieur Masan, converted the cane into raw sugar on a fairly large scale (Gardeur 1980:7; Wilson 1980:60).

After Dubreuil, other planters near New Orleans tried cultivating sugar cane as a cash crop. Their success was modest, possibly because their production was on a rather small scale. In 1785, an Isleno Spaniard named Solis, who resided in Terre aux Boeuf (lower St. Bernard Parish), imported a wooden mill from Havana and he became the first person to convert the juice of locally grown sugar cane into molasses (Fossier 1957:47). Solis, and later Mendez, who purchased the Solis plantation, grew the cane and converted the tafia to distilled rum. It was Mendez's sugar maker, chemist Antoine Morin, who in 1795 successfully granulated sugar from Louisiana cane for de Boré (Gardeur 1980:17-22; Sitterson 1953:5). His success was significant because it demonstrated that cane production could be achieved on a rather large scale. Planters throughout Louisiana followed de Boré's example, and turned sugar cane cultivation into a large scale investment and operation.

Cane culture underwent a series of experiments during the antebellum era of the nineteenth century. In 1817, Ribbon Cane, sometimes referred to as Black Java or Batavian Striped, was introduced to the area. The heartier Javanese Ribbon variety, however, was better suited to the south Louisiana environment. Different planting and harvest schedules were tried, but eventually, most planters began planting in January and harvesting in October. Through time, the antebellum nineteenth century sugar planters became more knowledgeable and efficient at growing cane. New techniques included digging drainage canals, rotating crops to maintain soil integrity, windrowing (making deep furrows for planting cane cuttings) to protect against severe weather, using premium cane cuttings, and spacing the cuttings further apart (Begnaud 1980:31, 32; Sitterson 1953:13-127). At the larger plantations, the narrow gauge railroad also was used to transfer the cane from the fields to the sugarhouse, and then to the riverfront for export on barges or, later, steamboats. This reduced both transportation time and cost. During the antebellum decades, the plow replaced the hoe as the implement for cane cultivation. Originally, the plow was used exclusively for preparing the soil for planting. As a cultivating tool, the plow doubled the amount of acres a field hand could cultivate (Sitterson 1953:128).

Unlike rice, which required irrigation, the Louisiana cane fields received enough rainfall to allow cultivation. Both cane cultivation and sugar production, however, did require some water management. Sugar processing required water (more so after the introduction of the steam powered sugar mill); therefore, canals and retaining pools were constructed near the sugarhouses. Proper drainage was critical for the increasingly large cane fields. By the 1840s, a steam powered drainage wheel was designed, which moved the excess water from a drainage ditch and into the backswamp. Drainage wheels were considered valuable and they often were listed in sugar plantation inventories.

Sugar production was a complex procedure that required many specialized structures, machines, and tools. The early Louisiana sugar makers incorporated the existing milling technologies of the large sugar colonies of the French West Indies. The first Louisiana sugarhouses were round to allow draft animals to turn the rollers (Figure 13). In the early nineteenth century, most Louisiana sugarhouses were made of wood (Sitterson 1953:135), although by the Civil War, brick was the construction material of choice.

In ca. 1817, the introduction of the steam engine into southern Louisiana played a significant role in the technological advancement of the sugar cane industry. Steam-powered sugar mills changed the design of the sugarhouses from round to rectangular. While the first steam-powered sugar mills constructed in the state were expensive, they were adapted quickly; a total of 1,027 of the 1,291 sugar mills in Louisiana were steam-powered by the eve of the Civil War (Begnaud 1980:35).

In addition to the introduction of steam engines into the sugar manufacturing operation, Norbert Rillieux, a free Creole of color (and cousin of the great Impressionist painter Edgar Dégas), first patented the vacuum-pan apparatus in 1834. This invention improved the evaporation process by offering more control in the heating procedure, thereby improving the quality of the raw sugar. The vacuum-pan apparatus required

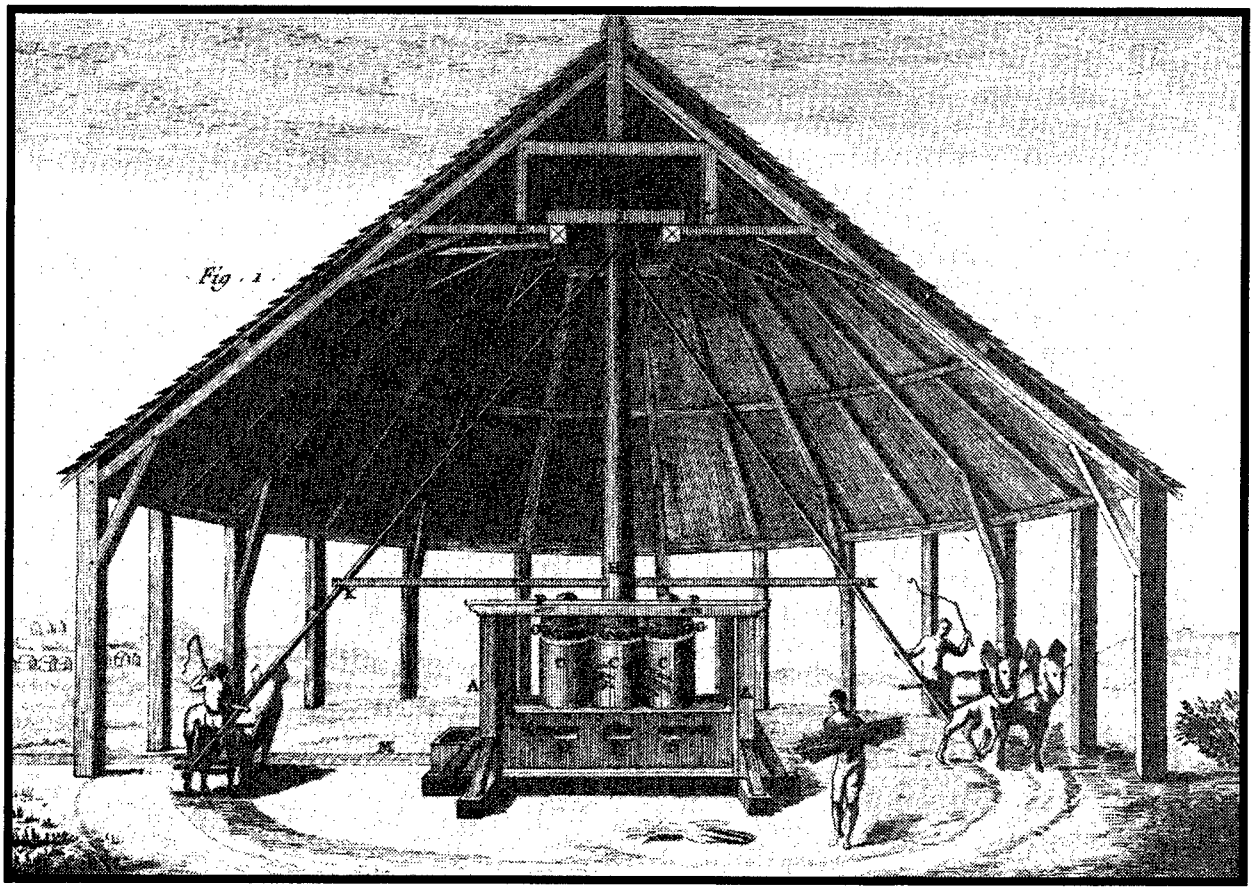


Figure 13. This engraving depicts a round, animal-powered mill from the eighteenth century, similar to early sugar mills in Louisiana. Adapted from *Green Fields: Two Hundred Years of Louisiana Sugar*.

substantially less fuel, cutting fuel costs by as much as 53 percent. Before the vacuum-pan apparatus, approximately 14 cords of wood per day were required to fuel the kettle furnaces (Sitterson 1953:152). The multiple effects system, introduced in the 1840s, further improved the vacuum-pan apparatus, by utilizing escaping steam from one pan to supply heat for an adjoining kettle.

After heating and reducing, the crystallized mass was cooled and placed into hogsheads. The opened hogsheads were left to drain in the draining room. According to Heitmann (1987:13), sugarhouses built after 1830 contained two draining sheds positioned at right angles to the sugarhouse. Molasses was the by-product of draining the hogsheads. After draining, the hogsheads were sealed and prepared for export. Along the Louisiana "River Parishes," the cargo of hogsheads was loaded for transport via rivercraft, to New Orleans, then primarily to northern markets.

The landscape of the early Louisiana sugar plantations resembled that of the large French West Indian slave plantations. The Mississippi River plantations in south Louisiana, however, were arranged in a linear pattern and they extended in a perpendicular fashion back and away from the river (Kniffen 1968; Rehder 1971). The linearity was achieved from the alignment of the overseer's house and a double row of slave cabins along a centralized road that also extended back in a perpendicular manner from the river. The sugar house and outbuildings generally were located at the end of the road, usually equidistant between the levee crest and the backswamp. The Celeste Plantation, for example, exhibited this layout; this plantation was located within the general vicinity of the Alhambra to Hohen-Solms project item (Figure 14). Thorpe (1853:746-747) explains that "[the buildings were situated] to divide up as much as possible the distance that must be traversed in hauling the wood from the

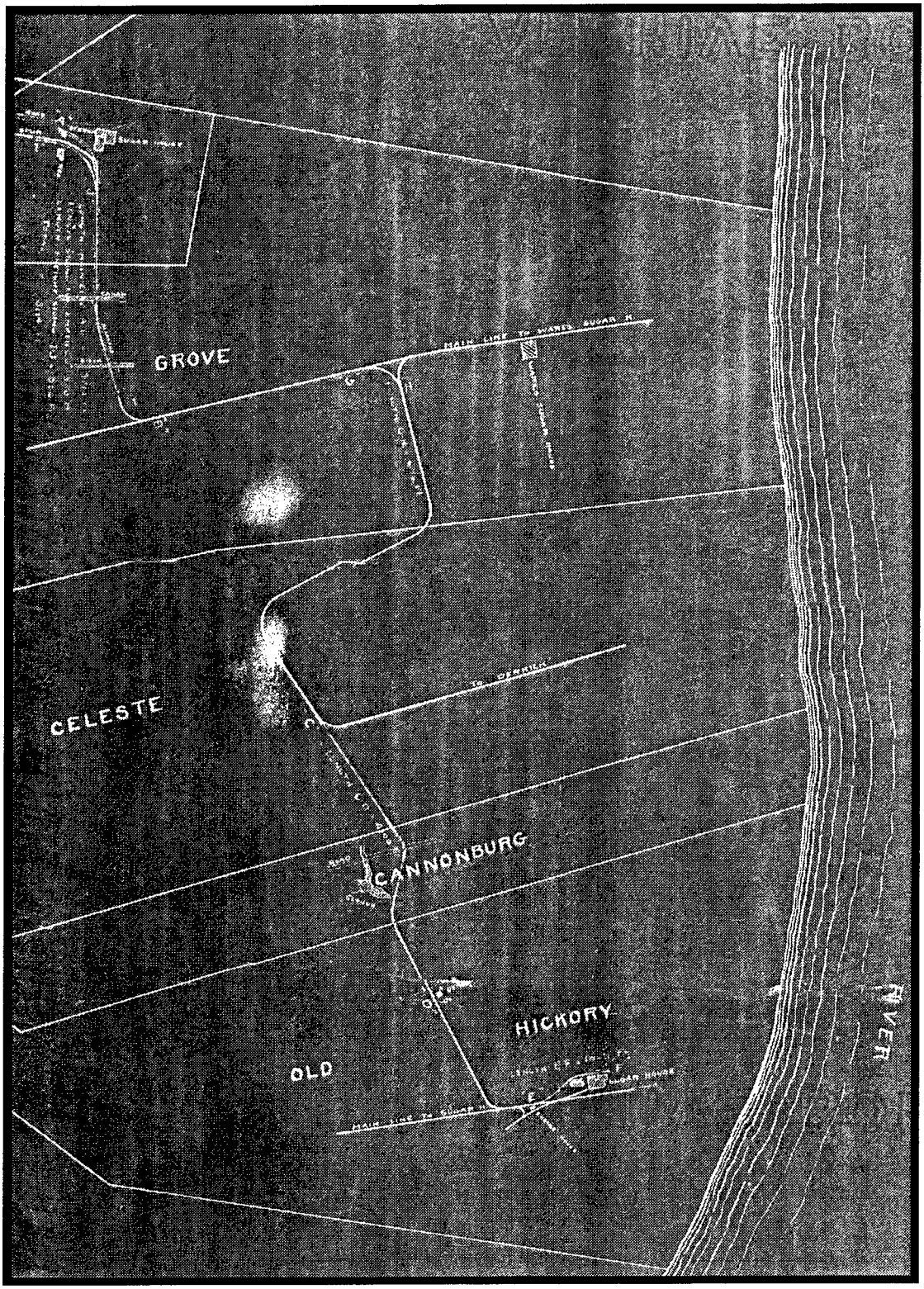


Figure 14. **This map of Belle Grove, Celeste and Old Hickory Plantations shows centrally-located sugar houses. From Iberville Parish Conveyance records (Iberville Parish Court House, Plaquemine, Louisiana).**

'swamp,' the cane from the fields, and the crop to the river for shipment." Thus, the Louisiana sugar plantation was a self-contained community. Each plantation grew its own vegetables, raised its own cattle, hogs, and chickens, maintained its own store, chapel, brick kiln, and workshops (blacksmith, machine, and carpentry). This design plan became increasingly popular during the nineteenth century.

Thus, the early nineteenth century development of the sugar cane industry resulted in a substantial change in settlement throughout the area. The cultivation and processing of sugar cane required a substantial initial investment, large landholdings, and a large number of slaves. Consequently, most of the small farmers could not afford to invest in the construction and operation of a sugarhouse. Instead of competing with the larger plantations, many of the small farmers simply sold their land holdings to the large plantation owners or to wealthy immigrant speculators (Schmitz 1977:108; Taylor 1976:65; White 1944:352). The small farmers who remained in the region focused on raising cattle and pigs, and cultivating corn, potatoes, and other similar crops. Although many descendants of the original Acadians remained in the area, the nature of the farms changed dramatically with the advent of and the transition to sugar cultivation. The transformation, in essence, was from modest self-sufficient farmsteads, to large consolidated plantations (Wall et al. 1984:155-156).

Joseph Landry, one of the original Acadian exiles to settle in the proposed project reach, illustrates the change that occurred during this transitional period. Landry was only three years old when he and his family were expelled from Nova Scotia. They lived in Talbot County, Maryland for several years, and they moved to Louisiana in the 1760s. Joseph Landry was granted land that later became part of New Hope Plantation, at the southernmost edge of the proposed project area (Figure 15). Landry became prominent in Ascension Parish during the late eighteenth and early nineteenth centuries. He rose quickly in the militia (under both Spanish and American governments), became a Justice of the Peace (1805), and was elected to the state legislative council (1805) and to the state senate (1812). By the time of his death (1814), New Hope Plantation was producing sugar (Conrad 1988:480).

Trasimond Landry, one of Joseph's sons, also became a major planter in the project area during the nineteenth century. Born in 1795, Trasimond was a second lieutenant in the Seventh Regiment of the Louisiana Militia during the War of 1812. He became commander of the Ascension Militia in 1814 and during the Civil War, Trasimond served as a colonel in the militia. In 1817 he "helped form [a] family partnership to manage New Hope Plantation," and four years later he "acquired [a] share of [the] plantation" (Conrad 1988:481). Trasimond eventually owned several major sugar producing plantations. In addition, he followed in his father's political footsteps, serving in the state senate (1832), and as Lieutenant Governor (1846) (Conrad 1988:481-482).

Various Anglos, lured to the Acadian Coast by the availability of land and the promise of wealth through agriculture, purchased small farms and then consolidated them into large plantations. For example, Evan Jones arrived on the Acadian Coast during the late eighteenth century, and he began cultivating indigo and cotton on the site that became Evan Hall Plantation, which lies approximately 4.8 km (3.0 mi) above Donaldsonville, and just downriver of the cur-

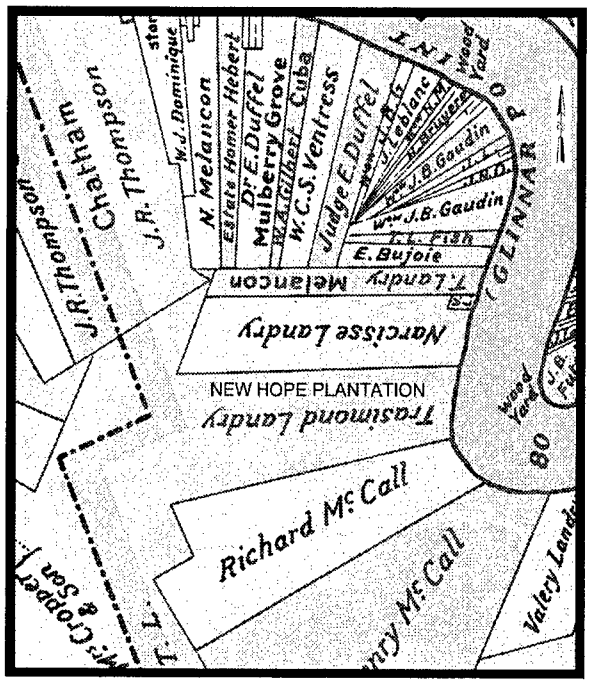


Figure 15. **Excerpt from Persac's *Plantations on the Mississippi River from Natchez to New Orleans* (Norman's Chart [1858]), showing Joseph Landry's New Hope Plantation in the project area.**

rently proposed project area. Henry McCall, the son-in-law of Evan Jones, acquired the property and he transformed it into a sugar plantation. Indeed, well after the Civil War, Evan Hall remained one of the largest sugar plantations in Louisiana (Brown 1888:3-4). Henry McCall also acquired the John Etienne Bujol (Bujau) tract, which, along with the adjacent Blanchard tract, would become consolidated into McManor Plantation by his son, Richard McCall. McManor Plantation lies immediately upriver from Evan Hall Plantation, and adjacent to New Hope at the extreme downriver edge of the proposed project reach.

In Iberville Parish, Celeste Plantation (Sections 7, 8, 9, and 10, of Township 10S, Range 13E,) formed the majority of the proposed project reach. It originally was purchased by Evariste Lauve and Hart Moses Shiff ca. 1807. That same year, Lauve married Celeste Brunet, an Acadian from Opelousas, and named his new Iberville Parish sugar plantation after her. The Lauves had great economic success along the river, acquiring 94 slaves by 1840, 70 of whom worked the fields. When Evariste died in 1843, Celeste took over the job of running the plantation, which she continued until her death in 1869. In 1850, she was one of the largest slave owners in the parish, holding property worth $115,000.00, including 111 slaves. The plantation primarily produced sugar. At the peak of production, just before the Civil War, the Widow Lauve produced 685 hogsheads of sugar in one year (1861) (Bouchereau, 1877-78; U.S. Census, Iberville Parish 1840, 1850; Iberville Parish Conveyance Records, 1829, 1831; Riffel, 1985, Sternberg, 1996).

Antebellum census records reflected the dominance of the plantation economy throughout the area. By 1830, population statistics for Ascension Parish recorded approximately two slaves for each freeman, a ratio that generally was maintained throughout the pre-war years. With the federal census of 1830, the parish counted a population of 5,426, i.e., 1,725 whites, 3,567 slaves, and 134 free people of color. Approximately 20 years later, the tally rose to 10,752 inhabitants, of whom 3,340 were white, 7,266 were slaves, and 146 were free people of color. Through the next decade, the Ascension Parish population increased. In 1860, the population totaled 11,484, including 3,940 whites, 7,376 slaves, and 168 free people of color (Kennedy 1864a:194; Marchand 1931:79).

The proposed project reach included many of the major sugar plantations of the region. Among these nineteenth century properties were Old Hickory, Celeste, Claiborne, Chatham, Mulberry Grove, Cuba, Woodstock (Germania), Pellico, Modeste, Home, Babin, Melancon, Arlington, Ascension, and New Hope Plantations, all fronting along the river and within the currently proposed project reach. A sample listing of some of the former landowners reads like a "Who's Who" among leading antebellum figures – Henry Johnson (Chatham), U.S. senator (1818 - 1824) and Governor of Louisiana (1824 - 1828); Dr. Edward Duffel (Mulberry Grove and Woodstock), Ascension Parish judge; and Trasimond Landry (New Hope), Lieutenant Governor of Louisiana (1846 - 1849) (Arthur and Kernion 1931:157-160; Calhoun 1995:473, 476; Conrad 1988:459, 481-482; Heitmann 1987; Marchand 1936:141; Seebold 1941:139-140; Sternberg 1996:166-171, 231-235).

On the eve of the Civil War, several of the area landowners were among the largest planters and slaveholders (50 slaves or more) in Iberville and Ascension Parishes. Persac depicted the general configurations of most of these properties in his 1858 map entitled *Plantations on the Mississippi River from Natchez to New Orleans* (Figure 16). The 1860 federal census confirmed the land and chattel status of several of the major planters, whose aggregate landholdings in Ascension Parish alone totaled 14,249 improved ha (35,209 improved ac), as well as 36, 637 unimproved ha (90,529 unimproved ac), and they were worked by a combined labor force of 5,593 slaves (the census recorded a total of 7,376 slaves). All of these principal landholders cultivated sugar cane; none of them planted cotton (Menn 1964:120-124). The value of property in Iberville Parish on the eve of the Civil War was assessed at approximately $14,000,000.00. At that time 13,355 ha (33,000 ac) were planted in cane, 8,903 ha (22,000 ac) were planted in corn, and 607 ha (1,500 ac) were used to raise cotton. The white population totaled approximately 5,600, compared to 10,000 slaves. Only 200 free people of color lived in the parish (Pritchard 1938:1129).

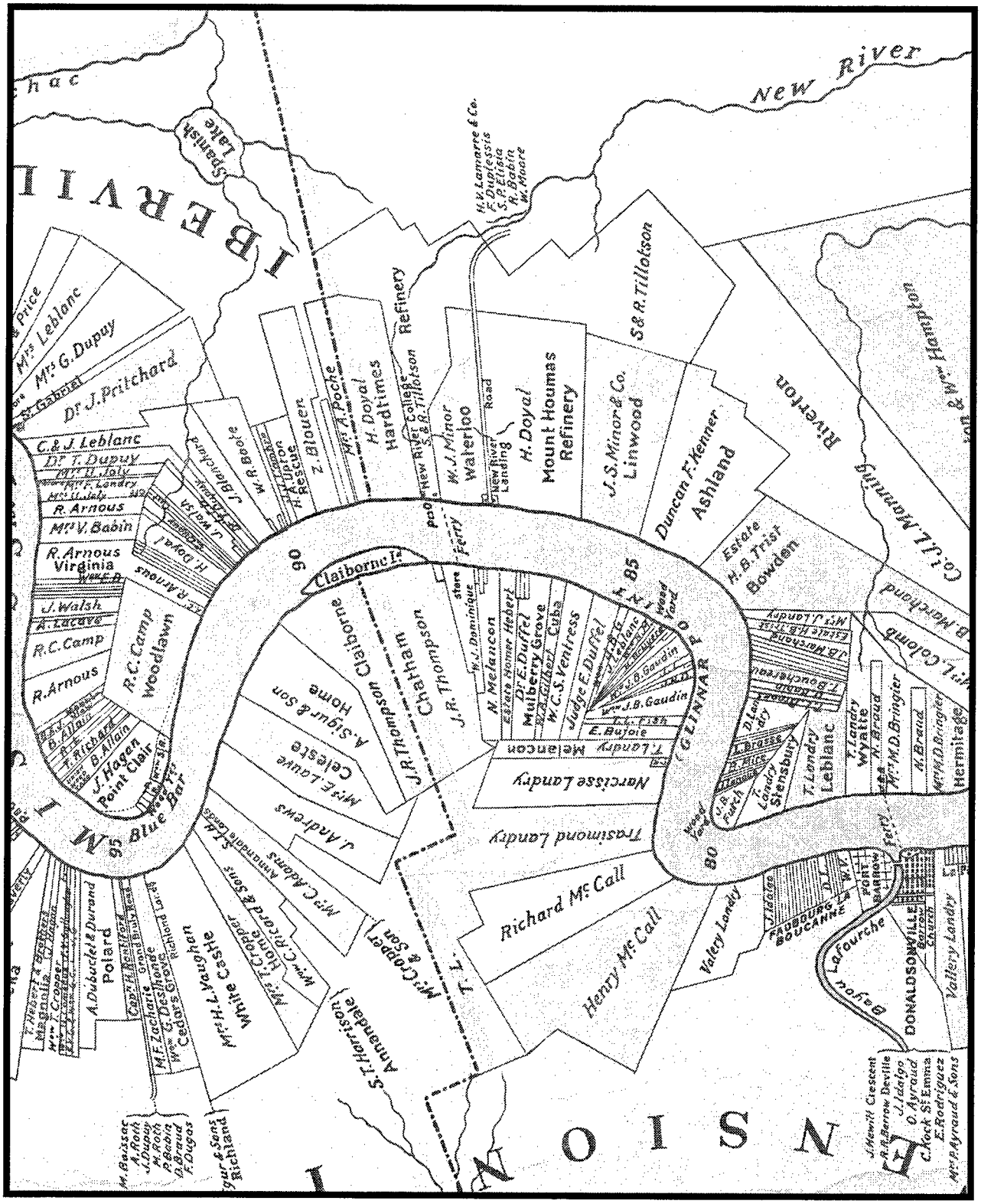


Figure 16. **[1858] Excerpt from Persac's *Plantations on the Mississippi River from Natchez to New Orleans* (Norman's Chart), showing the project area as it was configured on the eve of the Civil War.**

During the next few years, the ravages of the Civil War would drastically effect the economic status of most of the area planters.

The Civil War

The Civil War devastated the south Louisiana area. While there were no major Civil War campaigns conducted in the immediate project vicinity, the location of Donaldsonville at the junction of Bayou Lafourche and the Mississippi River caused it to become both a target and a fortification for the Federal Army. Outside of the Donaldsonville area, military activity in the upper Lafourche region apparently was confined to a series of skirmishes that occurred along the bayou below town and as far downstream as Thibodaux and Lafourche Crossing in 1862–1863. Across the Mississippi River, there were several encounters in the vicinity of New River Landing. This portion of Ascension Parish was occupied by Federal troops through the end of the war (Bergeron 1985:198-206; Davis 1971:253-265; Raphael 1975:41-46).

After the fall of New Orleans and Baton Rouge in the spring of 1862, a company of Texas Partisan Rangers based in the Donaldsonville area fired on the Federal transports and gunboats traveling the Mississippi River between the two occupied cities of Donaldsonville and Plaquemine that Admiral David Farragut threatened the local citizenry with bombardment "for six miles below Donaldsonville and nine miles above" if there was no stop to the sniping (Winters 1963:153). Area residents begged the partisans to discontinue firing, but to no avail. Farragut ordered the evacuation of Donaldsonville, then opened fire on the morning of August 9. The barrage was followed by a landing party that torched the town's hotels, warehouses, and other structures in the business district, as well as some of the private dwellings. Riverfront plantations on either side of the town also were shelled and burned (Bergeron 1985:199; Raphael 1975:25-26; Winters 1963:153). A few days later, the New Orleans newspapers reported that "There is nothing left of it [Donaldsonville] now but ruins and rubbish" (Davis 1971:256; Marchand 1936:154).

Plans to build a Federal fortification near Donaldsonville were formulated in November of 1862. In late January of 1863, Fort Butler was completed at Port Barrow, a small community located at the head of Bayou Lafourche and opposite Donaldsonville. A contemporary account described the star-shaped fort as having "three bastions on the west side and two near the levee. On the three land sides there were high dirt emplacements, the dirt being supported by bricks and planking. All around the fort was a moat supposedly sixteen feet wide and twelve feet deep" (Casey 1983:36, 253, 348). The natural waterfront protection provided by the Mississippi River and Bayou Lafourche was supplemented "by a strong log stockade extending from the levees to the water" (Winters 1963:290).

On June 26, 1863, Confederate General Alfred Mouton commanded General Thomas Green to capture Fort Butler from the Federal forces. Green night-marched his Confederate troops from Thibodaux and camped at sunrise approximately 14 km (9 mi) from the fort. While Green's main force spent the day in rest and reconnaissance, one regiment crossed to the east bank of Bayou Lafourche, via a pontoon bridge made of sugar-coolers, to provide a diversion at Donaldsonville. Green and his Texans advanced within 2 km (1.5 mi) of Fort Butler during the night, then attacked in the early morning of June 28. Although Green had the advantage of surprise and manpower, the Confederates were stymied by an unreported ditch that fronted the inside batture of the Mississippi River levee (Green was aware of and had prepared for the 16-ft wide moat reported to encircle the fort). "At this ditch a most desperate fight ensued . . . . Our men used brick-bats upon the heads of the enemy, who returned the same" (Marchand 1936:158). The combat continued from 2 A.M. until daybreak, when three Federal gunboats began firing on the exposed Confederates. Green sent out a flag of truce and ordered his men to retire. In his report of the failed assault, General Green reported that "The fort was much stronger than it was represented to be, or than we expected to find it. Had it fallen into our hands, I am satisfied, with a little work on it, we would have held it against all the gunboats below Port Hudson" (Marchand 1936:158). According to Green, 800 of his men engaged 500 - 600 enemy troops, with 40 Confederates killed, 114 wounded, and 107 missing. Federal reports noted 180 - 225 defenders, with only 5 - 8 killed and 15 wounded, and claimed that Confederate

casualties numbered 350 killed or wounded and 130 prisoners taken (Casey 1983:37; Marchand 1936:158; Winters 1963:290-291).

Following the Confederate defeat at Fort Butler, General Green ordered three of his Texas regiments to keep the fortification under observation, while several artillery and cavalry units were assigned to a 32 km (20 mi) stretch of riverfront to fire on all passing Federal vessels. Minor skirmishing took place to the south along Bayou Lafourche, culminating on July 13 with the "battle of Kock's (sometimes spelled Cox) plantation" about 10 km (6 mi) south of Fort Butler. The tables were turned in this action, largely due to the drunkenness of one Federal officer (Colonel Joseph Morgan) and to the summer heat. General Green and his force of 1,200 Confederates defeated a Federal army triple its size, with only 39 casualties, 3 killed and 24 wounded. Reports of Federal casualties vary -- one source states 16 killed and 20 wounded, another lists 56 killed, 217 wounded, and 186 missing or taken prisoner (Marchand 1936:160; Winters 1963:291-293).

On the east bank of the Mississippi River, Federal troops manned a stockade on "Doyal's Plantation" (located directly across the river from the project area); it was positioned approximately 11 - 13 km (7 - 9 mi) northwest of Donaldsonville and Fort Butler. Although Henry R. Doyal also owned Hard Times Plantation, situated adjacent to the east bank Iberville/Ascension Parish line, the fortified property probably consisted of his downriver Mount Houmas Plantation, which was located along the east side of the New River Road and Landing between Waterloo and Linwood Plantations (Figure 17) (Casey 1983:55). The Doyal plantation was the site of several encounters during the war.

In the later years of the war, Doyal commanded Company G of Ogden's Regiment. Doyal and his men, as well as other companies comprised of Ascension and Iberville Parish residents, were assigned to the area along the lower Amite River and to the Mississippi River below Baton Rouge (including the New River region), no doubt because that was their home territory (Bergeron 1989:53-54; U.S. Secretary of War [*OR*] 1891:34[2]; 1893:41[1-2]; 1896:48[1]).

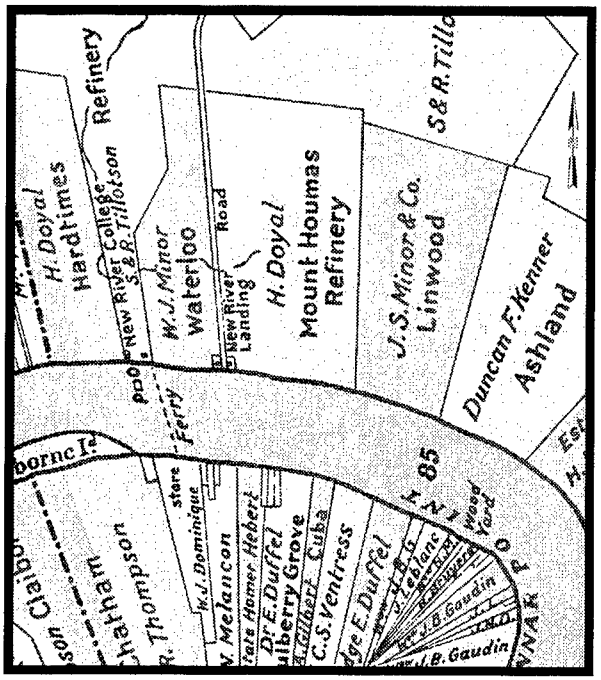


Figure 17. Doyal's Mount Houmas Plantation, from Persac's "Norman's Chart," 1858.

On February 8, 1864, Captain Henry Doyal raided his own plantation and seized the Federal outpost stationed there. The reporting officers believed that the purpose of the attack was to obtain supplies at the Lewis store, which apparently was located near New River Landing. Captain Doyal was able to take only one cartload of stores, but captured eight of the Union pickets and wounded the two remaining men (*OR* 1891:34[2]:276-277, 284). In order to prevent further such incidents, Brigadier General Philip St. George Cooke, the Federal commander of the Baton Rouge headquarters, made the following statement:

> . . . New River Landing is a noted smuggling place, and its being but 16 miles of Seviques Ferry, on the Amite, raids are to be expected, and this is the third which has been made.
>
> The place is in Ascension, a trade district, but I strongly recommend that Lewis & Deckory's [store] permit be recalled and no store allowed on this side above Donaldsonville (*OR* 1891:34[2]:284).

Nearly six months later, on the morning of August 5, 1864, Confederate troops under Colo-

nel John S. Scott entered the Doyal plantation grounds, via a rear route through the woods and corn fields, and covertly surrounded the Union camp. Startled and undermanned, Major S. Pierre Remington ordered his 206 cavalrymen (of the Eleventh New York Cavalry) to charge the enemy line, which consisted only of a cavalry brigade and four artillery pieces, and ride down the levee road to the telegraph station. The confusion created by the Federal offense, rather than the expected defense, allowed Remington to break through the Confederate line; however, Scott captured the 92 Federal troops (most of whom were sick) who remained in the stockade, as well as 130 horses (many of which had been taken earlier from Captain Doyal and his men) and some of the abandoned camp equipment. Several mules and horses also were confiscated from the Doyal property and the adjacent Minor plantation (either Waterloo or Linwood). Remington returned with reinforcements and a gunboat before the Confederate troops were able to completely deplete the stockade, then he pursued them back to the Amite River. Official records referred to this incident as the "Affair at Doyal's Plantation." The stockade was reoccupied by Remington and his men on the following morning (Casey 1983:55; U.S. Secretary of War [*OR*] 1893:41[1]:213-218; 41[2]:582-583; Winters 1963:396).

Later that same year, the Doyal plantation again was the site of a small skirmish. On November 29, 1864, 14 men from the Third Rhode Island Cavalry were detailed to chase a band of jayhawkers who had looted a property in the New River area. While the cavalrymen halted at the Doyal plantation to feed both the men and horses, a band of 20 or so Confederate troops attacked and captured the Federals. The Rhode Island lieutenant later was criticized severely for permitting all of his men to eat at once, without assigning any pickets on the roads that led to the Doyal plantation, a place considered by Brigadier-General Thomas W. Sherman to be "a point most open to attack of any in that region" (*OR* 1893:41[1]:945-947).

Because Donaldsonville and New River Landing both were occupied areas, the region witnessed a great deal of military traffic. Early in the war, the Linwood house was ransacked and Ashland Plantation (both located directly across the river from the proposed project area) was occupied by Federal troops for four days, both episodes said to be revenge against the elusive Duncan Kenner, who was an active Confederate proponent. Kenner, in fact, reportedly escaped Federal capture by fleeing across the Mississippi and through Belle Grove Plantation, i.e., the area positioned just upriver of Old Hickory and at the edge of the proposed project area (Seebold 1941:146). As late as 1865, a skirmish occurred at Dominique's Store; it was located upriver from Donaldsonville and below Chatham Plantation (Figure 18) (Seebold 1941:140-150, 154-155; Sternberg 1996:167-168, 232). Although fighting may not have been involved in all instances, plantations along both sides of the Mississippi River certainly were traversed by both Union and Confederate forces as they moved from post to post, foraged for supplies, and scouted for the enemy.

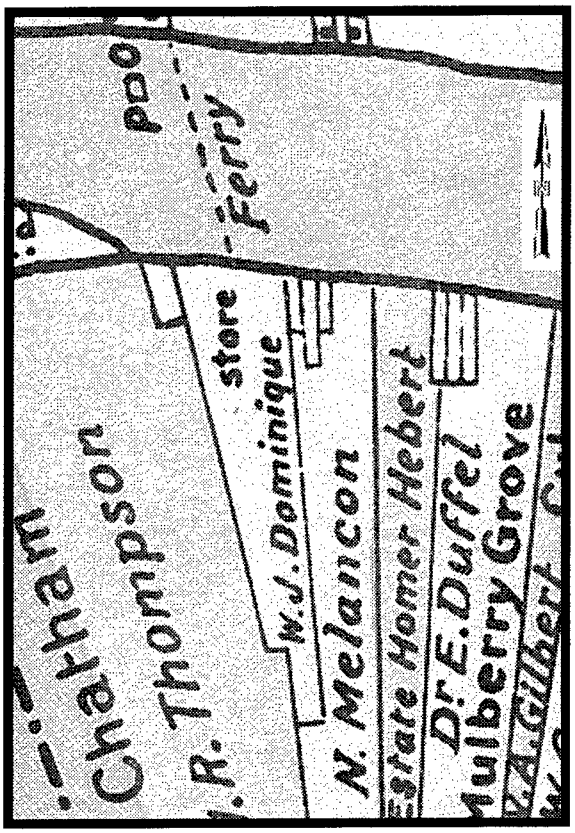


Figure 18. **W. J. Dominique's store was centrally-located, on a major river landing and ferry port. Adapted from Persac's "Norman's Chart," 1858.**

Postbellum Era

The Louisiana slave-based sugar industry was thrust into turmoil by the war. Prices fell, credit was tight, and slaves fled the plantation at their earliest opportunity (Begnaud 1980:38-39; Goodwin and Yakubik 1982). As a result of these financial difficulties, many planters lost their estates in the wake of the war. After the war, industry was slow to recover from the disruption it had suffered. A pervasive lack of capital impeded the revitalization of the sugar belt. Planters could not afford to rebuild their sugar houses, nor could they repair the levees that had been neglected during the war years. Without the proper levees, many former sugar plantations were inundated during high water. Bouchereau notes some of the causes that prevented the capital investment in sugar cane:

> Changes in labor systems, bad politics and government, and fear that the (sugar) tariff would be abolished or greatly modified, preventing capital from being invested . . . (A. Bouchereau 1889-1890:53a).

The loss of slave labor further encumbered economic recovery. Not only did former slave owners now have to pay for labor, but many former slaves migrated north. Freedmen who stayed were perceived by the white population as a political threat during and after Reconstruction. Moreover, the formation of violent, white, vigilante groups such as the Knights of the White Camelia and the Ku Klux Klan drove even more freedmen from the fields. L. Bouchereau notes that "not more than two out of every twenty sugar planters have a full complement of laborers" (1868-1869:viii).

These fundamental obstacles necessitated great changes in the sugar industry. Since most planters lacked both the capital and the laborers to manufacture sugar, a new method was proposed by Bouchereau in 1874; he urged planters to separate the agricultural and industrial aspects of sugar production. His proposal, the "Central Factory System," included centralized mills to serve the needs of many planters: "Let the sugar factories be established in different neighborhoods and let the producers of the cane sell it to the factory (Bouchereau and Bouchereau 1874:xii-xiii)." In this way, the increased labor costs could be absorbed. This system also allowed smaller farmers to participate in sugar cane cultivation; impoverished farmers were able to grow small tracts of sugar cane to sell to the factory. Under the antebellum plantation system, small-scale production had been an economic impossibility.

Despite these changes to try to boost the productivity of the economically damaged plantations, the relationship between planters and slaves, now freedmen, had changed radically. Formerly successful planters had lost their cheap, abundant supply of labor and they were forced to pay workers in order to continue their operations. In addition, despite their new status as freed persons, immediately following the war many former slaves remained in the agricultural fields of the South, both to stay near their families and due to a lack of industrial skills. Thus, the tenant farming land tenure system was born (Aiken 1978).

Under this tenure system, tenant farmers supplied their labor for the production of crops, which in the case of southern Louisiana included sugar, rice, and, in some areas, indigo. Planters, now functioning in their new roles as landlords, provided the land, seed crops, farm implements, and sometimes dwellings -- usually former slave cabins. They also extended a line of credit, either in the form of cash or commodities, from an inflated plantation commissary or store. As payment for their labor, the tenant farmers received a portion of the crops, usually 50 percent or less. In a few cases, the landlord paid the tenant farmer in cash for his portion of the crop. The proceeds, however, were never enough to allow the tenant farmer to pay off the debt he had accrued at the plantation store. This was a cyclical pattern that emerged between the landlord and the tenant farmer; it insured that the labor supply would remain on the plantation, and that, in the long term, the plantation would remain solvent. Only the planter profited as a result of this relationship.

In addition to radical labor changes, the postbellum period also witnessed significant crop diversification. Rice cultivation became a viable alternative to the high cost of sugar cane production for many planters. In 1877, Bouchereau wrote:

> Many of the sugar plantations are planted in rice for want of the necessary means to rebuild or repair sugar houses, etc., while others are only partially cultivated owing to the encroachment of water from crevasses, and many are completely abandoned on account of overflow (Bouchereau and Bouchereau 1877-1878:XX).

Rice was a more appropriate crop for the neglected postbellum plantations since river water through broken or neglected levees, although harmful to the growth of sugar cane, was necessary for rice cultivation. Rice agriculture also was much less labor-intensive than sugar cane cultivation, an added incentive to planters facing a labor shortage. In addition, rice could be planted on depleted cane fields or on low-lying acreage ill-suited to other crops (Ginn 1940:554-557, 575-576; Goodwin et al. 1990:23, 49-50; Jones et al. 1938:21-22).

By the end of the nineteenth century, sugar had regained its prominence as an agricultural staple, particularly in the River Parishes. The Central Factory System caught on and was quite successful; in 1893, Bouchereau remarked:

> Gradually the cultivation of cane and manufacture of sugar from it are becoming separate and distinct industries. Men of means invest their capital in equipping first-class factories furnished with all the modern improvements that the genius of the inventor has produced; small planters pursue the cultivation on the general lines . . . . More sugar is now produced per acre than ever before (Bouchereau and Bouchereau 1893-94).

In Iberville and Ascension Parishes, some planters turned to rice to supplement their sugar crop, while a few switched over exclusively to rice production. Sugar, however, remained the most important industry in the region.

After the Civil War, the traditional linear layout of the antebellum sugar plantations remained unchanged (Prunty 1955:460). Slave cabins continued to be occupied by field laborers, and the overseer's house was taken over by the plantation manager. The major difference between antebellum and the postbellum sugar plantations was the absence of a sugarhouse. Many of the old sugarhouses never were rebuilt. After the Civil War, the materials from these abandoned sugarhouses, especially the metal and brick, were either reused or sold.

All over the agricultural South, the postbellum period was marked by dramatic change. The proposed project reach was no exception. The large landholdings of the former slaveowners along the Mississippi coast lay fallow for lack of money, seed and laborers. By the late 1860s, John Burnside had purchased Ascension Plantation from Narcisse Landry. Burnside also owned a successful mercantile business on Canal Street in New Orleans before the war, and he began purchasing plantations in the 1850s; he owned approximately 10 plantations before his death in 1881. These included Houmas Plantation. His estate, which was willed to his partner in trade, Oliver Bierne, valued his holdings at over 1.25 million dollars (Conrad 1988:132).

By the 1880s, Evan Hall (located just downriver from the proposed project area), Ascension and New Hope plantations were among the major sugar producers in Ascension Parish. The Evan Hall Plantation illustrates the consolidation and modernization that was required to succeed in the post-Civil War economy. Evan Hall was large (including 648 ha [1,600 ac] under cane cultivation); by the 1880s, the McCalls, owners of the plantation, had established a system of tenant farmers to replace the loss of slave labor. The McCalls also had constructed a large, modern sugar refining facility. The refinery at Evan Hall, in 1887, produced over four million pounds of refined sugar (this was produced within two months' time). Neighboring McManor Plantation used this refinery by pumping its cane sugar through a 2.4 km (1.5 mi) long pipeline to the Evan Hall refinery for processing (Brown 1888:4).

Ascension and New Hope Plantations also boasted a large sugar refinery; it was built on the dividing line between the two plantations (by this time they both were consolidated into the Oliver Bierne estate). This refinery, named "New Hope," processed over two million pounds of sugar each year (Brown 1888:4). In 1892, these plantations merged with several other regional plantations to form the Miles Planting and Manufacturing Company, Ltd. The same sort of changes had occurred upriver at Belle Grove and Old Hickory Estates, which were consolidated

into the enormous sugar holdings of the Berthelot Brothers after the turn of the century.

Some plantation owners had more difficulty adapting to the changes wrought by the war. Canonsburg Plantation (subdivided from Celeste Plantation after the war), for example, had been owned by the Lauve family since the first decade of the nineteenth century. Shortly after the war, however, Celeste Lauve, the head of the family, died, leaving her once-regal sugar estate to her son, Ulger Lauve. Ulger struggled with maintaining the family business as a viable business operation. Ultimately, he failed to account for the incipient changes in the labor and manufacturing systems, and he declared bankruptcy twice between the years of 1869 and 1874. He lost Celeste permanently in 1874.

The new owner, Gustave Soniat Dufossat, had purchased several defunct plantations in the wake of the war. He leased the Celeste Plantation to Thomas Sellers immediately, who in turn parceled the land out for sharecropping. Only two years later he sold the estate to J. J. Thompson, for whom he carried a large mortgage. Thompson was unable to turn enough profit to pay the mortgage, and Dufossat foreclosed. Shortly thereafter, the property changed hands several times during the next decade, often through foreclosures. It seems that no planter with experience in operating a sugar plantation could adjust profitably to the new economy. Finally, in 1887, a land speculator purchased the Celeste Plantation property at a sheriff's sale, and abandoned the plantation culture. Lazard Kern parceled out the property to former slaves already living and working on the property (Figure 19). For a small down payment -- as little as $5.00 -- Kern sold former slave cabins and small vegetable plots to sharecroppers. Over the next three years, he sold 14 such plots, as well the large homestead plot to a white storekeeper. By 1894, the remaining plantation land was purchased by large sugar producers, the Berthelot Brothers.

Several plantations in the proposed project reach were affected by the postbellum trend toward consolidation. One example of such property amalgamation was Germania Plantation, positioned between Chatham and Woodstock plantations, in the Ascension Parish portion of the proposed project reach. Germania was owned by John (George) Reuss (Figure 20). Reuss combined several tracts, including Mulberry and Cuba Plantations, to form Germania. In 1882, the local newspaper hailed him as the "future" of Ascension Parish:

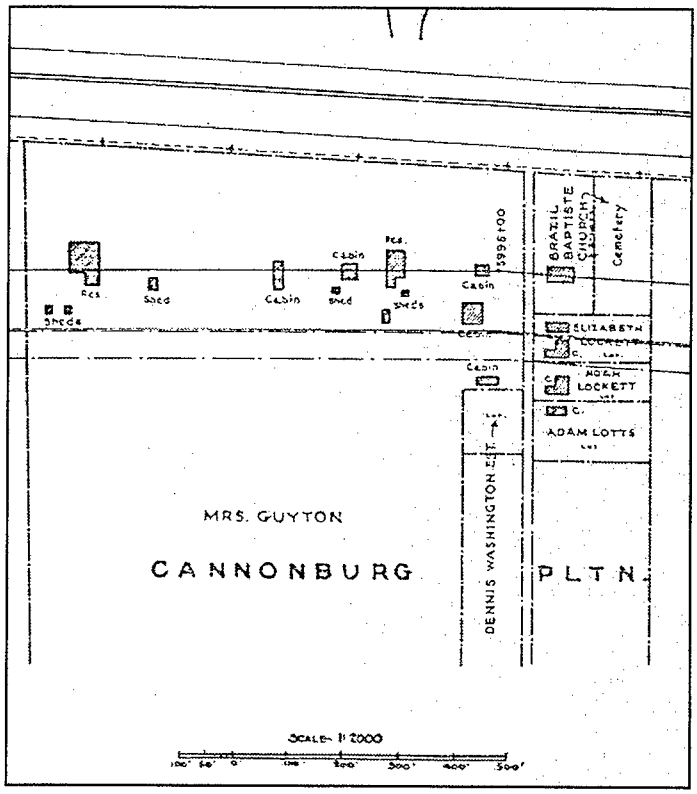


Figure 19. Cannonburg, with small plots divided from the main plantation. From Atchafalaya Basin Levee District map, 1932 (Louisiana Department of Transportation and Development, Baton Rouge, LA).

> . . . Reuss appears to be swallowing the upper portions of the parish . . . . He is welcome to all he can get, provided he continues, as he has begun, to improve and beautify his possessions. He has already inaugurated works on a gigantic scale. The sugarhouse he is now putting up on Germania to serve as a central cuisine, bids fair to be the most splendid structure of its kind in the state . . . . Under the administration of Mr. Reuss, the unsightly willow and cottonwood growth on the batture will disappear; the unhealthy marshes which disfigure the pastures will be drained and filled up; substantial dirt wharves will be constructed on its front, with extensive ware-

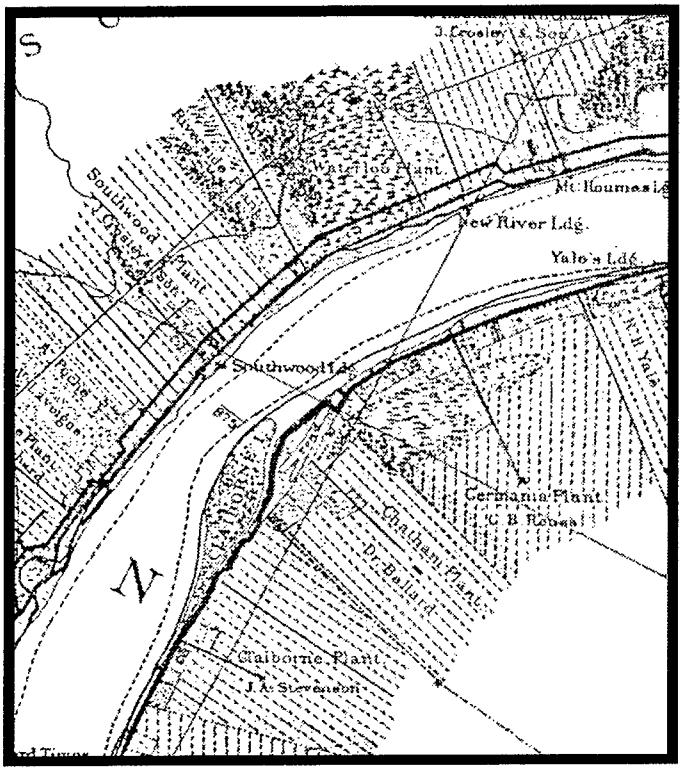


Figure 20. George Reuss's conglomerate, Germania Plantation. Adapted from *Mississippi River Commission Map of the Lower Mississippi from the Mouth of Ohio River to the Head of the Passes, 1896* (Library of Congress, Washington, D.C.).

> houses for the landing of freight; neat cottages and other outhouses will be added . . .; in one word, the 'confederation' will be the plantation of Ascension (Marchand 1936:205-206).

Along with the postbellum consolidation of sugar plantations came the conversion of former cane fields to rice acreage. As sugar production proved less profitable for financially distressed planters after the Civil War, a number of south Louisiana growers turned to rice cultivation as a supplement to or, in many cases, a replacement for sugar cane agriculture. Because the necessary labor and stock could be utilized between the cane planting and grinding seasons, rice required little additional capital for successful cultivation.

In 1860, the Federal agricultural census listed no rice crop for Ascension Parish; however, 10 years later, the parish reported a rice yield of 15,926 lbs (Kennedy 1864a:67; Walker 1872:743). In the vicinity of the proposed project reach, there were several sugar plantations that had made a partial switch to rice cultivation by the mid-1880s. Included among these properties were Woodstock Plantation in Ascension Parish and Celeste Plantation in Iberville Parish. The first rice field in the region reportedly was cultivated at Woodstock Plantation. In 1869, only 40 barrels of rice had been produced in all of Ascension Parish (MRC 1896-1907:25-26) (Bouchereau 1868-1889; Sternberg 1996:233).

Transportation

The invention of the steamboat influenced tremendously the economy of the region. The first steamboat to sail down the Mississippi River passed through the proposed project reach in 1812; she was the "New Orleans." In 1820, the steamer "Feliciana" is on record as carrying freight between Donaldsonville and St. Francisville. In 1835, the steamer "Revenue" advertised weekly service to Donaldsonville. While flatboats were still seen on the river, the steamers took on the vast bulk of the sugar and passenger trade (Marchand 1949:15-18). The river remained the dominant means for transporting commercial goods and agricultural products until the postbellum development of the railroad system. The Cannonburg area of the project corridor, i.e., Section 7 of Township 10S, Range 13E, was named for John W. Cannon, the famed steamboat captain who won the most touted river race of the century (Riffel 1985).

Within the overall project reach, twentieth century land use generally was limited by the increasing reliance on the railroad system for transportation of goods to market, and riverine migration. During the postbellum period, railroad lines were constructed along both the east and west banks of the Mississippi River natural levee. Use of these railroads for the transportation of agricultural products (e.g., sugar, rice, cotton, etc.) to market proved faster and more reliable than riverine transportation. As a result, by the early twentieth century, most farms and plantations relied on the rail system for transportation as opposed to steamboats. In general, plantation owners either built new sugar houses near the railroad, or constructed rail spurs to link their sugar

houses with the railroad line. As a direct result, utilization of the batture decreased considerably. While plantations formerly maintained landings on the batture, the changing transportation system alleviated the need for these plantation landings. Most of the batture reverted to largely unutilized woodland.

Twentieth Century

After the turn of the century, agriculture continued to dominate the proposed project reach. Sugar production remained the chief force behind the area economy. Consolidated management by such corporations as the Old Hickory Planting and Manufacturing Company and, later, the Guyton Sugar Company, which purchased and operated Old Hickory Plantation continued (Louisiana Planter and Sugar Manufacturer 1924:92, 1929:49). By 1921, the riverfront fields of Belle Grove Plantation were planted in rice. In fact, most of the Belle Grove acreage actually encompassed the old Celeste Plantation, which had been planted in rice during the postbellum years (Mississippi River Commission [MRC] 1921:67-68).

Land tenure within the proposed project reach reflected the early twentieth century land use patterns found along the Mississippi River and throughout southern Louisiana – agricultural dominance, particularly sugar cane cultivation, with most production in the hands of a few corporations. By 1921, several of the area plantations had converted former cane fields to grain fields; however, sugar cane unquestionably remained the predominant crop (Figure 21) (Louisiana Planter and Sugar Manufacturer 1924:92, 1929:49; MRC 1921:67-68). In 1945, Iberville Parish recorded 10,522 ha (26,000 ac) planted in sugar cane, with only 809 ha (2,000 ac) used to cultivate rice. Sugar cane fields at that time represented 50 percent of the cultivated acreage in the parish; the remaining acreage was planted in corn (30 percent) and used as pasture or to grow rice, hay, potatoes, and truck crops (20 percent).

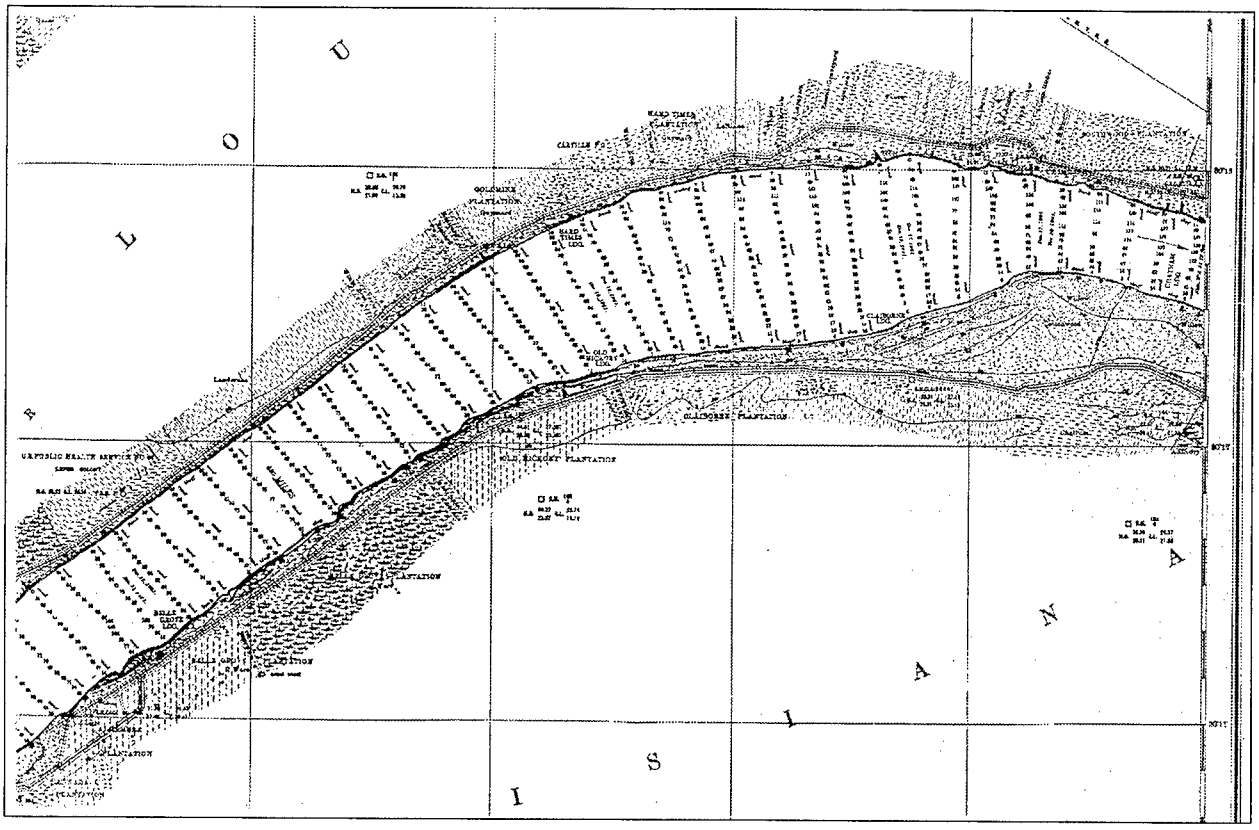


Figure 21. Adaptation of the *Mississippi River Commission Map of the Lower Mississippi from the Mouth of Ohio River to the Head of the Passes, 1907*, depicts diversified crops along the project reach (Library of Congress, Washington, D.C.).

Currently, sugar cane, soybeans, grain sorghum, pecans, and livestock (beef cattle and horses) are the chief agricultural products of the area (Calhoun 1995:218; Draughon et al. 1995:5; Grace 1946:225).

Early in this century, increased quantities of corn, fruit, and pecans were produced in the area. Cotton, grown during the early 1900s, had all but disappeared by 1940. Soybeans, initially planted with corn to replenish the soil, also became an important cash crop. Livestock breeding increased during the 1930s and 1940s; the abandoned rice fields provided good pasture lands. By the 1960s, cattle production was second to sugar cane as a source of farm income (Iberville Parish Development Board 1964). Agriculture was the main occupation of the local residents, and it employed over one-half of the available work force.

The sugar industry, as noted above, endured a difficult economic period between the Civil War and the first half of the twentieth century. In 1869, sugar production statewide had plummeted to less than 15 percent of the 1862 production totals. This drop also was experienced in the project reach. Production trends for the reach closely paralleled those of the state though 1889, as production steadily rose with economic improvements in and the protection of the industry. Slowly, cane regained prominence in the sugar belt, and by the end of 1945, sugar cane accounted for over 50 percent of all the cultivated land in the parish. Conversely, rice production in the parish dwindled significantly; by 1945, only 809 ha (2,000 ac) of land were devoted to rice cultivation (Iberville Parish Planning Board 1945:19-20).

During these years, Iberville was the second most productive sugar parish in Louisiana. Ascension did not lag far behind. Several natural disasters during these years damaged much of the statewide sugar cane crop, but did not affect production in Iberville Parish. The killing frost in November 1855, as well as a series of crevasses in 1859 that flooded all the land between Bayou Lafourche and the Mississippi River, helped to reduce output through the Lafourche St. Charles, St. John the Baptist, St. James, Assumption, and Ascension Parishes.

Rice apparently was cultivated as extensively in the vicinity of the proposed project area as it was in other areas of the sugar region throughout the first half of the twentieth century. Small farmers situated throughout the reach undoubtedly cultivated the grain for home consumption; however, its popularity as a cash crop faded as the nineteenth century drew to a close. As a local Iberville Parish newspaper attested in 1906:

> The staple industry of this parish has always been and most probably will always be the cultivation of cane and the making of sugar, and although planters frequently go from cane to rice, or from cane to cotton, they invariably, after the lapse of a few years, find themselves again laying by big crops of cane (The Weekly Iberville South, 1906).

Throughout this region, small farmers continued to sell their land to larger plantation owners, until small farms had almost disappeared in many areas.

One of the most innovative and unique developments that emerged within the vicinity of the proposed project area, and which resisted the trend of large-scale consolidation, was the creation of Africa Plantation in the 1920s. As a means of combating the devastating effects of the tenancy system, Dr. John Harley Lowery, the first African American physician in Ascension Parish, organized a benevolent society dedicated to helping other first-generation freedmen seize economic control of their lives. The Grand and Glorious International Order of Brothers & Sisters of Love & Charity purchased the former Babin Plantation, on Philadelphia Point, in 1919. Within a few years, more than 200 African Americans -- including the children of former Babin Plantation slaves -- lived on the renamed "New Africa Farm." The benevolent society eliminated tenancy, replacing it with a cooperative model of farming. Members raised rice, sugar, strawberries and figs, as well as livestock on the 182 ha (450 ac) plot. By 1932, more than 20 buildings dotted the plantation, including a large school (Figure 22).

The Central Agriculture School was modeled after Booker T. Washington's industrial education plan. The four-room building catered both to children of the Society and to adults who had been deprived of educational opportunity as children. The Society functioned in a fashion

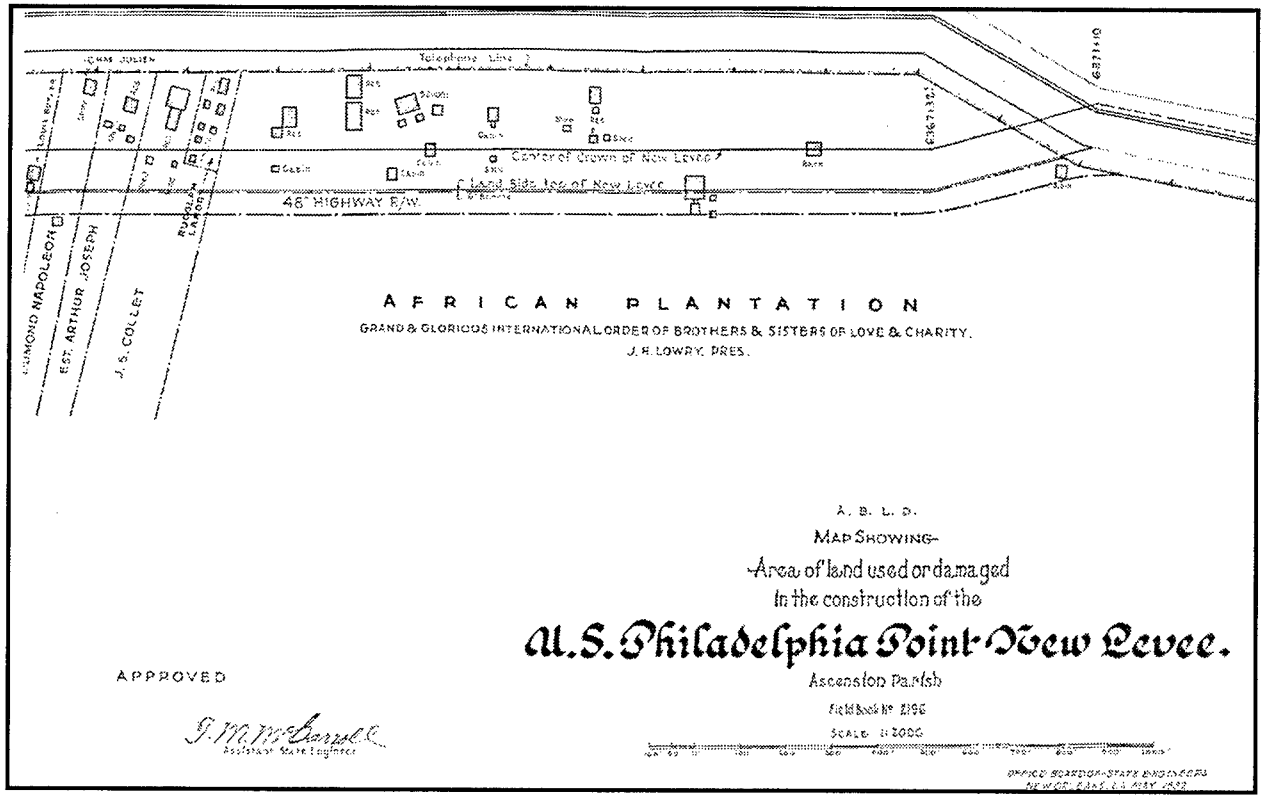


Figure 22. "African Plantation" was actually Africa farm, both a collective and Benevolent Society, ca. 1932. Note the Central Agriculture School (Louisiana Department of Transportation and Development, Baton Rouge, LA).

similar to many other African American benevolent societies of the time. Members paid a small amount into the group weekly (maintained in a membership book), and in the case of illness, the Society paid the doctor's expenses. When a member died, the Society would pay the expenses of the funeral (Hambrick 2000, personal communication; River Road African American Museum 2000).

In addition to caring for members of the Society, the New Africa Farm contributed to the welfare of other African Americans in Ascension Parish. The farm donated excess crops from the harvest to local sharecroppers who couldn't feed their families. The Society sought to expand their holdings throughout the early twentieth century, purchasing land in South America and participating in Marcus Garvey's "Back to Africa" movement by investing in settlements in Liberia (River Road African American Museum 2000).

After World War II and the subsequent end of the Depression, the popularity of Benevolent Societies and cooperative farms waned. New Africa Farm was purchased by Leonard Julien, an African American farmer and inventor. Mr. Julien invented a machine for planting sugar cane in 1964, revolutionizing the time and labor required for the planting season. Ironically, the Africa Plantation house, of particular importance to the history of Ascension Parish for its notable former owners, is now part of a plantation museum. The River Road African American Museum (2000) is part of the new tourist economy of Ascension Parish. It is the only plantation resource available that directly addresses the condition of African Americans during and after slavery. Though it is located just a few miles away from the beautiful, restored Mulberry Grove plantation (Figure 23), the condition of Africa Plantation today seems a metaphor for the damage and destruction of the "peculiar institution" on the southern landscape (Figure 24).



Figure 23. **Mulberry Grove Plantation, today a major River Road tourist stop, was restored to its former beauty by a private owner several years ago.**



Figure 24. **Africa Plantation, formerly Babin Plantation, has recently been donated to the River Road African American Museum, and still has a long journey before it can function as a tourist site. Curators estimate several hundred thousand dollars for restoration need to be raised.**

Although agriculture has remained a major local force in the area through the twentieth century, the economic and physical landscape of the proposed project reach began to change with the discovery of petroleum throughout the area. Escaping natural gas had been noticed at Point Pleasant during the late nineteenth century. In 1898, the ferryman there utilized a large gas seep, "with the aid of a can and jet," to light his Mississippi River night route (Grace 1946:189). In June of 1901, the White Castle Oil & Gas Company was established and it drilled a well; however, the located oil pockets were not viable commercially. Petroleum exploration did not begin in earnest in Iberville Parish until 1926, when salt domes were discovered southwest of White Castle (just a few kilometers upriver of the proposed project reach) and at Bayou Bouillon, or Bayou Larompe. Today, the Point Pleasant Gas Field and the Laurel Ridge Oil and Gas Fields extend into or very near the project area. Across the river, the primary pool of the St. Gabriel petroleum field dominates the industry of the area (Grace 1946:189-190; Louisiana Department of Transportation and Development 1994; Riffel 1985:58). The Georgia Gulf Corporation and Ashland Chemical, Inc., have facilities in the region, as well as Fina/CosMar plant (shared site of the Fina Oil and Chemical Co. and the CosMar Company); Arcadian Fertilizer, L.P.; Allied Signal, Inc., and the Geismar Complex (Draughon et al. 1995; DTC, Incorporated 1992). Dozens of enormous factories now shadow the riverbanks, symbolizing the shift from a rural to an industrial economy. The Mississippi riverside has been transformed by the evolution of the petroleum and chemical industries in both Ascension and Iberville Parishes.

Conclusion

Historical research pertaining to the development of the proposed project reach in Iberville and Ascension Parishes has identified a number of themes that are essential to understanding the historic period development and the associated archeological remains of the area. These themes include: the initial Acadian settlement of the eighteenth century and the lifestyle of subsistence farming established there; antebellum economic development, which saw the rise of sugar planting and plantation culture throughout the state and in the proposed project area; and the consolation of small farms into large plantations, due to the exigencies of sugar cultivation. Although there is a virtual absence of historical and archeological data relating to the antebellum lumber industry, fragmentary evidence exists that lumbering occurred on a scale beyond the mere clearing of fields along the banks of the Mississippi River and within the proposed project area (Grace 1946:90).

Themes relevant to the postbellum period include the movement towards rice cultivation; the shift back to sugar during the late nineteenth century; and, the gradual trend towards centralized sugar manufacture, which led to the eventual elimination of sugar processing in the project area. This centralization enabled small farmers to stay in business and, consequently, brought about some reversal of the trend towards consolidated land holdings. Moreover, modifications in the social and labor arena helped to change the region permanently.

Consolidation, however, was the dominant land use pattern in the sugar producing areas of Louisiana. Iberville and Ascension Parishes remain two of the foremost sugar producing parishes in Louisiana. Agriculture has dominated the economy of the area since its initial settlement, and sugar has been the dominant crop for more than 150 years. Currently, the area is dotted with petrochemical properties, and it is traversed by several natural gas pipelines. With the exception of petroleum exploitation and the petrochemical industry, it does not appear that agriculture, led by sugar cultivation, will lose its place of preeminence within the economy of the proposed project area in the near future.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

The area encompassing the proposed project reach has been the subject of numerous cultural resources investigations. This chapter provides a review of all of the archeological investigations conducted within 8 km (5 mi) of the proposed project reach, as well as all previously recorded sites, standing structures, historic period cemeteries, and properties listed in the National Register of Historic Places located within 1.6 km (1 mi) of the current project area (Figure 2: oversized map). These data were collected from information currently on file at the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, Divisions of Archaeology and Historic Preservation, Baton Rouge, Louisiana.

Previously Conducted Surveys Within 8 km (5 mi) of the Project Reach

Background research resulted in the identification of 22 previously conducted cultural resources surveys within 8 km (5 mi) of the proposed project items (Table 7). These surveys are discussed in ascending order by parish, below. Those surveys that were conducted in more than one parish are reported on at the end of the section under the heading of Multiple Parishes.

Table 7. Previously Conducted Surveys within 8 km (5 mi) of the Proposed Project Reach.

FIELD DATE	REPORT NUMBER	TITLE/AUTHOR	PROJECT DESCRIPTION	RESULTS AND RECOMMENDATIONS
Ascension Parish				
Jun-76	22-155	*Cultural Resource Survey of the Proposed Smoke Bend Revetment, Ascension Parish, Louisiana* (Shenkel 1976)	Pedestrian Survey	No sites or cultural material identified; no additional testing was recommended.
Aug-78	22-515	*A Cultural Resources Survey of the Relocation of Highway 70 Near Pierre Part* (Neuman 1978)	Records review and pedestrian survey	No sites or cultural material identified; no additional testing was recommended.
Jul-92	22-1625	*Cultural Resources Survey of Two Ascension Parish Revetments, Mississippi River M-179.1 to 173.0* (Hinks et al. 1994)	Records review, pedestrian survey, systematic shovel testing, and limited auger testing	Identified Site 16AN54 which consisted of postbellum and early 20th century artifact scatters associated with the town of Darrow, LA. The site was assessed as potentially significant; additional testing was recommended if the site were to be impacted.
Not Reported	22-609	*Cultural Resources Survey of Bayou LaFourche Bridge and Approaches - Ascension Parish* (Ducote 1980)	Records review, pedestrian survey, and shovel testing	No sites were identified; no additional testing was recommended.
1993-1994	22-1779	*Cultural Resources Investigations for Item M-178.0 to 173.2-R, Mississippi River Levees, Louisiana* (Vigander et al. 1994)	Records review, pedestrian survey, auger testing, and limited shovel testing	No sites were identified; no additional testing was recommended.
Iberville Parish				
Mar-74	22-281	*White Castle -Plaquemine Highway Route LA 1 Iberville Parish, Louisiana* (Rivet 1974)	Pedestrian survey	Four, small loci were identified. No additional testing was recommended. Inspection of site areas after construction was suggested.

Table 7, continued

FIELD DATE	REPORT NUMBER	TITLE/AUTHOR	PROJECT DESCRIPTION	RESULTS AND RECOMMENDATIONS
Feb-77	22-64	*Cultural Resource Survey of the Mississippi River Levees, Item 194.5-R Atchafalaya Basin Levee District White Castle, Louisiana* (Ryan 1977)	Records review and pedestrian survey	No cultural materials were identified; no additional testing was recommended
Not Reported	22-711	*A Cultural Resource Survey of White Castle Revetment Iberville Parish, Louisiana* (Gagliano et al. 1979)	Pedestrian survey, and bankline profiling	Identified Site 16IV136. The site was disturbed heavily and determined not significant. No additional testing was recommended.
Not Reported	22-630	*Cultural Resource Survey for Planning Area Number 4 Iberville Parish, Louisiana* (McIntire and Morgan 1980)	Records review, pedestrian survey, and shovel testing	Prehistoric mound sites (16IV11 and 16IV12) were relocated. The surrounding area was assessed as potentially significant; additional testing was recommended.
Jul-81	22-421	*Cultural Resource Survey Maynard Oil Company Well Site and Access Road Iberville Parish, Louisiana* (Goodwin et al. 1981)	Records review, pedestrian survey, and shovel testing	No sites or cultural materials were identified; no additional testing was recommended.
Not Reported	22-933	*Archaeological Investigations at the White Castle Gap Revetment, (M-196-R), Iberville Parish, Louisiana* (Pearson and Guevin 1984)	Records review, pedestrian survey, unit excavation, and trench excavation	Prehistoric and historic period material scatters were identified within the project area, but no site numbers were assigned to them. The area was assessed as potentially significant and limited, additional testing was recommended if the site were to be impacted.
Aug/Sept-85	22-1092	*Between Two Levees: Archaeological Testing and Evaluation of the National Register Eligibility of the Bayou Goula Landing Site, Iberville Parish . Louisiana* (Goodwin et al. 1986)	Pedestrian survey, auger testing, unit excavation, profile mapping and laboratory analysis	Limited historic period material scatter identified at Site 16IV131.The site was assessed as not significant; no additional testing was recommended.
Oct-85	22-1269	*Archaeological Testing at Two Sites Near White Castle, Iberville Parish, Louisiana: 16 IV 147 and 16 IV 149* (Goodwin et al. 1988)	Records review, topographic mapping, auger testing, and shovel testing	Two historic period sites (16 IV 147 and 16 IV 149) were identified. Both sites were assessed as not significant; no additional testing was recommended.
Multiple Parish				
Early 1978	22-421	*Archeological /Historical Survey: Shell Pipeline's Proposed Geismar-Napoleonville Pipeline* (McIntire 1978)	Records review, pedestrian survey, and shovel and auger testing	No sites or cultural remains were located; no additional testing was recommended.
Mar/Apr-81	22-1021	*Cultural Resource Survey Louisiana Section of Proposed Pipeline Corridor from Weeks Island to Mississippi Border* (McIntire 1981)	Records review, aerial and pedestrian survey, auger testing, and shovel testing	Relocated Site 16AN24. No additional sites were identified; no additional testing was recommended.
Not Reported	22-1041	*A Cultural Resource Survey of the Proposed Shell Pipeline Between Station 9030+7 and Station 9863+45, Iberville and Ascension Parishes, Louisiana* (Byrant 1985)	Records review and pedestrian survey	Two small historic period materials scatters were identified. The areas were assessed as not significant and no additional testing is recommended.
April - June 1988	22-1306	*Archaeological and Historical Investigations of Four Proposed Revetment Areas Located Along The Mississippi River in Southeast Louisiana* (Kelley 1988)	Records review, pedestrian survey, and shovel and auger testing	A total of 13 historical sites were identified (Sites 16EBR40, 16EBR56, 16EBR70, 16EBR71, 16AN6, and 16AN42-49). Only Site 16AN43 was assessed as potentially significant; additional testing was recommended at that site.
Sept/Oct-95	22-1926	*A Cultural Resources Survey From Sorrento, Louisiana to Mont Belvieu, Texas* (Skinner et al. 1995)	Pedestrian and boat survey and shovel testing	No cultural materials or sites were identified; no additional testing was recommended.
Sep-97	22-2148	*Phase 1 Cultural Resources Survey and Inventory of the Proposed Ridgeline Gas Distribution Acadian Extension 6.625 in O.D. Pipeline Project, Ascension and t. James Parishes, Louisiana* (Davies et al. 1998)	Pedestrian survey and shovel testing	Two historical Sites, 16AN67 and 16AN25, were identified as well as two cultural resources loci. The sites were assessed as not significant and no additional testing was recommended.
Nov-97	22-2117	*Phase I Survey of the Napoleonville to Tebone Pipeline, Assumption, Iberville, and Ascension Parishes, Louisiana* (Skinner et al. 1997)	Records review, pedestrian survey, and shovel testing	No sites were identified; no additional testing was recommended.
Not Reported	22-366	*The Texas-Louisiana Ethylene (TLP) Project* (McIntire nd)	Records review, aerial survey, pedestrian survey, and auger and shovel testing	One prehistoric site, the O'Brian Site, was identified as well as one previously known site. Neither site was assessed and no additional testing was recommended for the pipeline corridor.

Ascension Parish

During June, 1976, J. Richard Shenkel conducted a Phase I cultural resources inventory of the proposed Smoke Bend Revetment project item located at River Mile 177.5 and on the right descending bank of the Mississippi River. This survey was conducted on behalf of the U.S. Army Corps of Engineers, New Orleans District (Shenkel 1976). The proposed project area measured approximately 4.4 km (2.7 mi) in length; the width of the survey area, however, was not reported. Pedestrian survey of the project area failed to identify any cultural resources. No additional testing of the proposed Smoke Bend Revetment project area was recommended.

During August, 1978, Robert W. Neuman conducted a cultural resources investigation in anticipation of the proposed relocation of State Highway 70 near Pierre Part, Louisiana. The survey was conducted at the request of an unspecified party (Neuman 1978). While the exact size of the proposed project area was not specified in the report, archival research identified several shell middens within the proposed project area. Pedestrian survey, however, failed to locate any cultural resources. No additional testing of the proposed highway was recommended.

Prior to May 1980, Gregory J. Ducote conducted a cultural resources survey of the Bayou Lafourche bridge and approaches on Louisiana Highway 943 in Ascension Parish, Louisiana. The survey was undertaken at the request of the Federal Highway Administration and the Louisiana Department of Transportation and Development (Ducote 1980). The proposed project corridor extended from the intersection of Louisiana Highway 943 and Louisiana Highway 1, across the Bayou Lafourche bridge, where it terminated at the intersection of Louisiana Highway 308 and Louisiana Highway 1. Intensive pedestrian survey augmented by shovel testing throughout the Area of Potential Effect failed to produce any cultural resources. No additional testing of the proposed Bayou Lafourche Bridge project corridor was recommended.

During July, 1992, R. Christopher Goodwin & Associates, Inc., conducted a Phase I cultural resources survey of the Smoke Bend and St. Elmo Revetments, at the request of the U.S. Army Corps of Engineers, New Orleans District (Hinks et al. 1994). The Smoke Bend Revetment project area was located along the right descending bank of the Mississippi River between River Miles 179.1 - 178.5-R, while the St. Elmo Revetment project item was positioned along the left descending bank of the Mississippi River between River Miles 176.2 - 175.3-L. Fieldwork included pedestrian survey augmented by the systematic excavation of shovel and auger tests throughout the project area. Survey within the proposed St. Elmo Revetment project item resulted in the identification of Site 16AN54. No cultural resources were identified within the proposed Smoke Bend Revetment project area and no additional testing of this revetment was recommended.

Site 16AN54, 25 x 350 m (82 x 1148 ft) in area, was described as the archeological remains associated with the town of Darrow, Louisiana. Hinks et al. (1994) reported that a three block portion of the town had been razed, prior to the construction of the U.S. Darrowville levee setback. The excavation of two 1 x 1 m (3.3 x 3.3 ft) units resulted in the collection of a variety of historic period cultural material dating from the late nineteenth - early twentieth century. Hinks et al. (1994) reported that the cultural deposits appeared to be intact and that they were covered by approximately 45 cm (17.7 in) of modern alluvium. Site 16AN54 was assessed as potentially significant. Since the site would not be impacted by the then-proposed construction project, no additional testing of the site was recommended. Site 16AN54 is located outside of the currently proposed project reach.

During 1993 and 1994, Earth Search, Inc., conducted a Phase I cultural resources inventory between River Mile 178.0 and 173.2 along the right descending bank of the Mississippi River. The survey was conducted on behalf of the U.S. Army Corps of Engineers, New Orleans District prior to proposed construction of the Philadelphia Point to Donaldsonville Levee Enlargement (Vigander et al. 1994). Prior to survey, a records review was undertaken to identify the archeological site potential of the project area. This review resulted in the identification of two areas, totaling 104.8 ac (42.4 ha), considered to have a high potential for containing prehistoric and/or historic period cultural resources.

The first of these areas was located between Levee Stations 0+00 and 50+68. Pedestrian sur-

vey and the excavation of both auger and shovel tests throughout this area failed to produce any cultural material or evidence of intact cultural deposits. No additional testing of the area was recommended. The second high probability area fell between Levee Stations 6168+00 and 6188+00. Pedestrian survey augmented by the excavation of 19 auger tests failed to identify any cultural material or evidence of significant archeological resources. No additional testing of the proposed Philadelphia Point to Donaldsonville Levee Enlargement project corridor was recommended.

Iberville Parish

During March, 1974, Philip G. Rivet conducted a Phase I cultural resources investigation of the White Castle-Plaquemine Highway, Route 1, in Iberville Parish, Louisiana. This survey was conducted at the request of an unspecified party (Rivet 1974). The exact size of the project area was unspecified, however, pedestrian survey resulted in the identification of two small, prehistoric ceramic scatters situated along the western edge of the right-of-way near the intersection of Herbert Road and Louisiana Highway 1. In addition, two prehistoric ceramic scatters also were identified along the eastern edge of the right-of-way in the same vicinity. The sites were assessed as not significant, each lacked stratigraphic integrity. No additional testing of the White Castle-Plaquemine Highway project corridor was recommended; however, monitoring of the sites during construction was recommended (Rivet 1974).

During February, 1977, Thomas M. Ryan performed a Phase I cultural resources survey of the Atchafalaya Basin Levee District in White Castle, Iberville Parish, Louisiana. This survey was conducted at the request of the U.S. Army Corps of Engineers, New Orleans District (Ryan 1977). Fieldwork included pedestrian survey along the right descending bank of the Mississippi River between levee station 5720+00 and 5755+97. All borrow pits and previously disturbed areas associated with the project item also were investigated, however, no cultural resources were identified. No additional testing of the Atchafalaya Basin Levee District project area was recommended.

Prior to February, 1979, Coastal Environments, Inc., conducted a Phase I cultural resources investigation in the vicinity of Mississippi River Mile 197.5, Iberville Parish, Louisiana at the request of the U.S. Army Corps of Engineers, New Orleans District (Gagliano et al. 1979). Gagliano et al. (1979) reported that pedestrian survey and bankline examination was conducted within a portion of the proposed Whitecastle Revetment project item where personnel of the U.S. Army Corps of Engineers, New Orleans District, had observed historic period material eroding from the bank of the Mississippi River. The artifact scatter (later designated as Site 16IV136) measured approximately 12 x 80 m (39.4 x 262.5 ft) in size. The site was located within the vicinity of the proposed project reach and it is discussed in the section on previously recorded sites below.

Pedestrian survey of Site 16IV136 resulted in the collection of historic period ceramic sherds, nails, brick fragments, coal, mortar, and unspecified bone fragments. The authors suggested that the material recovered from Site 16IV136 dated from ca. 1820 to 1920. Gagliano et al. (1979) reported, however, that these materials were not in situ and they suggested that the artifacts were redeposited in the area during the construction of the levee. Site 16IV136 was assessed as not significant and no additional testing of the site was recommended. In 1983, Bureman completed a State of Louisiana Site Record Update Form for Site 16IV136. No information other than that previously provided by Gagliano et al. (1979) was provided on the State of Louisiana Site Update Form.

Prior to May 1980, William G. McIntire and James D. Morgan, conducted a Phase I cultural resources survey of the proposed corridors and collection stations associated with proposed sanitary sewer systems in Planning Area Number 4 of Iberville Parish, Louisiana. The survey was conducted on behalf of Simons J. Barry and Associates, Consulting Engineers, Baton Rouge, Louisiana (McIntire 1980) and it extended from the west bank of the Mississippi River between Point Pleasant and Dorcyville east to Alhambra. A small area at Samstown and another small area northeast of Pleasant Point also were included within the study area. Archival review revealed

the presence of two prehistoric mound sites (16IV11 and 16IV12) in the vicinity the project item. Pedestrian survey and shovel testing were utilized to relocate both mound sites; however, no mention is made in the report whether or not the mounds were relocated. In addition, McIntire and Morgan (1980) indicated that no new prehistoric sites were recorded during survey. Nevertheless, Planning Area Number 4 project area was assessed as potentially significant due to its high probability for containing sites (McIntire 1980). Intensive testing along the length of the sewer system was recommended.

During July, 1981 Southern Archaeological Research, Inc., conducted a Phase I cultural resources survey of the proposed Maynard Oil Company well site and access roadway in Iberville Parish, Louisiana. The survey was undertaken at the request of Maynard Oil Company, of Dallas, Texas (Goodwin et al. 1981). The project area encompassed approximately 4.8 acres and it was located 1.0 km (0.62 mi) west of the Iberville-Ascension Parish line. Archival research was conducted to assess the potential of the project area to contain archeological sites. Pedestrian survey augmented by systematic shovel testing failed to produce any cultural remains within the project area. No additional testing of the Maynard Oil Company well site project area was recommended.

Prior to February 1984, Coastal Environments, Inc., conducted a Phase I cultural resources survey of the White Castle Gap Revetment, M-196-R, located on the west bank of the Mississippi River at the community of Bayou Goula, Iberville Parish, Louisiana. The investigation was undertaken at the request of the U.S. Army Corps Engineers, New Orleans District. Pearson and Guevin (1984) reported that the project area encompassed a stretch of land extending from levee station 5128 to levee station 5174 along the west bank of the Mississippi River; this area measured 1,280 m (4,199 ft) in length and 180 to 340 m (590 to 1,115 ft) in width and was located near Bayou Goula. Archival research revealed that the Bayou Goula area was one of the oldest points of European settlement in the area and it was determined to have a high probability for containing archeological sites. Fieldwork included pedestrian survey augmented by unit excavation and backhoe trenching. As a result of survey, both prehistoric and late nineteenth century artifacts and architectural features were identified, but no site numbers were assigned to these cultural resources. Additional testing was recommend for the White Castle Gap Revetment project area, as well as the implementation of a monitoring program during construction.

Between August and September, 1985, R. Christopher Goodwin & Associates, Inc., conducted a Phase I cultural resources inventory of the proposed White Castle Revetment Item located adjacent to the right descending bank of the Mississippi River between River Miles 192-R and 191.2-R in Iberville Parish. The survey was conducted at the request of the U.S. Army Corps of Engineers, New Orleans District (Goodwin et al. 1987). Pedestrian survey augmented by limited shovel testing, auger testing, and unit excavation resulted in the identification of Sites 16IV147 - 16IV151. In addition, a single locus (White Castle Site 1) for which no official state site number was requested, also was identified. Locus White Castle Site 1 was described as a surface scatter of brick, concrete, asphalt, and other unspecified construction materials. Goodwin et al. (1987) suggested that the materials had been redeposited in the area as fill and/or rip-rap. Locus White Castle Site 1 was assessed as not significant and no additional testing of the site was recommended. No assessment was made of Sites 16IV147 and 16IV149 as a result of this survey; however, Sites 16IV148, 16IV150, and 16IV151 were assessed as not significant and no additional testing was recommended for any of these sites. All of the sites identified by Goodwin et al. (1987) were located within the vicinity of the currently proposed project reach and they are discussed in detail below in the section on previously recorded archeological sites.

During 1987, R. Christopher Goodwin & Associates, Inc., conducted additional testing at Sites 16IV147 and 16IV149 to determine if the they were eligible for nomination to the National Register of Historic Places (Goodwin et al. 1988). Pedestrian survey, shovel and auger testing, unit excavation, and the examination of bankline profiles failed to produce any evidence of cultural features or structural remains at either site. Site 16IV147 was described as a brick scatter and a thermally-altered soil profile was located in the bluff face; no other cultural material was recov-

ered from the site. It was suggested that Site 16IV147 may represent the remains of a nineteenth century furnace, however, only a small portion of the site remained at the time of survey. Site 16IV147 was assessed as not significant and no additional testing of the site was recommended.

Site 16IV149 was described as a scatter of domestic refuse that may have been associated with the ca. 1830s occupation of the Celeste Plantation. Goodwin et al. (1988) reported that only a small portion of the original scatter remained intact. It also was noted that other portions of the scatter had been impacted by levee construction and by road grading. Site 16IV149 was assessed as not significant and no additional testing of the site was recommended.

During October, 1985, R. Christopher Goodwin and Associates, Inc., conducted Phase II National Register eligibility testing of the Bayou Goula Landing Site (16IV131). This investigation was undertaken at the request of the U.S. Army Corps of Engineers, New Orleans District (Goodwin et al. 1986). The project area extended 1,280 m (4,199 ft) along the bankline of the bayou. Intensive pedestrian survey, systematic shovel testing, and unit excavation, resulted in the identification of several small scatters of historic period cultural material within the boundaries of the site. Only Artifact Scatter 1 retained any degree of integrity. Artifact Scatter 2 consisted predominantly of rubble and brick. Goodwin et al. (1986) attributed these deposits to previously destroyed architectural features. Goodwin et al. (1986) further reported that these deposits were located within a massive slump zone that essentially destroyed the entire site. Other locales contained architectural debris associated with the Talley Ho Plantation. Site 16IV131 was assessed as not significant, due primarily to a lack of integrity and low archeological research potential. No additional testing of the Bayou Goula Landing project area was recommended.

Multiple Parishes

During August, 1978, William McIntire conducted a Phase I cultural resources survey of the proposed Geismar-Napoleonville Pipeline corridor on behalf of the Shell Oil Company (McIntire 1978). The survey area extended for an unreported length, however, it extended from near Geismar to Napoleonville. Archival research augmented by pedestrian survey, as well as shovel and auger testing failed to produce any cultural materials. No additional testing of the proposed pipeline corridor was recommended.

During 1978, William McIntire also conducted a Phase I cultural resources inventory for a proposed pipeline right-of-way that extended from Mont Belvieu, Texas to the Napoleonville and Choctaw domes in Louisiana. The overall length and width of the proposed pipeline corridor were not reported, and it was not disclosed for whom the survey was conducted (McIntire 1978). A variety of survey techniques were employed, including helicopter survey, windshield survey, boat survey, pedestrian survey, and judgmental shovel and auger testing. The archeological survey throughout the project corridor resulted in the identification of only one new cultural resource, the O'Brien Site (no number given) and previously known sites (AC21); both were described as earthen middens. Neither site was assessed and no additional testing of the proposed pipeline right-of-way was recommended.

Prior to May, 1981, William McIntire conducted a Phase I cultural resources inventory of the Louisiana section of a proposed Shell pipeline corridor located between Weeks Island, Iberville Parish, Louisiana, and the Louisiana-Mississippi border, St. Helena Parish, Louisiana (McIntire 1981). The survey was conducted at the request of Dames & Moore of Houston, Texas. Helicopter survey augmented by pedestrian survey and limited shovel and auger testing relocated previously recorded Site 16AN14. The nature of the site was not reported; however, McIntire (1981) did state that the site was located outside the proposed pipeline right-of-way and that it would not be impacted by the proposed construction. No additional testing of the proposed corridor was recommended (McIntire 1981). Site 16AN14 is not located within the current study area.

Prior to July, 1985, Coastal Environments, Inc., conducted a Phase I cultural resources inventory of a proposed pipeline right-of-way located within portions of Ascension and Iberville Parishes, Louisiana. The survey was conducted at the request of the Shell Pipeline Corporation, in Baton Rouge, Louisiana (Bryant 1985). The proposed corridor measured approximately 17.7 km (11 mi) in length and approximately 30.5 m (100

ft) in width. Pedestrian survey augmented by shovel testing resulted in the identification of two historic period loci (X16IV-F and X16IV-G). Locus X16IV-F was described as surface scatter, and it produced three historic period ceramic sherds and an unspecified number of brick fragments; it measured approximately 30.5 m (100 ft) in diameter. Locus X16IV-F was assessed as not significant and no additional testing of the site was recommended.

Locus X16IV-G was characterized as a surface scatter of brick that measured approximately 3 x 3 m (10 x 10 ft) in area. In addition to the brick, 1 historic period ceramic sherd and 1 glass bottle neck shard also were noted at locus X16IV-G. The locus was assessed as not significant and no additional testing of the locus was recommended. Of the two loci identified by Bryant (1985), only loci X16IV-F was located within the vicinity of the current project reach.

During April and June, 1988, Coastal Environments, Inc., conducted a Phase I cultural resources survey of four proposed revetment areas located along the Mississippi River in southeastern Louisiana. This investigation was undertaken at the request of the U.S. Army Corps of Engineers, New Orleans District (Kelley 1988). The first revetment area, Arrow Bend, lies along the left descending bank of the Mississippi River in West Feliciana Parish. Manchac, the second revetment area, was located on the left descending bank in East Baton Rouge Parish. The two other project items included the Marchand Project Item, located on the left descending bank, and the Aben Project Item, situated on the right descending bank of the river in Ascension Parish. Pedestrian survey augmented by systematic shovel and auger testing throughout the Area of Potential Effect resulted in the identification of 13 historic period sites. None of the identified sites were located within the Arrow Bend Revetment area.

Sites 16EBR70 and 16EBR71 were located within the Manchac revetment project area. Site 16EBR70 consisted of a concrete machinery foundation of undetermined age. Due to the fact that the foundation lacked associated cultural deposits and it was not in situ, Site 16EBR70 was assessed as not significant and no additional testing of the site was recommended. Site 16EBR71 consisted of a late eighteenth to early nineteenth century sheet midden and associated surface scatter. It lacked integrity and it too was assessed as not significant; no additional testing of Site 16EBR71 was recommended. Sites 16EBR40 and 16EBR56 also were located within the Manchac revetment area. Site 16EBR40 was described as a disturbed shell deposit that was possibly prehistoric in origin; it was assessed as not significant and no additional testing of the site was recommended. Site 16EBR56 was described as the location of a twentieth century church that was recorded from documentary evidence alone; its location at the time of survey was described as within a borrow pit. Site 16EBR56 has been destroyed previously by borrow pit excavation and it was described as not significant. No additional testing of this site was recommended.

In addition, six sites were located within the Marchand Revetment area (Sites 16AN45-16AN49 and 16AN6). Each of these sites was described as a sheet midden associated with a group of houses that represented the remains of a late nineteenth to early twentieth century community. All of the sites were assessed as not significant and no further testing was recommended for any of these sites.

The three remaining sites (16AN42-16AN44) were identified within the Aben Revetment project item. Site 16AN42 was characterized as a large multi-component historic period site. Associated rice irrigation structures were identified in two areas of the site and an in situ concrete foundation of undetermined age was recorded in another area of the site. There also were several surface scatters of late nineteenth century cultural material identified within the site. Despite the presence of an extensive archeological deposit, Site 16AN42 was determined to have limited research potential and it was assessed as not significant. No further testing of Site 16AN42 was recommended.

Site 16AN43 was described as the remains of a late nineteenth century sawmill associated with the Stella Plantation. The structural remains of the sawmill appeared to be intact and associated cultural deposits were identified during survey. Site 16AN43 was assessed as potentially significant and additional testing of the site was recommended.

Finally, Site 16AN44 consisted of an in situ late nineteenth century machinery foundation. Despite archeological investigation of the site, no

associated cultural material was recovered. Site 16AN44 was assessed as not significant and no additional testing of this site was recommended.

During September and October, 1995, AR Consultants of Dallas, Texas conducted a Phase I cultural resources inventory of a proposed pipeline right-of-way that extended from Sorrento, Louisiana to Mont Belvieu, Texas on behalf of the Concha Chemical Pipeline Company (Skinner et al. 1995). Within the Louisiana portion of the study area, the proposed project route passed through portions of Ascension, Iberville, St. Martin, Lafayette, Acadia, Jefferson Davis, and Calcasieu Parishes. The majority of the proposed pipeline corridor was located within existing rights-of-way, but Skinner et al. (1995) reported that an additional 18.3 m (60 ft) of new right-of-way was required for construction of the pipeline. That additional right-of-way also was included in the survey. Pedestrian survey augmented by shovel testing failed to identify any cultural resources. No additional testing of the proposed pipeline right-of-way was recommended.

During September, 1997, R. Christopher Goodwin and Associates, Inc., conducted a Phase I cultural resources survey and archeological inventory of the proposed Bridgeline Gas Distribution Acadian Extension in O.D. Pipeline project corridor in Ascension and St. James Parishes, Louisiana. This investigation was undertaken at the request of Bridgeline Gas Distribution, of St. Rose, Louisiana (Davies et al. 1998). The project corridor encompassed approximately 165.31 ac (66.9 ha). Pedestrian survey and systematic shovel testing produced evidence of three archeological loci, A2-1, A2-2, A2-3, and one archeological site (16AN67). Davies et al. (1998) reported that Loci A2-2 and A2-3 were associated with the Palo Alto Plantation (Site 16AN25) and that their boundaries extended both to the south and to the west of the site. The larger of these two loci, Locus A2-3, had been impacted heavily and it possessed no intact cultural deposits. Locus A2-1 was described as a scatter of modern remains and one historic period artifact. Site 16AN67 was characterized as a previously disturbed artifact scatter situated on the eastern side of the Bayou LaFourche. Each of the two loci and Site 16AN67 were assessed as not significant and no further testing of the proposed Bridgeline Gas Distribution project corridor was recommended.

Finally, in November, 1997, AR Consultants conducted a Phase I cultural resources survey of the proposed Napoleonville to Tebone Pipeline route within Assumption, Iberville, and Ascension Parishes, Louisiana. This survey was conducted for Shell Western Exploration & Production, Inc. (Skinner et al. 1997). The survey corridor encompassed approximately 26 ha (63 ac) and it extended from Grand Bayou to Southwood, Louisiana. Pedestrian survey augmented by systematic shovel testing failed to identify any cultural resources within the proposed pipeline right-of-way. No additional testing of the proposed Napoleonville-Tebone Pipeline corridor was recommended.

Previously Recorded Archeological Sites within 1.6 km (1 mi) of the Proposed Project Reach

A review of the Louisiana site files located at the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana resulted in the identification of 10 previously recorded archeological sites within 1.6 km (1 mi) of the proposed project reach (Table 8). These sites are discussed below by parish in ascending order.

Ascension Parish

Sites 16AN19 - 16AN22 were recorded in Ascension Parish by Castille in 1977. Site 16AN19 was located in Section 14 of Township 11S, Range 14E and it was described as the Noel Plantation. Castille reported that the site dated from the nineteenth and twentieth centuries. On the basis of information provided on the State of Louisiana Site Record Form it appears that only a windshield survey of Site 16AN19 was conducted. Site 16AN19 was not assessed and no recommendations concerning additional testing were provided on the submitted site form.

Site 16AN20 was identified within Sections 10 and 11 of Township 11S, Range 14E and it was described as the remains of New Hope Plantation. Castille reported that the site dated from the nineteenth and twentieth centuries and it consisted of the big house, the overseers house, and six workers dwellings. Information contained on the State of Louisiana Site Record Form suggested that the site had good archeological poten-

Table 8. Previously Identified Sites within 1.6 km (1 mi) of the Proposed Project Reach.

SITE NUMBER	UTM	USGS 7.5' QUAD	SITE DESCRIPTION	CULTURAL AFFILIATION	FIELD METHODS	NRHP ELIGIBILITY	RECORDED BY
Ascension Parish							
16AN19	Zone 15, 3334300N, 688450E	Carville and Belle Rose, La	Noel Plantation	19th and 20th centuries	Not reported	Unknown	Castille 1977
16AN20	Zone 15, 3335250N, 689300E	Carville, La	New Hope Plantation	19th and 20th centuries	Not reported	Potentially significant	Castille 1982
16AN21	Zone 15, 3335990N, 689700E	Carville, La	Ascension Plantation	19th century	Visual reconnaissance	Unknown	Castille 1977
16AN22	Zone 15, 3336500N, 690300E	Carville, La	Historic period residential structure	Late 19th and early 20th centuries	not reported	Potentially significant	Castille 1977
Iberville Parish							
16IV141	Zone 15, 3340580N, 681000E	Carville, La	Structural ruins of historic plantation	Historic, ca. 1850s to post W.W.II	Pedestrian survey	Unknown	Van Horn 1983
16IV147	Zone 15, 3341400N, 681560E	Carville, La	Historic period material scatter and brick foundation; Prehistoric ceramic and lithic scatter	Unspecified historic period; undetermined prehistoric period	Pedestrian survey, auger testing, and excavation units	Not Significant	Gendel 1985
16IV148	Zone 15, 3341600N, 681960E	Carville, La	Historic Period materials scatter; Prehistoric lithic scatter	Unspecified historic period; Coles Creek period	Pedestrian survey, auger and shovel testing	Not Significant	Gendel 1985
16IV149	Zone 15, 3341660N, 68210E	Carville, La	Historic period material scatter and remains of brick floor	Unspecified historic period	Pedestrian survey, probing and stratigraphic profiling	Not Significant	Gendel 1985
16IV150	Zone 15, 3341800N, 682210E	Carville, La	Historic period materials scatter	Unspecified historic period	Pedestrian survey and shovel and auger testing	Not Significant	Gendel 1985
16IV151	Zone 15, 3341690N, 682090E 3341690N	Carville, La	Historic period materials scatter; Prehistoric ceramic scatter	Unspecified historic period; Undetermined prehistoric period	Pedestrian survey and auger and shovel testing	Not Significant	Gendel 1985

tial and that the big house was in excellent condition. Site 16AN20 was assessed as potentially significant; however, no recommendations concerning additional testing of the site were reported.

Site 16AN21 was identified within Section 9 of Township 11S, Range 14E and it was described as the location of the nineteenth century Ascension Plantation; Castille noted on the State of Louisiana Site Record Form, however, that all attempts to locate structures associated with the plantation were unsuccessful. Site 16AN21 was not assessed and no recommendations concerning additional testing of the site were provided on the submitted site form.

Site 16AN22 was identified within Sections 3 and 4 of Township 11S, Range 14E and it was described as containing two structures possibly associated with Delicia or Arlington Plantations. The site apparently dated from the late nineteenth to the early twentieth century, and Castille assessed the site as potentially significant. No recommendations concerning additional testing of Site 16AN22 were provided on the submitted State of Louisiana Site Record Form.

Iberville Parish

Site 16IV141 was identified within Section 12 of Township 10S, Range 13E by Van Horn in 1983 and it was described as the former location of the Belle Grove Plantation house. Van Horn reported that the plantation house was constructed ca. 1850 and it was demolished at an unspecified time following World War II. Pedestrian survey of the site failed to produce any cultural material. Site 16IV141 was not assessed and no recom-

mendations concerning additional testing of the site were provided on the completed State of Louisiana Site Form.

Site 16IV147 was identified within Section 10 of Township 10S, Range 13E and it was recorded by Gendel in 1985 and reported on in Goodwin et al. (1987). It was described as a surface scatter of historic period bricks, ceramic sherds, and glass shards. In addition, prehistoric ceramic sherds of an undetermined cultural affiliation were noted at the site. The investigators calculated mean ceramic dates of 1779.7 and 1792.1 for the historic period ceramic sherds recovered for the site and they noted that the site might represent the remains of a Colonial Period Arcadian farmstead. Goodwin et al. (1987) reported that the majority of the site had been disturbed by bankline erosion, but that intact cultural deposits and a feature consisting of a course of bricks may still have been present at Site 16IV147. Site 16IV147 was assessed as not significant; however, additional testing of the site was recommended prior to construction.

During 1987, R. Christopher Goodwin & Associates, Inc., conducted additional testing at Site 16IV147 to assess its National Register significance (Goodwin et al. 1988). Shovel testing, auger testing, and an examination of the bank line revealed that Site 16IV147 consisted of a scatter of brick and deposits thermally altered soil. No cultural features were identified during survey. It appeared that Site 16IV147 may have represented the remains of a nineteenth century furnace. Only a small portion of the site remained, the rest had eroded into the Mississippi River. Site 16IV147 was assessed as not significant and no additional testing of the site was recommended.

Site 16IV148, located within Section 9 of Township 10S, Range 13E, was recorded in 1985 by Gendel and Goodwin (1987). It contained both prehistoric and historic period components. Pedestrian survey augmented by shovel and auger testing resulted in the recovery of historic period ceramic sherds and glass shards possibly dating from the late nineteenth century. In addition, prehistoric ceramic sherds dating from the Coles Creek period also were recovered. Site 16IV148 measured approximately 10 x 30 m (32.8 x 98.4 ft) in area. Goodwin et al. (1987) reported that Site 16IV148 lacked intact cultural deposits and the site was assessed as not significant. No additional testing of Site 16IV148 was recommended.

Site 16IV149 also was recorded in 1985 by Gendel (Goodwin et al. 1987). The site was identified within Section 9 of Township 10S, Range 13E and it was described as an historic period sheet midden. Pedestrian survey augmented by the cleaning of two cutbank profiles resulted in the identification of a portion of an intact brick floor. Site 16IV149 measured approximately 30 x 40 m (98.4 x 131.2 ft) in area. Goodwin et al. (1987) reported that the majority of Site 16IV149 had eroded into the Mississippi River; however, it was suggested that intact cultural deposits may have been present at the site. It also was reported that Site 16IV149 may have represented the location of an early nineteenth century Acadian farmstead; historic period ceramic sherds recovered from the site produced a mean ceramic date of 1815.96 (Goodwin et al. 1987:106). Site 16IV149 was not assessed; however, additional testing of the site was recommended.

During 1987, R. Christopher Goodwin & Associates, Inc., conducted additional testing at Site 16IV149 to assess its National Register significance (Goodwin et al. 1988). The excavation of two 1 x 1 (3.3 x 3.3 ft) units augmented by auger testing and the examination of the bank line resulted in the recovery of historic period ceramic sherds, coal, faunal remains, and brick fragments. It was suggested that Site 16IV149 represented the redeposited remains of a ca. 1830s refuse deposit associated with the Celeste Plantation. Goodwin et al. (1988) reported that only a small portion of the original midden remained intact and that no structural features were identified during additional testing. Site 16IV149 was assessed as not significant and no additional testing of the site was recommended.

Site 16IV150 was recorded by Gendel and Goodwin in 1985 and it was reported on in Goodwin et al. (1987). The site was located within Section 8 of Township 10S, Range 13E and it was described as an historic period material scatter that dated from the late eighteenth century. Site 16IV150 measured approximately 25 x 60 m (82 x 196.9 ft) in area. Pedestrian survey resulted in the collection of historic period ceramic sherds, glass, metal, and brick fragments. Goodwin et al. (1987) reported that the excavation of shovel and

auger tests failed to produce any additional cultural material and that no intact cultural deposits were identified at the site. Site 16IV150 was assessed as not significant and no additional testing of the site was recommended.

Finally, Site 16IV151 was recorded in 1985 by Gendel and it was reported on in Goodwin et al. (1987). The site was located within Section 9 of Township 10S, Range 13E and it was described as a surface scatter of historic period ceramic sherds, metal, brick, and non-diagnostic prehistoric ceramic sherds. The site measured 30 x 30 m (98.4 x 98.4 ft) in area, and Goodwin et al. (1987) suggested that the site may have represent the remains of the Celeste Plantation great house complex. It was reported that Site 16IV151 possibly dated from ca. 1859 based on a mean ceramic date obtained from the recovered historic period ceramic sherds. Goodwin et al. (1987) reported that the excavation of shovel tests and a single auger test failed to produce any additional cultural material or evidence of in situ cultural deposits. Site 16IV151 was assessed as not significant and no additional testing of the site was recommended.

Previously Recorded Standing Structures within 1.6 km (1 mi) of the Proposed Project Reach

A review of the standing structure files located at the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, Division of Historic Preservation, Baton Rouge, Louisiana, resulted in the identification of 75 previously recorded standing structures within 1.6 km (1 mi) of the proposed project reach (Table 9). These structures are discussed below by parish.

Ascension Parish

A total of 65 of the 75 previously recorded standing structures (3-198 - 3-262) were identified within the Ascension Parish portion of the proposed project reach. Each of these structures were recorded by Tadashi Nakagawa in 1984. The majority of these structures (n=60 [92 percent]) were described as residential buildings ranging in date from 1836 to ca. 1920. The remaining structures were listed as agricultural (n=2 [3 percent]), commercial (n=2 [3 percent]), and governmental (n=1 [2 percent]) types.

Table 9. Previously Identified Standing Structures within 1.6 km (1 mi) of the Proposed Project Reach.

STRUCTURE NO.	UTM	USGS 7.5' QUAD	CONSTRUCTION DATE	TYPE	STYLE	NRHP ELIGIBILITY	RECORDED BY
Ascension Parish							
3-198	N3342335.51, E688039.40	Carville	ca. 1880	Residential	Queen Ann	Not Assessed	Nakagawa 1984
3-199	N3342294.66, E687930.58	Carville	ca. 1880	Agricultural	Not Reported	Not Assessed	Nakagawa 1984
3-200	N3342335.51, E688094.27	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-201	N3442314.72, E688081.97	Carville	ca. 1880	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-202	N3342243.32, E688239.21	Carville	ca. 1910	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-203	N3342200.87, E688268.68	Carville	ca. 1890	Residential	Creole	Not Assessed	Nakagawa 1984
3-204	N3342180.99, E688345.61	Carville	ca. 1880	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-205	N3342125.16, E688352.88	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-206	N3342077.89, E688481.76	Carville	ca. 1880	Residential	Queen Ann	Not Assessed	Nakagawa 1984
3-207	N3342055.41, E688517.77	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-208	N3341717.54, E688943.79	Carville	ca. 1890	Residential	Queen Ann	Not Assessed	Nakagawa 1984
3-209	N3341635.91, E689035.62	Carville	ca. 1880	Residential	Creole	Not Assessed	Nakagawa 1984
3-210	N3341863.56, E688782.88	Carville	ca. 1884	Commercial	Not Reported	Not Assessed	Nakagawa 1984

Table 9, continued

STRUCTURE NO.	UTM	USGS 7.5' QUAD	CONSTRUCTION DATE	TYPE	STYLE	NRHP ELIGIBILITY	RECORDED BY
3-211	N3341903.28, E688652.03	Carville	ca. 1850	Residential	French and Victorian	Not Assessed	Nakagawa 1984
3-212	N3341879.82, E688631.36	Carville	ca. 1860	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-213	N3341844.49, E688652.34	Carville	ca. 1880	Residential	Victorian	Not Assessed	Nakagawa 1984
3-214	N3341825.41, E688668.93	Carville	ca. 1880	Commercial	Not Reported	Not Assessed	Nakagawa 1984
3-215	N3341790.06, E688818.57	Carville	ca. 1870	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-216	N3341791.00, E688715.89	Carville	ca. 1890	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-217	N3341778.81, E688592.54	Carville	ca. 1900	Agricultural	Not Reported	Not Assessed	Nakagawa 1984
3-218	N3341638.20, E688591.44	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-219	N3341676.56, E688556.74	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-220	N3341594.76, E688557.67	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-221	N3341547.62, E688535.46	Carville	ca. 1920	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-222	N3341617.40, E688523.90	Carville	Unknown	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-223	N3344148.45, E688488.29	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-224	N3341440.74, E689202.72	Carville	1836	Residential	Not Reported	Listed on 1993 National Register	Nakagawa 1984
3-225	N3341364.58, E689344.17	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-226	N3341328.19, E689397.11	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-227	N3341276.57, E689435.66	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-228	N3341188.22, E689524.84	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-229	N3341124.75, E689602.35	Carville	ca. 1890	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-230	N3340166.95, E690424.49	Carville	ca. 1870	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-231	N3339671.77, E690880.60	Carville	ca. 1890	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-232	N3339622.08, E690899.00	Carville	ca. 1910	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-233	N3339605.19, E690912.93	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-234	N3339524.46, E690960.94	Carville	ca. 1910	Government	Not Reported	Not Assessed	Nakagawa 1984
3-235	N3339395.80, E691004.38	Carville	ca. 1890	Residential	Creole	Not Assessed	Nakagawa 1984
3-236	N3339310.55, E691039.03	Carville	ca. 1900	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-237	N3339256.74, E691058.65	Carville	ca. 1910	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-238	N3339254.39, E691103.52	Carville	ca. 1890	Residential	Anglo	Not Assessed	Nakagawa 1984
3-239	N3339149.00, E691018.11	Carville	ca. 1920	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-240	N3339090.81, E690909.87	Carville	ca. 1920	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-241	N3339157.26, E690936.64	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-242	N3339130.92, E690984.26	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984

Table 9, continued

STRUCTURE NO.	UTM	USGS 7.5' QUAD	CONSTRUCTION DATE	TYPE	STYLE	NRHP ELIGIBILITY	RECORDED BY
3-243	3339206.41, E691107.45	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-244	N3339191.47, E691086.99	Carville	1907	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-245	N3339201.69, E691146.02	Carville	1910	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-246	N3339181.25, E691153.11	Carville	ca. 1880	Residential	Creole	Not Assessed	Nakagawa 1984
3-247	N3338935.69, E691302,51	Carville	ca. 1910	Residential	Double Shot-gun	Not Assessed	Nakagawa 1984
3-248	N3338965.40, E691498.65	Carville	ca. 1890	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-249	N3337992.58, E691840.15	Carville	ca. 1910	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-250	N3338023.71, E691883.10	Carville	ca. 1880	Residential	Central Hall with Eastlake Porch	Not Assessed	Nakagawa 1984
3-251	N3337924.20, E691792.61	Carville	ca. 1910	Residential	Shotgun with Eastlake Porch	Not Assessed	Nakagawa 1984
3-252	N3337859.17, E691847.23	Carville	ca. 1910	Residential	Creole	Not Assessed	Nakagawa 1984
3-253	N3337877.71, E691904.21	Carville	ca. 1890	Residential	Creole	Not Assessed	Nakagawa 1984
3-254	N3337245.29, E691350.41	Carville	ca. 1910	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-255	N3337257.38, E691311.76	Carville	ca. 1900	Residential	Creole with Corbelled Chimney	Not Assessed	Nakagawa 1984
3-256	N3337258.16, E691397.64	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-257	N3337267.13, E691274.68	Carville	ca. 1900	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-258	N3337315.88, E691163.42	Carville	ca. 1910	Residential	Shotgun	Not Assessed	Nakagawa 1984
3-259	N3337303.40, E691080.27	Carville	ca 1920	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-260	N3336979.61, E691148.19	Carville	ca. 1910	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-261	N3336617.01, E690659.96	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
3-262	N3336378.65, E690273.31	Carville	ca. 1800	Residential	Not Reported	Not Assessed	Nakagawa 1984
Iberville Parish							
24-753	N3340491.57, E680920.41	Carville	ca. 1910	Residential	Not Reported	Not Assessed	Nakagawa 1984
24-754	N3340448.75, E680945.47	Carville	ca. 1890	Residential	Not Reported	Not Assessed	Nakagawa 1984
24-755	N3341073.73, E681678.51	Carville	ca. 1910	Residential	Not Reported	Not Assessed	Nakagawa 1984
24-756	N3341296.58, E682042.21	Carville	ca. 1930	Agricultural	Not Reported	Not Assessed	Nakagawa 1984
24-757	N3341341.52, E6820081.10	Carville	ca. 1930	Residential	Not Reported	Not Assessed	Nakagawa 1984
24-758	N3341504.63, E682242.66	Carville	ca. 1920	Residential	Not Reported	Not Assessed	Nakagawa 1984
24-759	N3341607.71, E682418.57	Carville	ca. 1930	Agricultural	Not Reported	Not Assessed	Nakagawa 1984
24-760	N3341797.13, E682487.92	Carville	ca. 1930	Residential	Not Reported	Not Assessed	Nakagawa 1984
24-761	N3342620.95, E685550.59	Carville	ca. 1900	Residential	Not Reported	Not Assessed	Nakagawa 1984
24-762	N3342629.40, E685509.80	Carville	ca. 1880	Residential	Not Reported	Not Assessed	Nakagawa 1984

Building styles included Queen Ann (n=3 [4.5 percent]), Shotgun (n=11 [17 percent], Creole (n=7 [11 percent]), French and Victorian (n=1 [1.5 percent]), Victorian (n=1 [1.5 percent]), and Anglo (n=1 [1.5 percent]). The majority (n=41 [63 percent]) of the structures, however, had no listing for style. With the exception of Structure 3-224 (Mulberry Grove Plantation House), none of the structures was assessed by Nakagawa.

According to the National Register of Historic Places Registration Form completed by the National Register staff at the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, Division of Historic Preservation, the Mulberry Grove Plantation house dated from ca. 1836 and it was described as a two-story, double galleried residence constructed in the Greek Revival style. In addition to the main house, the plantation site contained four quarters houses constructed ca. 1890, a privy, and a cistern associated with the main house. The Mulberry Grove Plantation house and quarters structures were listed on the Register during October, 1993.

Iberville Parish

A total of 10 previously recorded standing structures (24-753 - 24-762) were identified within the Iberville Parish portion of the proposed project reach. Each of these structures were recorded by Tadashi Nakagawa in 1984. The majority of the structures (n=8 [80 percent]) were described as residential buildings. The two remaining structures (20 percent) were identified as agricultural buildings. While these structures represented construction dates ranging from ca. 1840 to ca. 1930, the architectural style was not recorded for any of them. In addition, Nakagawa did not assess the significance of the structures. A review of the State of Louisiana National Register of Historic Places list revealed that none of the previously recorded standing structures identified within the Iberville Parish portion of the proposed project reach were listed on the National Register of Historic Places.

Historic Period Cemeteries Noted within 1.6 km (1 mi) of the Proposed Project Reach

A review of the archeological site and standing structure files located at the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, Divisions of Archaeology and Historic Preservation, Baton Rouge, Louisiana resulted in the identification of three historic period cemeteries within 1.6 km (1.0 mi) of the proposed project items (Table 10). In addition, one historic period cemetery was identified during the review of the Carville, Louisiana 7.5' series topographic quadrangle. These cemeteries are discussed below by parish.

Ascension Parish

A total of two previously recorded historic period cemeteries were identified within the Ascension Parish portion of the project reach. The St. Mary Baptist Church Cemetery (3-171), located within Section 21 of Township 10S, Range 14E was recorded by Tadashi Nakagawa in

Table 10. Previously Identified Historic Period Cemeteries within 1.6 km (1 mi) of the Proposed Project Reach.

CEMETERY NAME	UTM COORDINATES	USGS 7.5' QUAD	DATE RANGE	APPROXIMATE AREA (M/FT)	NRHP ELIGIBILITY	RECORDED BY
Ascension Parish						
St. Mary Baptist Church Cemetery (3-171)	Zone 15, N3342416, E687699.63	Carville, La.	ca. 1900 - present	22 x 15 m (72 x 42 ft)	Not Assessed	Nakagawa 1984
St. Philip Baptist Church (3-172)	Zone 15, N3339716, E690776.82	Carville, La.	ca. 1869 - present	44 x 15 m (145 x 50 ft)	Not Assessed	Nakagawa 1984
Iberville Parish						
Raspberry Cemetery	Zone 15, N3340150, E681050	Carville, La.	19th century	Not Reported	Not Assessed	Nakagawa 1984
Cannonburg Cemetery	Zone 15, N3341680, E682750	Carville, La.	Unknown	Unknown	Unknown	Not reported officially; Located on Carville, La. 7.5' Series Topographic Quadrangle

1984. According to the Historic Standing Structures Form, the cemetery measured 22 m (72 ft) in length and 13 m (42 ft) in width. Nakagawa reported that the cemetery was established ca. 1900 and it contained an unknown number of burials. The only visible graves at the cemetery were those interred after ca. 1950. The St. Mary Baptist Church Cemetery was not assessed by Nakagawa.

The remaining cemetery in Ascension Parish, the St. Philip Baptist Church Cemetery (3-172), also was recorded by Tadashi Nakagawa in 1984. The cemetery, located within Section 37 of Township 10S, Range 14E, measured 44 m (145 ft) in length and 15 m (50 ft) in width; it contained approximately 90 burial chambers. Nakagawa described the majority of the burial chambers as concrete vaults. He suggested that the cemetery was established ca. 1869; however, it was still in use at the time it was recorded. Nakagawa did not assess the National Register significance of the cemetery.

Iberville Parish

A total of two cemeteries, the Raspberry Baptist Church Cemetery (24-752) and the Cannonburg Cemetery, was identified within the vicinity of the proposed project reach in Iberville Parish. The Raspberry Baptist Church Cemetery is located within Section 13 of Township 10S, Range 13 E and it also was recorded by Tadashi Nakagawa in 1984. No measurements of the cemetery were provided on the Historic Standing Structures Form and no estimate of the number of people interred at the cemetery was provided. The cemetery was described as a Baptist cemetery that was noted for its use of crosses as grave markers. No assessment of the cemetery was provided on the completed Historic Standing Structures Form.

The Cannonburg Cemetery was identified during a review of the Carville, Louisiana. 7.5' series topographic quadrangle. The cemetery is located in Section 7 of Township 10S, Range 13E and it is situated approximately 250 m (820 ft) south of the Alhambra to Hohen-Solms Project Item. This cemetery has not been recorded officially; thus, it has no associated site or standing structure number and its National Register of Historic Places eligibility remains unknown.

Summary

A total of 22 previously completed cultural resources investigations have been identified within 8 km (5 mi) of the proposed Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items. These investigations resulted in the recordation of 10 archeological sites, 75 historic standing structures, and 4 historic period cemeteries positioned within 1.6 km (1 mi) of the proposed project reach. None of these sites is located within the Area of Potential Effect. In addition, none of the previously recorded historic standing structures are located within the Area of Potential Effect. Finally, the four historic period cemeteries are located on the land side of the batture; thus, they also are positioned outside of the Area of Potential Effect.

CHAPTER VI

METHODS

Objectives

The objective of this cultural resources investigation was to provide sample survey data to evaluate the potential impacts that the proposed undertaking encompassed by the Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items will have on cultural resources located throughout the Area of Potential Effect. The goal of this research was to assist the U.S. Army Corps of Engineers, New Orleans District, in future planning compliance efforts related to the construction of the concrete slope paving and the re-contouring of the existing artificial flood control structure. Since this was in fact a sample survey, only those portions of the proposed project items that were considered to have a moderate to high probability for containing intact archeological deposits were tested. The remainder of the proposed project reach was subjected only to a pedestrian survey.

Stratification of the Proposed Project Reach into Areas of Archeological Potential

Prior to undertaking fieldwork, personnel from R. Christopher Goodwin & Associates, Inc., stratified the Area of Potential Effect into zones of low, moderate, and high probabilities for containing intact cultural deposits. Only those areas designated with moderate and high probabilities were tested archeologically. No subsurface testing was conducted within the low probability areas.

High probability areas were designated on the basis of numerous factors. These factors included the presence or possible presence of buried or elevated natural levees, as well as the presence of historic period structures and/or as features depicted on historic period maps of the project area. These structures and/or cultural features included residences, stores, barns, gins, riverboat landings, etc. Detailed analysis of the historic maps indicated that the Area of Potential Effect was located within or adjacent to numerous areas that contained historic period landings and structures. The latter, since they were associated closely with the historic plantations of the area and they were arranged in parallel rows and/or clusters, and possibly served as worker's cabins; however, they also could have been barns, sheds, gins, or other outbuildings associated with plantation agriculture.

In addition, the designation of each high probability area also took into account the distribution of all previously recorded archeological sites situated within or near to the Area of Potential Effect. The background research for this undertaking identified 10 previously recorded archeological sites within 1.6 km (1.0 mi) of the proposed project reach. These consisted of Sites 16AN19 - 16AN22 in Ascension Parish and Sites 16IV141 and 16IV147 - 16IV151 in Iberville Parish. While minor prehistoric components were identified at some of these sites (16IV147, 16IV148, and 16IV151), the majority of the resources contained only historic period components; some of these historic period components may be associated with the nearby plantations depicted on the maps of the area. Moreover, 50 percent (n=5) of these sites were located on the batture and within the immediate vicinity of the Area of Potential Effect. These included Sites 16IV147 - 16IV151; all are located in Iberville Parish. Sites 16IV149 and 16IV150 were characterized as historic period sites and they contained

such features as a sheet midden and a brick floor, respectively. The three remaining sites (16IV147, 16IV148, and 16IV151) were described as multi-component sites that produced historic period ceramics, pieces of brick, metal fragments, and glass shards, as well as prehistoric lithic and ceramic artifacts. In addition, a brick foundation was identified at Site 16IV147. None of the completed Louisiana Site Forms associated dates with the historic period components identified at these sites. Only the prehistoric period component at Site 16IV148 was dated; it was assigned a Coles Creek period affiliation. While none of the sites were identified within the proposed Area of Potential Effect, their location on the batture was taken into account when designating areas of high probability for containing intact archeological deposits.

Detailed historic period map analysis also was utilized to delineate areas with a high probability for containing historic period deposits. Maps used in the background review and subsequent stratification of the project reach included the Mississippi River Commission 1884 map series, Charts 68 and 69; the Mississippi River Commission 1896 map series, Sheet 26; the Mississippi River Commission 1907 map series, Sheet 25; and the Mississippi River Commission 1921 map series, Charts 68 and 69. In addition, the 1829, 1831, and 1843 Township plats from Ascension and Iberville Parishes were examined, as well as Norman's Chart (1858) and the La Tourette map (1853). This analysis identified several historic plantations located in the vicinity of the proposed project reach. Since prior to levee construction, these plantations would have extended to the Mississippi River, the current batture areas associated with these historic plantations were assessed as having a high probability for containing historic period deposits.

In addition, the position of the Mississippi River bankline at various times during the historic and modern periods was considered when determining the areas with a high probability for containing archeological sites. Historic period bankline locations were digitized from the Mississippi River Commission 1884, 1921, and 1965 map series. Modern bankline positions were copied from the 1996 digitized USGS 7.5' series topographic Carville, Louisiana quadrangle. Comparisons of the modern and historic period banklines allowed for the identification of a variety of areas that have not been impacted or destroyed by the lateral migration of the Mississippi River channel. Those areas deemed to be little altered by channel migration and located in the vicinity of a historically important plantation were classified as having a high probability for containing intact archeological deposits. A total of six high probability areas were designated during the research design phase of this project. They were designated AHP1 - AHP3 and HSHP1 – HSHP3. The designations stood from Alhambra High Probability Areas 1 – 3 and Hohen-Solms High Probability Areas 1 – 3.

The, moderate probability areas were chosen prior to the initiation of fieldwork. These areas were designated applying all of the above-mentioned methods. Particular areas were designated as moderate probability zones if they fell within the vicinity of a historic plantation, to the landward side of the 1884 bankline, and if they did not, on the basis of historic period map analysis, contain within them historic period structures or landings. A total of six moderate probability areas were chosen during the research design phase of this project. In general these areas flanked the previously defined high probability areas, and they were designated as AMP 1 – AMP3 and HSMP1 – HSMP3. The designations stood from Alhambra Moderate Probability Areas 1 – 3 and Hohen-Solms Probability Areas 1 – 3.

Finally, all areas exhibiting substantial subsurface disturbance were eliminated from consideration. These areas included buried pipelines and power lines that crossed through the Area of Potential Effect, i.e., extended from the river to the land side of the levee and through the area encompassed by the proposed project items. These disturbances also were depicted on the research design map depicting the proposed project reach; this map was utilized by field personnel during backhoe testing of the proposed project items. Use of this map in the field insured that all buried electrical, gas, and oil transmission lines were avoided during survey.

Field Methods

After consultation with the U.S. Army Corps of Engineers, New Orleans District, R. Christopher Goodwin & Associates, Inc., sam-

pled those areas designated with a moderate to high probability of containing intact cultural deposits (approximately 40 percent of the Area of Potential Effect was investigated); areas designated as possessing a low probability for containing intact cultural deposits were eliminated from subsurface testing, and though they were subjected to pedestrian survey. A pedestrian survey of each of the moderate and high probability areas also was completed prior to the initiation of subsurface testing. Subsurface testing methods within these moderate and high probability areas consisted only of backhoe trenching. This sampling procedure is discussed in detail below.

Backhoe Trenching

Backhoe trenching was utilized to identify intact cultural deposits within the Area of Potential Effect. Backhoe trenches measuring 1 x 2 m (3.3 x 6.6 ft) in size were excavated to a depth of approximately 2 meters below surface (mbs) (6.6 feet below surface [ftbs]) or until excessive amounts of water impeded further excavation. Each trench was excavated in 20 cm (7.9 in) levels within natural strata. Screening of backhoe trench fill was not undertaken; rather monitoring of the trench excavation was conducted and those artifacts identified during the examination of the resultant backdirt piles were collected. Once excavated, all backhoe trenches were profiled, with the vertical location of all strata breaks and cultural materials plotted. Profiling proceeded from the surface of each backhoe trench; for safety purposes, personnel from R. Christopher Goodwin & Associates, Inc., only entered backhoe trenches to record cultural features. In addition, all artifact producing backhoe trenches, as well as a representative number of non-artifact producing trenches were photographed after excavation was completed. Photographs were taken with 35 mm cameras using both black and white and color film. All backhoe trenches were backfilled immediately upon completion of the archeological recordation process.

In high probability areas, backhoe trenches were excavated at 30 m (98 ft) intervals along a single survey transect located approximately 3 to 5 m (10 to 16 ft) from the toe of the levee. A total of 115 backhoe trenches (approximately 250 linear m [820 linear ft]) were excavated throughout the various high probability areas. Three backhoe trenches could not be excavated because they fell within areas covered by standing water or in areas disturbed previously by the construction of buried pipelines or electrical wires.

In moderate probability areas, backhoe trenches were excavated at 50 m (164 ft) intervals along a single survey transect; they too were positioned 3 to 5 m (10 to 16 ft) from the toe of the levee. A total of 98 backhoe trenches (122 linear m [400 linear ft] of backhoe trenching) was completed throughout the moderate probability areas. Thus, 213 backhoe trenches were excavated within the Area of Potential Effect during the initial Phase I survey.

Application of the Criteria for Evaluation (36 CFR 60.4 [a-d])

All cultural resources identified during fieldwork were examined to ascertain, if possible, the nature, size, depth, integrity, age, and affiliation of the cultural deposits. Site delineation also was used to assess the stratigraphic placement, density, and research potential of each identified cultural resource. This information was gathered to assist in the subsequent assessment of whether or not a site was significant, potentially significant, or not significant applying the National Register of Historic Places criteria of evaluation (36 CFR 60.4 [a-d]). Site delineation included: (1) establishment of a site datum labeled as N1000 E1000; (2) intensive surface reconnaissance of the site area; (3) excavation of tightly spaced backhoe trenches to delineate both site size and configuration; and (4) mapping and photographing of the site. Additional backhoe trenching was undertaken as part of the site delineation process; a total of 51 additional backhoe trenches were excavated as a result of the archeological site delineation process. Overall 264 backhoe trenches were excavated during survey of the proposed project item. In addition, Dr. Roger Saucier, a professional geomorphologist, visited the proposed project reach and he examined the stratigraphic profiles of a variety of backhoe trenches before they were backfilled.

Finally, State of Louisiana Site Record Forms were completed for each archeological site identified during survey. These forms were submitted to the Louisiana Division of Archeology in Baton Rouge (Appendix II).

Laboratory Analyses

Laboratory analyses consisted of a detailed study of all of the data collected as a result of This investigation. It included the analysis of all materials recovered during survey, as well as the compilation of descriptions for all sites identified during survey. The laboratory analysis provided insights into both site type/function and chronology. All of the material recovered during survey was washed and sorted by material category. After washing, artifact attribute data was encoded into computerized site catalogs that allowed for further manipulation of the data. The nature and structure of the analyses were guided by the goals of the project.

The first requirement of this research was to determine whether or not a cultural resources locus had the potential to meet the legal definition of an archeological site. Therefore, particular care was taken to observe and record chronologically sensitive attributes of the artifacts recovered, and to evaluate, for example, whether or not they were more than 50 years in age.

Beyond the determination of minimum age, the artifact analysis consisted of making and recording a series of observations for each specimen. The observations were chosen to provide the most significant and temporally diagnostic information about each specimen. This analysis resulted in the compilation of three separate databases that were utilized to store, organize, and manipulate the data generated by the analytical process. Separate databases were used to analyze the historic/modern period artifacts, faunal specimens, and human skeletal specimens recovered during survey. The use of these different databases reflected the differences in the analytical protocols required to study thoroughly the material recovered during survey.

Historic/Modern Period Material Analysis

The analysis of the historic/modern period cultural material was organized by class, functional group, type, and subtype. The first level, class, represented the material category, e.g., ceramic, glass, metal. The second level, functional group, e.g., architecture, kitchen, or personal, was based on classifications established by South (1977). The third and fourth levels, type and subtype, described the temporally diagnostic artifact attributes identified during analysis. The identification of artifacts was aided by consulting standard reference works, including Coates and Thomas (1990), Fike (1987), Florence (1990), Kovel and Kovel (1986), Miller (1980, 1991), Nelson (1968), South (1977), Speer (1979), Switzer (1974), Toulouse (1971, 1977) and Wilson (1981).

Faunal Analysis

The faunal database was organized by type and subtype. The biological class according to conventional systematics, e.g., mammal and bird, was listed under the heading "type." The subtype column lists the family, genus, or species when identifiable. When generic or specific identification was not possible, each bone was placed into a general descriptive category, e.g., large mammal, large to medium mammal, medium to small mammal, small mammal, bird, reptile, fish, etc. Skeletal elements and orientation also were identified when possible. In addition, for the purposes of recordation, thermal modification to the bone was noted as burned, charred, or ashed. The presence of cut marks, butchering, and/or sawing also was identified when possible, as was fragmentation. Vertebrate remains recovered from the sites considered in this report were examined using standard zooarcheological methods. Identifications were made using the comparative reference skeletal collections of R. Christopher Goodwin & Associates, Inc. In addition to reference specimens, guidelines and manuals used to aid identification procedures included those of Gilbert (1980), Hillson (1986), and Olsen (1964, 1979).

Human Skeletal Analysis

The human skeletal database also was organized by type and subtype. The biological class was listed under the heading "type," e.g., mammalia. The subtype column identifies the family, genus and species, e.g., Primates, Homo, sapiens. Skeletal elements and orientation were identified when possible. When specific identification was not possible, each bone placed into a general descriptive category, e.g., miscellaneous cranial fragment. In addition, each bone was examined for post mortem modifications, as well as for pathologies. Skeletal identifications were made using standard identification manuals (Buikstra and Ubelaker 1994).

Cultural Resources Loci/Site Descriptions

During the data analysis phase of this project, site descriptions were compiled for all sites identified during survey. Minimally, these descriptions included data on site type, size, and cultural/temporal affiliation. In addition, data pertaining to landform, elevation, distance to water, and soil type were recorded. These site descriptions also included an assessment of site integrity and significance applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Curation

Following acceptance of the final report, all archeological materials, records, photographs, and field notes will be curated with the:

State of Louisiana
Department of Culture, Recreation, and Tourism
Division of Archaeology
P.O. Box 44247
Baton Rouge, Louisiana 70804-4247
(504) 342-8170

CHAPTER VII

RESULTS OF THE INVESTIGATION

Introduction

This chapter presents the results of Phase I cultural resources survey and archeological inventory of the Alhambra to Hohen-Solms and Hohen-Solms to Modeste project items in Ascension and Iberville Parishes, Louisiana. This survey was conducted on behalf of the U.S. Army Corps of Engineers, New Orleans District by R. Christopher Goodwin & Associates, Inc. Fieldwork consisted of pedestrian survey augmented by systematic backhoe trenching throughout the Areas of Potential Effect. The proposed Alhambra to Hohen-Solms project area measured approximately 4,300 m (14,107.6 ft) in length, whereas the Hohen-Solms to Modeste project item measured approximately 5,100 m (16,732.3 ft) in length; thus, the project reach encompassed an area that measured approximately 9,400 m (30,839.9 ft) in total length.

The Areas of Potential Effect associated with the proposed project items consisted of that portion of the batture situated between the toe of the existing artificial flood control levee and a series of long, continuous, previously excavated borrow pits positioned approximately 10 to 20 m (32.8 to 65.6 ft) to the east and north of the existing levee; approximately 14 ha (34.8 ac) were examined for the presence of cultural resources as a result of this investigation (Figure 2: oversized map). To facilitate control during the fieldwork phase of this project, the moderate and high probability portions of the Areas of Potential Effect, since they essentially were linear, were divided into 14 discrete survey segments. Pursuant to the Scope of Services drafted by the U.S. Army Corps of Engineers, New Orleans District, no low probability areas, which totaled approximately 3,051 m (10,009.8 ft) in length, were examined during survey (Figure 2: oversized map). The survey segments, depending on their probability classifications (moderate or high), were labeled sequentially.

The Alhambra to Hohen-Solms Project Item (M-191 to M-185-R)

The current cultural resources survey and archeological inventory of the Alhambra to Hohen-Solms project item situated within Ascension and Iberville Parishes, Louisiana resulted in the identification of five archeological sites: Sites 16IV48 - 16IV52 (Table 11). Descriptions of the survey segments examined along the proposed project item, as well as each of the identified archeological sites, are presented below.

Segment AHP-1a (High Probability Area #1)

Segment AHP-1a, in High Probability Area #1 of the Alhambra to Hohen-Solms project item, originated within Section 9 of Township 10S, Range 13E, and it extended for approximately 270 m (885 ft) to its termination point at the boundary of Sections 8 and 9 of Township 10S, Range 13E (Figure 2: oversized map). This survey segment, which extended in a northeasterly direction, consisted of an open grassy area that was bounded to the south by the extant levee and to the north by a series of borrow pits that were excavated for fill used in construction of the existing artificial flood control structure (Figure 25). This survey segment was situated at approximately 7.6 m (25 ft) NGVD, and it was characterized by soils belonging to the Vacherie series. Vacherie soils consist of poorly drained, slowly permeable silty loams that commonly are

Table 11. Breakdown of Survey Segments Examined during the Initial Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items.

Segment	Length (m/ft)	Testing Interval	Number of Backhoe Trenches[1]	Archeological Sites Identified During Survey	NRHP Assessment
Alhambra to Hohen-Solms Project Item					
AHP-1a	270 m/885 ft	30 m/98.4 ft	11/11	16IV48	Not eligible
AHP-1b	345 m/1,131	30 m/98.4 ft	18/18	16IV49	Eligible
AHP-2a	405 m/1,328 ft	30 m/98.4 ft	16/16	16IV50	Eligible
AHP-2b	345 m/1,131	30 m/98.4 ft	14/14	16IV51	Potentially eligible
AHP-3	725 m/2,378 ft	30 m/98.4 ft	24/25	-	-
AMP-1	235 m/770 ft	50 m/164 ft	5/5	-	-
AMP-2	600 m/1,968	50 m/164 ft	18/18	16IV52	Potentially eligible
Hohen-Solms to Modeste Project Item					
HSHP-1	590 m/1,935 ft	30 m/98.4 ft	22/22	16AN69	Eligible
HSHP-2	360 m/1,181 ft	30 m/98.4 ft	12/12	-	-
HSHP-3	304 m/997 ft	30 m/98.4 ft	10/10	-	-
HSMP-1	825 m/2,706 ft	50 m/164 ft	34/36	16AN70	Eligible
HSMP-2	600 m/1,968	50 m/164 ft	24/24	16AN68	Not eligible
HSMP-3	125 m/410 ft	50 m/164 ft	3/3	-	-
HSMP-4	620 m/2,034 ft	50 m/164 ft	12/12	-	-
Totals	**6,349 m/20,830 ft**	-	**223/226**	-	-

[1] The total number of backhoe trenches excavated is located to the left of the /, the total number of planned backhoe trenches is located to the right of the /.



Figure 25. Overview photo of Segment AHP-1a facing southwest

distributed along natural levees of large streams and rivers such as the Mississippi River (Spicer et al. 1976). Both archival research and historic period map analysis demonstrated that this survey segment possessed a high probability for containing intact cultural deposits due to its proximity to several structures depicted on a series of historic period maps of the area (Figure 2: oversized map).

During survey of Segment AHP-1a, 11 of 11 (100 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout the Area of Potential Effect (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 200 cmbs (78.7 inbs), and it exhibited five strata in profile (Figure 26). Stratum I ranged in depth from 0 to 24 cmbs (0 to 9.4 inbs), and it consisted of a layer of dark grayish brown (10YR 4/2) loamy clay. Stratum I was underlain by Stratum II, a layer of yellowish brown (10YR 5/4) silty clay that extended from 24 to 48 cmbs (9.4 to 18.9 inbs). Stratum III was characterized as a layer of dark grayish brown (10YR 4/2) silty clay that extended from 48 to 100 cmbs (18.9 to 39.4 inbs). Stratum IV consisted of a layer of dark grayish brown (10YR 3/2) silty clay mixed with strong brown (7.5YR 4/6) silty clay; it extended to depths of 100 to 170 cmbs (39.4 to 66.9 inbs). Finally, Stratum V was encountered at depths ranging from 170 to 200 cmbs (66.9 to 78.7 inbs), and it was described as a layer of dark gray (7.5YR 4/1) silty clay.

Phase I cultural resources survey and archeological inventory of High Probability Area #1a (Segment AHP-1a) of the Alhambra to Hohen-Solms project item resulted in the identification and recordation of a single archeological site: 16IV48. This site is discussed in detail below.

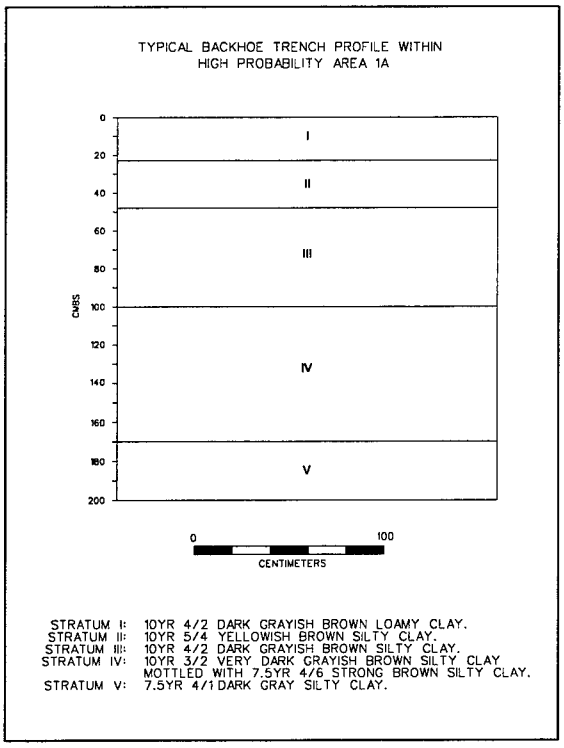


Figure 26. Profile of a typical backhoe trench within Segment AHP-1a.

Site 16IV48

Site 16IV48 consists of a nineteenth to early twentieth century historic period artifact scatter that was identified during survey of the western portion of Segment AHP-1a of the Alhambra to Hohen-Solms project item. This site is located on the batture of the Mississippi River within Sections 8 and 9 of Township 10S, Range 13E (Table 11; Figures 27 and 28). It is situated at an elevation of approximately 7.6 m (25 ft) NGVD. Soils located in the vicinity of Site 16IV48 belong to the Vacherie soil series. These soils consist of poorly drained loam and clay.

Site 16IV48 is oblong in shape and it encompasses an area that measures approximately 1.29 ac (0.52 ha) in size. The site is located approximately 200 m (656 ft) south of the Mississippi River. It is bounded to the north by a long linear borrow pit excavated during the construction of the existing artificial flood levee structure and to the south by the extant levee (Figure 27). Historically, this area was part of the Celeste and Cannonburg Plantations. A total of 170 historic period artifacts and eight faunal specimens were recovered during pedestrian survey and backhoe trenching throughout the area (Tables 12 and 13). All of this material originated from subsurface contexts.

During survey, 13 of 13 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16IV48 (Figure 29). They consisted of the 11 backhoe trenches excavated during the initial survey, as well as 2 of 2 (100 percent) planned site delineation backhoe trenches. During survey, 11 of the 13 (77 percent) excavated backhoe trenches positioned within the site area produced cultural material (Table 12). This material consisted of 6 opaque white/milk glass shards; 48 flat glass shards; 1 amber and 6 cobalt blue machine-made bottle glass shards; 1 dark green turn past mold glass shard; 1 amber and 1 green unidentified bottle glass shard; 3 barbed wire fragments; 1 iron chain fragment; 1 iron nut; 13 unidentified iron fragments; 4 iron can fragments; 7 machine-cut, 2 unidentified, and 3 wire nails; 12 sheet metal fragments; 1 unidentified iron tool fragment; 1 transfer-printed and 6 plain whiteware sherds; 1 wood corner molding; 50 pieces of brick; 1 piece of mortar; and 8 faunal specimens. The faunal assemblage consisted of 1 cow tibia fragment, 4 oyster shell fragments, and 3 unidentified mammal bone fragments. The cow tibia fragment exhibited evidence of having been cut with a handsaw, and one of the unidentified mammal bone fragments was gnawed by a carnivore (Table 13).

Of the 178 artifacts and ecofacts recovered from Site 16IV48, 49 were collected from Stratum II, 12 were identified in Stratum III, 8 were recovered from Stratum IV, 12 were retrieved from Stratum V, and 1 originated in Stratum VI. In addition, six artifacts could not be provenienced precisely; they originated from soil matrix removed from Strata I - III. The remainder of the artifacts (n = 90) was recovered from the backhoe trench backdirt piles. Temporally diagnostic artifacts recovered from the site, including opaque white/milk glass, machine-made bottle glass, turn paste mold bottle glass, machine-cut nails, and a single transfer-printed whiteware sherd (Figure 30; Table 12), suggest an occupation date extending from the nineteenth to the early twentieth centuries.

A variety of domestic artifacts, as well as faunal specimens and construction material, were recovered from Site 16IV48 (Tables

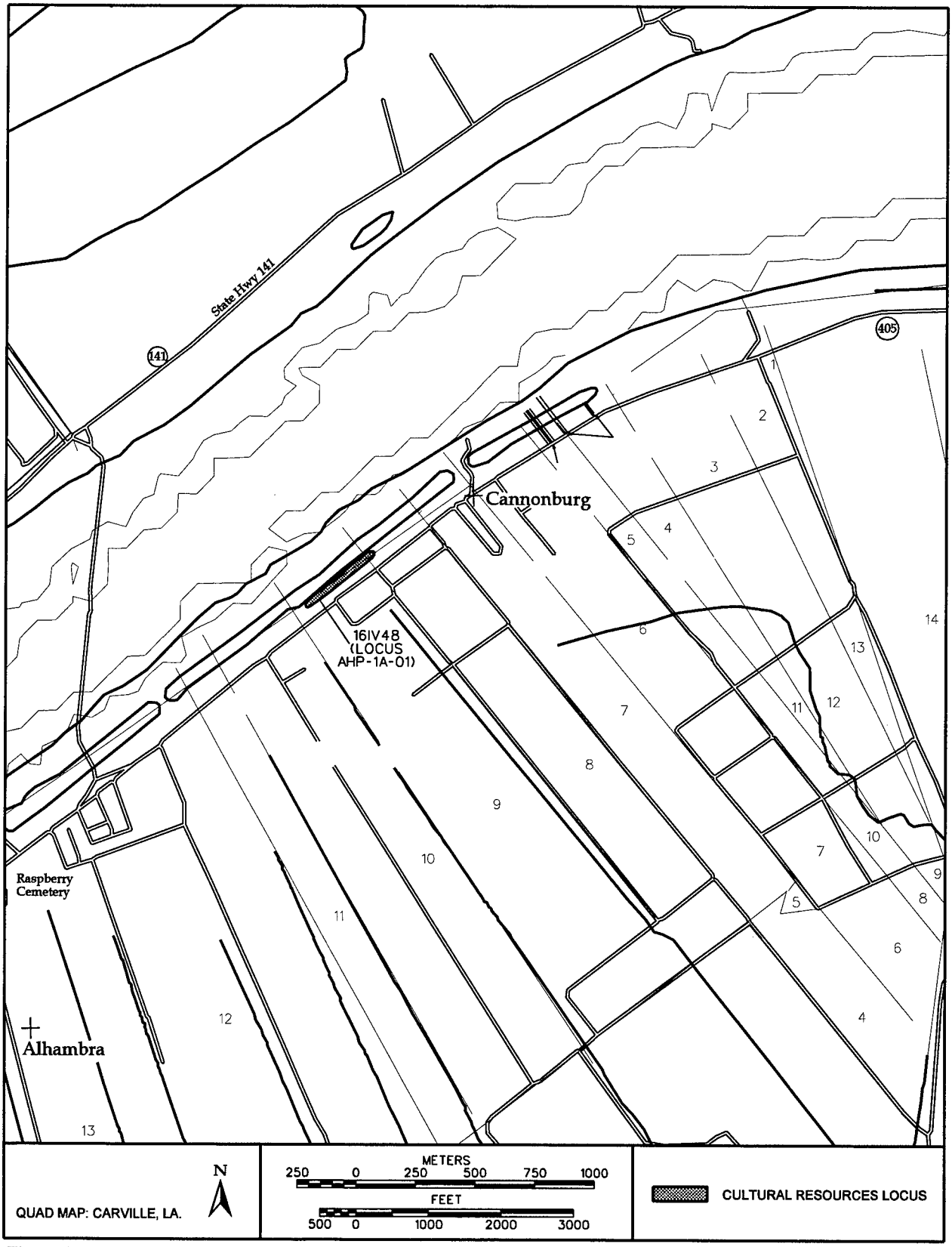


Figure 27. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16IV48.**



Figure 28. Overview photo of Site 16IV48 facing northeast.

12 and 13). The domestic artifact assemblage included historic period ceramic sherds (whiteware), glass shards (machine-made and paste mold glass shards), and iron can fragments. Construction materials recovered from Site 16IV48 consisted of brick fragments (machine- and hand-made), a single piece of mortar, a single piece of corner molding, and nails (machine-cut and unidentified types). In addition, miscellaneous pieces of hardware, including barbed wire fragments, a piece of chain, sheet metal, and an unidentified tool fragment were recovered from the site area.

This assemblage may represent the remains of one or more dwellings. It appears that the site is associated with several structures depicted on historic Mississippi River Commission and Louisiana Department of Transportation maps of the area, as well as on design plans for the Bayou Goula Bend New Levee setback, which was constructed in 1932; however, these structures are no longer standing. It is possible that those structures represented workers cabins or other facilities associated with the Celeste and/or Cannonburg Plantations, as well as early twentieth century residences.

Backhoe trenching revealed that, with the exception of fill associated with the construction of the existing levee setback, Site 16IV48 may contain intact cultural deposits. A typical backhoe trench at Site 16IV48 was excavated to a depth of 160 cmbs (63 inbs) and exhibited six strata in profile (Figure 31). Stratum I, which was described as fill deposited during construction of the existing artificial flood control structure, consisted of a layer of dark brown (10YR 3/3) clay that extended from 0 to 35 cmbs (0 to 13.7 inbs). Stratum I was underlain by Stratum II, a layer of light gray (10YR 7/2) sandy clay that ranged in depth from 35 to 38 cmbs (13.7 to 15 inbs). Stratum III was described as a layer of dark brown (10YR 3/3) clay that extended from 38 to 46 cmbs (15 to 18 inbs). Stratum IV was characterized as a deposit of alternating lenses of brown (7.5YR 3/3) clay and dark gray (7.5YR 4/1) silty loam; it reached from 46 to 60 cmbs (18 to 23.6 inbs). Extending from 60 to 80 cmbs (23.6 to 31.5 inbs), Stratum V consisted of a layer of gray (7.5YR 5/1) clay. Finally, Stratum VI ranged in depth from 80 to 160 cmbs (31.5 to 63 inbs); it consisted of a layer of brown (7.5YR 5/2) clay. The water table was encountered at approximately 160 cmbs (63 inbs), impeding further excavation of the backhoe trenches.

Archeological data collected during survey indicate that Site 16IV48 consists of a nineteenth to early twentieth century artifact scatter associated with buildings depicted on Mississippi River Commission and Louisiana Department of Transportation maps of the area, as well as those shown on the design plans of the Bayou Goula New Levee. The 1932 map of the Bayou Goula New Levee depicts these structures as residences, cabins, and sheds. Some of those buildings may have been associated with the Celeste and/or Cannonburg Plantations. In fact, one historic period structure was identified on historic period maps of the area as positioned between the 1932 proposed levee centerline and the previous levee feature, which was located close to the current bankline of the Mississippi River. This structure was situated approximately 10 to 15 m (32.8 to 49.2 ft) to the south of the survey transect of backhoe trenches excavated throughout the site area. Construction-related debris recovered from the site may be associated with this structure. No cultural features were identified during survey.

The results of the current investigation indicated that Site 16IV48 may contain intact cultural deposits; however, it does not retain research potential or intact cultural features. In consultation with the Division of Archaeology, Department of Culture, Recreation, and Tourism, it was determined that the site does not possess the qualities of significance as defined by the National Register of Historic Places (36 CFR 60.4 [a-d]). No additional testing of Site 16IV48 is recommended.

Table 12. Historic Period Artifacts Recovered from Site 16IV48.

STRATUM	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE	TOTAL
II	Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	Undetermined	1
	Glass	Flat Glass Shard(s)	No Color Assigned	Undetermined	Undetermined	48
III	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	5
	Glass	"Depression" Glass	Opaque White/ Milk glass	Rim/Lip to Base	post ca. 1925	6
	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)	1
I-III	Glass	Machine-Made Bottle Glass	Cobalt Blue	Body & Base	post ca. 1898	6
IV	Metal	Miscellaneous Hardware	Nut(s)	Iron	Undetermined	1
		Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	1
		Unidentified Metal Objects	Indeterminate	Iron	Undetermined	2
			Sheet Metal	Iron	Undetermined	3
V	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	7
			Brick, Handmade, Partial	Undetermined	Undetermined	1
		Miscellaneous Architectural	Mortar	Undetermined	Undetermined	1
	Glass	Turn Paste Mold	Dark Green	Base(s)	ca. 1870s-1920s	1
	Metal	Nail(s)	Unidentified	Iron	Undetermined	1
		Unidentified Metal Objects	Indeterminate	Iron	Undetermined	1
VI	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	1
Backdirt	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+	1
				Body(s)	ca. 1820-1900+	5
			Transfer-Printed	Body(s)	post ca. 1820; ca. 1820-1860	1
	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	20
			Brick, Handmade, Glazed	Undetermined	Undetermined	1
			Brick, Handmade, Partial	Undetermined	Undetermined	14
	Glass	Machine-Made Bottle Glass	Amber	Body(s)	post ca. 1898	1
		Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	Undetermined	1
			Green	Indeterminate	Undetermined	1
	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)	2
			Chain	Iron	Undetermined	1
			Unidentified	Iron	Undetermined	1
Backdirt	Metal, cont.	Miscellaneous Kitchen	Can(s)	Iron	Undetermined	4
		Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830s-1890s+	4
			Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	2
			Unidentified	Iron	Undetermined	1
			Wire, Common	Iron	post ca. 1890	2
			Wire, Unidentified	Iron	post ca. 1890	1
		Tools	Unidentified Tool(s)	Iron	Undetermined	1
		Unidentified Metal Objects	Indeterminate	Iron	Undetermined	9
			Sheet Metal	Iron	Undetermined	9
	Synthetic	Miscellaneous Construction/ Architectural	Corner Molding	Undetermined	Undetermined	1
Grand Total						**170**

Table 13. Faunal Specimens Recovered from Site 16IV48.

STRATUM	CLASS	GENUS	SPECIES	COMMON NAME	ELEMENT	MODIFICATION	TOTAL
IV	Mammalia	Bos	taurus	Cow	Tibia	Sawed	1
Backdirt	Invertebrata	Crassostrea	virginica	Virginia oyster	Invertebrate shell fragment	None	3
					Shell with hinge	None	1
	Mammalia	Unidentified	Unidentified	Even-toed ungulates	Metatarsal	Carnivore-gnawed	1
				Unidentified Mammal	Miscellaneous fragment	None	1
					Shaft fragment	Hack	1
Grand Total							**8**

Segment AHP-1b (High Probability Area #1b)

Segment AHP-1b, situated within High Probability Area #1b of the Alhambra to Hohen-Solms project item, originated at the boundary of Sections 8 and 9 of Township 10S, Range 13E (Figure 2: oversized map). It extended in a northeasterly direction for approximately 345 m (1,131 ft) to its termination point within the western portion of Section 7 of Township 10S, Range 13E. This grass covered survey segment was positioned at an approximate elevation of 7.6 m (25 ft) NGVD, and it contained soils of the Convent series. Convent soils, which mainly are composed of poorly drained, silty loams, dominate the natural levees of the streams and larger rivers found throughout south-central Louisiana (Spicer et al. 1976). This survey segment was bounded to the south by the extant levee and to the north by a series of inundated borrow pits excavated during construction of the existing flood control levee (Figure 32). The identification of residences, sheds, and other buildings on historic period maps of the area resulted in this survey segment being treated as if it possessed a high probability area for containing intact cultural deposits. These structures may have been associated with the Celeste and Cannonburg Plantations, both of which operated during the nineteenth and early twentieth centuries.

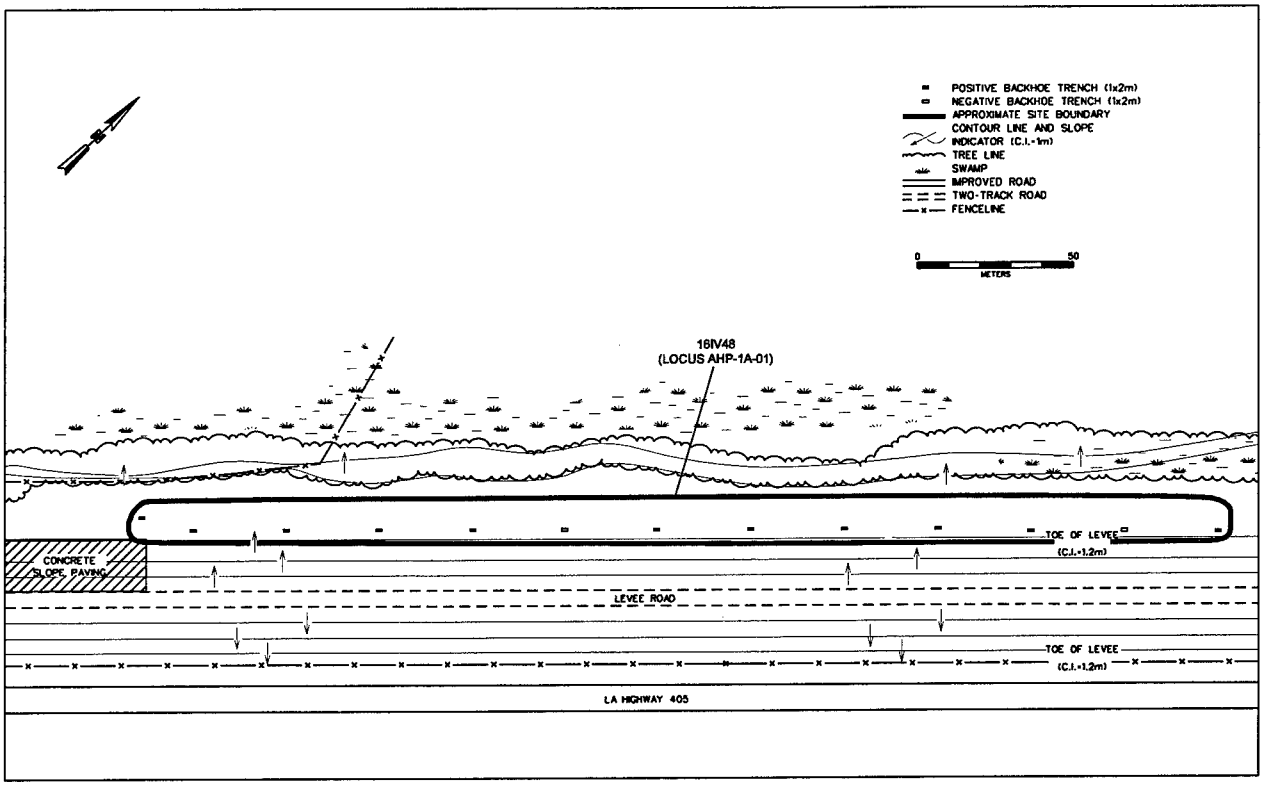


Figure 29. Plan view of Site 16IV48.

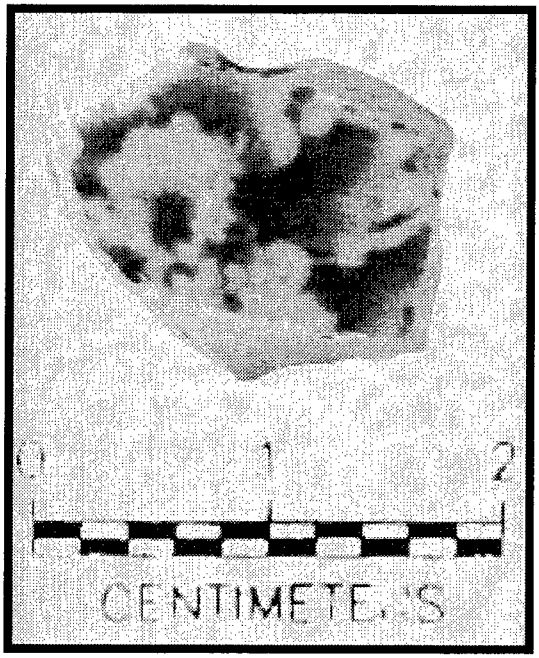


Figure 30. Transfer-printed whiteware body sherd recovered from Site 16IV48.

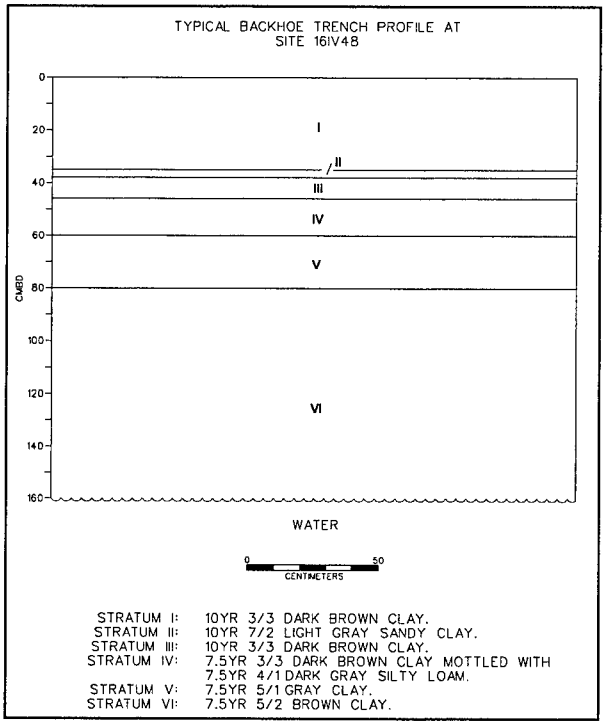


Figure 31. Profile of a typical backhoe trench at Site 16IV48.

During survey, 18 of 18 (100 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout the Area of Potential Effect associated with Segment AHP-1b (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 200 cmbs (78.7 inbs), and it exhibited four strata in profile (Figure 33). Stratum I ranged in depth from 0 to 38 cmbs (0 to 14.9 inbs), and it consisted of a layer of very dark gray (10YR 3/2) clay interbedded with thin lenses of gray (10YR 6/1) silty loam; it represented both recent fill associated with the construction of the extant flood control levee and subsequent high water events. Stratum I was underlain by Stratum II, a layer of dark grayish brown (10YR 4/2) silty clay that extended from 38 to 50 cmbs (14.9 to 19.7 inbs). Stratum III was described as a layer of dark gray (10YR 4/1) clay that ranged in depth from 50 to 88 cmbs (19.7 to 34.6 inbs). Finally, Stratum IV was characterized as a layer of gray (7.5YR 5/1) clay that extended from 88 to 200 cmbs (34.6 to 78.7 inbs).



Figure 32. Overview photo of Segment AHP-1b facing northeast.

Survey of Segment AHP-1b, in High Probability Area #1b of the Alhambra to Hohen-Solms project item resulted in the identification and recordation of a single archeological site: 16IV49. This site is discussed in detail below.

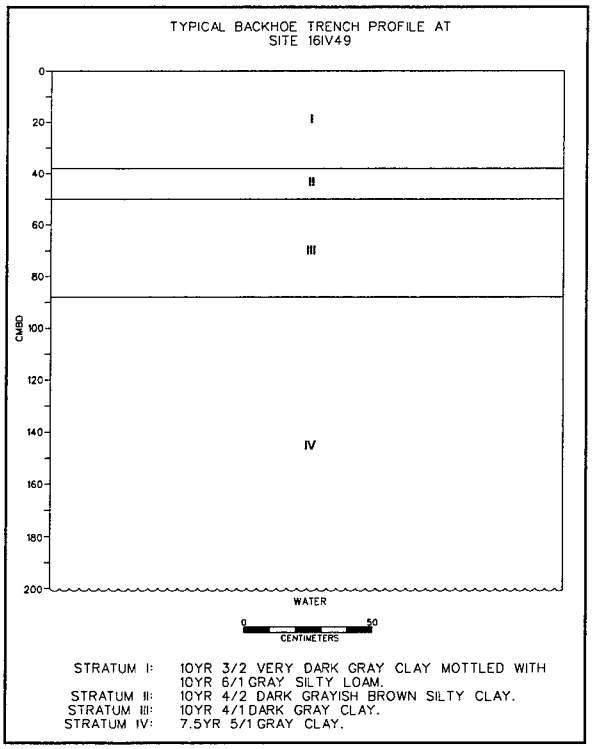


Figure 33. Profile of a typical backhoe trench within Segment AHP-1b.

Site 16IV49

Site 16IV49 initially was identified during survey of High Probability Area #1b (Segment AHP-1b) of the Alhambra to Hohen-Solms project item (Table 11; Figures 34 and 35). This site consists of a deposit of nineteenth to early twentieth century historic period artifacts. It is located on the batture of the Mississippi River within Sections 7 and 8 of Township 10S, Range 13E and it is situated at an approximate elevation of 7.6 m (25 ft) NGVD. Soils located in the vicinity of the site belong to the Convent series, which is characterized by poorly drained silts and clays.

Site 16IV49 encompasses an area that measures approximately 1.22 ac (0.48 ha) in size. This site is oblong in shape and it is located approximately 300 m (984 ft) from the bankline of the Mississippi River. It is bounded to the north by numerous long, narrow borrow pits created during construction of the existing artificial flood control levee, and to the south by the extant levee (Figure 36). Historically, this area also was part of the Celeste and Cannonburg Plantations. As a result of this investigation, 142 historic period artifacts and 11 faunal specimens were recovered from Site 16IV49 (Tables 14 and 15). All of this material originated from subsurface contexts.

During survey, 14 of 14 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16IV49; 10 of the 14 (57 percent) planned backhoe trenches produced cultural material (Table 14). This material consisted of 2 imported brown stoneware sherds; 1 plain ironstone sherd; 1 molded/embossed and 8 plain whiteware sherds; 28 machine-made and hand-made brick fragments; 2 colorless cup bottom mold glass shards; 1 amber and 3 colorless machine-made bottle glass shards; 10 light aqua tooled lip glass shards; 1 dark green turn paste mold glass shard; 1 colorless unidentified blown-in-mold glass shard; 1 amber, 1 colorless, 1 dark green, 1 green, 2 light aqua, and 2 opaque white/milk unidentified bottle glass shards; 1 iron hinge fragment; 1 iron pipe fragment; 1 iron spike; 2 iron fence staples; 1 cast iron stove part; 2 barbed wire fragments; 1 bolt; 1 casket furnishing; 2 wire fragments; 41 machine-cut, 2 unidentified, and 3 wire nails; 1 plow part; 4 sheet metal fragments; 10 unidentified iron fragments; 1 unidentified cast iron fragment; 1 piece of cinder; 1 unidentified synthetic artifact; and 11 faunal specimens. The faunal specimens consisted of 6 oyster shell fragments, 1 *Rangia* shell fragment, and 4 unidentified mammal bone fragments, one of which exhibited a saw cut (Table 15).

In addition, 17 pieces of human bone were recovered. This material originated from Delineation Backhoe Trench N1000 E1306 (Figure 36). These bone fragments consisted of 1 canine, 1 incisor, 2 molars, 2 premolars, 1 superior eye orbit fragment, 1 tooth bearing element, 2 mastoid fragments, and 7 miscellaneous cranial bone fragments (Table 16). These remains were identified in association with the single decorative casket element recovered from this trench (Figure 37). A review of casket hardware recovered during the cultural resources inventory of the Bonnet Carre Spillway, St. Charles Parish

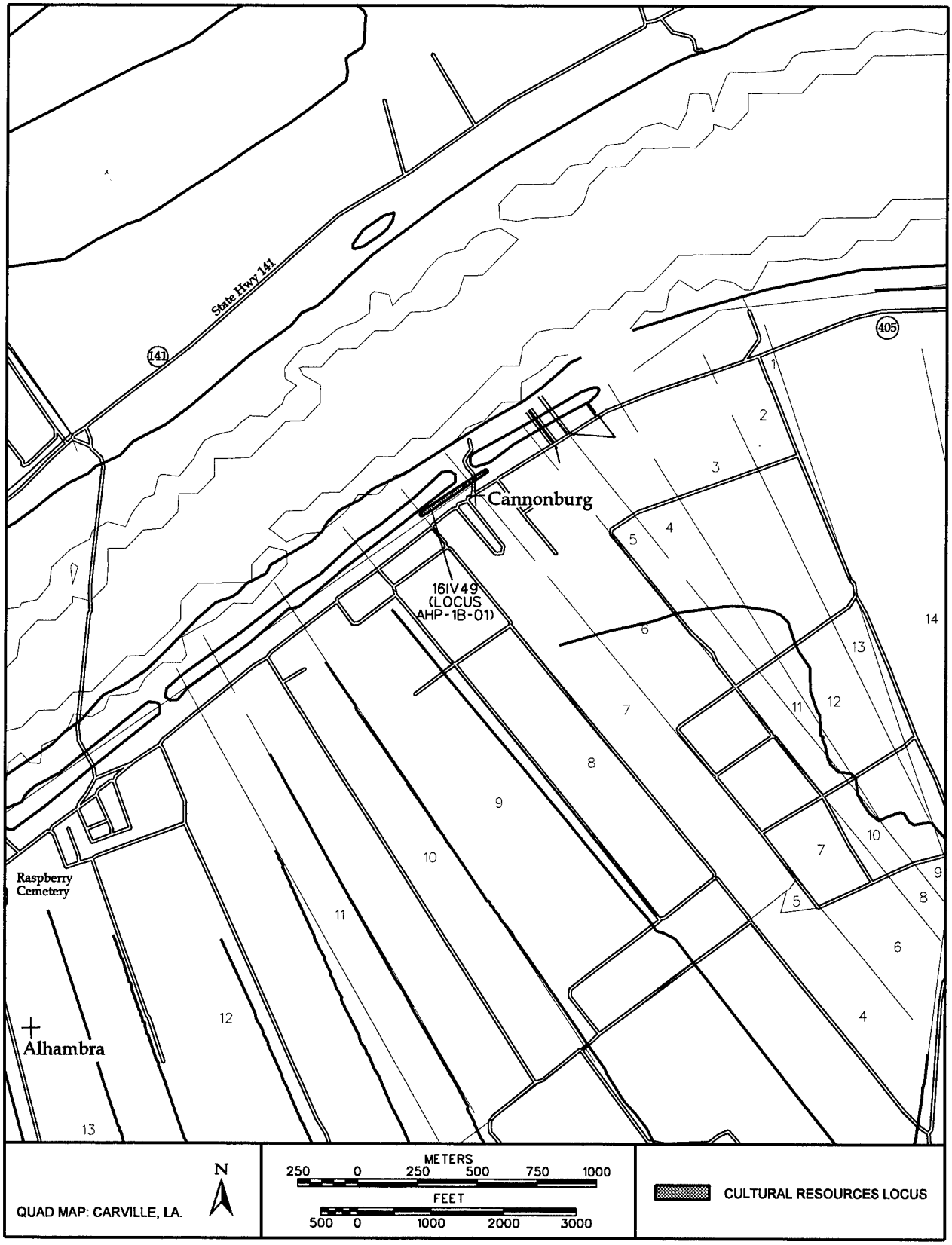


Figure 34. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16IV49.**



Figure 35. Overview photo of Site 16IV49 facing northeast.

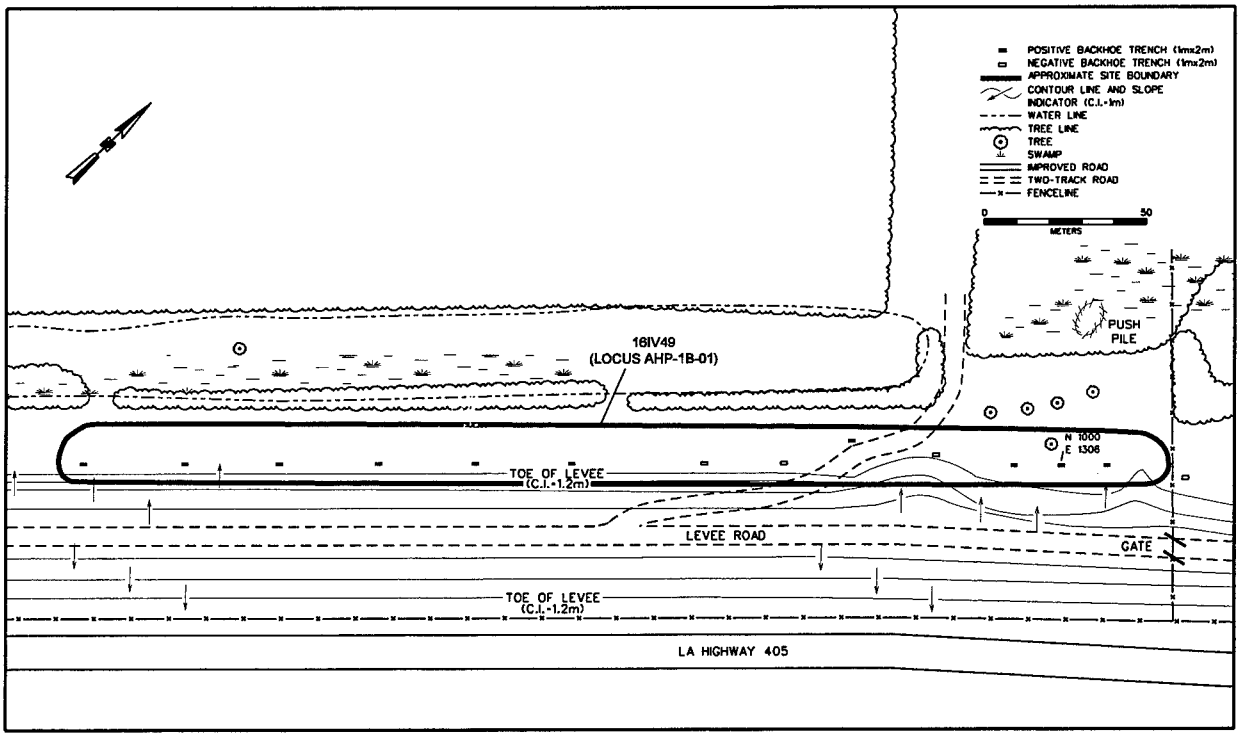


Figure 36. Plan view of Site 16IV49.

Table 14. Historic Period Artifacts Recovered from Site 16IV49.

STRATUM	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE	TOTAL
II	Glass	Machine-Made Bottle Glass	Colorless	Undetermined	post ca. 1898	1
III	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	1
	Glass	Cup Bottom Mold	Colorless	Base(s)	post ca. 1850	2
		Machine-Made Bottle Glass	Amber	Heel(s)	post ca. 1898	1
		Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	Undetermined	1
	Metal	Construction Hardware	Hinge(s)	Iron	Undetermined	1
			Spike(s)	Iron	Undetermined	1
		Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)	1
			Bolt(s)	Iron	Undetermined	1
		Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830s-1890s+	2
			Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	1
			Unidentified	Iron	Undetermined	1
		Tools	Plow Part(s)	Iron	Undetermined	1
		Unidentified Metal Objects	Indeterminate	Cast Iron	Undetermined	1
				Iron	Undetermined	1
IV	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+	1
				Rim(s)	ca. 1820-1900+	1
	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	1
	Glass	Unidentified Bottle Glass (Kitchen)	Green	Base(s)	Undetermined	1
			Light Aqua	Body(s)	Undetermined	2
		Unidentified Glass (Miscellaneous)	Opaque White/ Milk glass	Indeterminate	Undetermined	1
IV	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830s-1890s+	3
		Unidentified Metal Objects	Indeterminate	Iron	Undetermined	1
V	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	7
	Glass	Tooled Lip	Light Aqua	Rim/Lip to Base	ca. 1820s-1920s	10
		Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	Undetermined	1
	Metal	Construction Hardware	Staple(s)	Iron	Undetermined	1
		Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830s-1890s+	5
			Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	3
			Wire, Common	Iron	post ca. 1890	1
		Unidentified Metal Objects	Indeterminate	Iron	Undetermined	1
			Unknown Function	Iron	Undetermined	1
	Stone	Other Miscellaneous Stone	Cinder fragment(s)	Undetermined	Undetermined	1
	Synthetic	Miscellaneous Activities	Miscellaneous	Undetermined	Undetermined	1
Backdirt	Ceramic	Imported Brown Stoneware	Brown Mineral Glaze on Buff	Body & Base	Undetermined	2
		Ironstone	Undecorated White	Rim(s)	ca. 1813-1900+; U.P. post ca. 1845	1
		Whiteware	Molded/ Embossed Decoration	Rim(s)	Undetermined	1
			Plain	Base(s)	ca. 1820-1900+	1
				Body(s)	ca. 1820-1900+	4
				Rim(s)	ca. 1820-1900+	1
	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	12
			Brick, Extruded, Fragment	Undetermined	Undetermined	2
			Brick, Handmade, Partial	Undetermined	Undetermined	4
			Brick, Partial	Undetermined	Undetermined	1

Table 14, continued

STRATUM	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE	TOTAL
Backdirt, cont.	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898	1
				Neck(s)	post ca. 1898	1
		Turn Paste Mold	Dark Green	Base(s)	ca. 1870s-1920s	1
		Unidentified Blown-in-Mold Bottle Glass	Colorless	Body(s)	Undetermined	1
		Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	Undetermined	1
			Opaque White/ Milk glass	Body(s)	Undetermined	1
	Metal	Construction Hardware	Pipe(s)	Iron	Undetermined	1
			Staple(s)	Iron	Undetermined	1
		Furniture	Stove Part(s)	Cast Iron	Undetermined	1
		Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)	1
			Casket Furnishing	Alfenide	post 1865	1
			Unidentified	Iron	Undetermined	3
Backdirt	Metal	Miscellaneous Hardware, cont.	Wire fragment(s)	Iron	post ca. 1775	2
		Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830s-1890s+	17
			Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	10
			Unidentified	Iron	Undetermined	1
			Wire, Common	Iron	post ca. 1890	2
		Unidentified Metal Objects	Indeterminate	Iron	Undetermined	3
			Sheet Metal	Iron	Undetermined	1
Grand Total						**142**

Table 15. Faunal Specimens Recovered from Site 16IV49.

STRATUM	CLASS	GENUS	SPECIES	COMMON NAME	ELEMENT	MODIFICATION	TOTAL
V	Mammalia	Undetermined	Undetermined	Unidentified Mammal	Miscellaneous fragment	None	1
Backdirt	Invertebrata	Crassostrea	virginica	Virginia oyster	Invertebrate shell fragment	None	3
					Shell with hinge	None	1
					Whole gastropod shell	None	2
		Rangia	cuneata	Brackish water clam	Shell with hinge	None	1
	Mammalia	Undetermined	Undetermined	Unidentified Mammal	Miscellaneous fragment	None	1
						Sawed	1
					Shaft fragment	None	1
Grand Total							**11**

Table 16. Human Remains Recovered from Site 16IV49.

GENUS	SPECIES	COMMON NAME	ELEMENT	ADDITIONAL DESCRIPTION	TOTAL
Homo	sapiens	Human	Canine tooth		1
			Incisor		1
			Miscellaneous cranial fragments	Cranium	7
				Mastoid	2
				Orbit	1
			Molar(s)		2
			Premolar(s)		2
			Tooth-bearing fragment		1
Grand Total					**17**

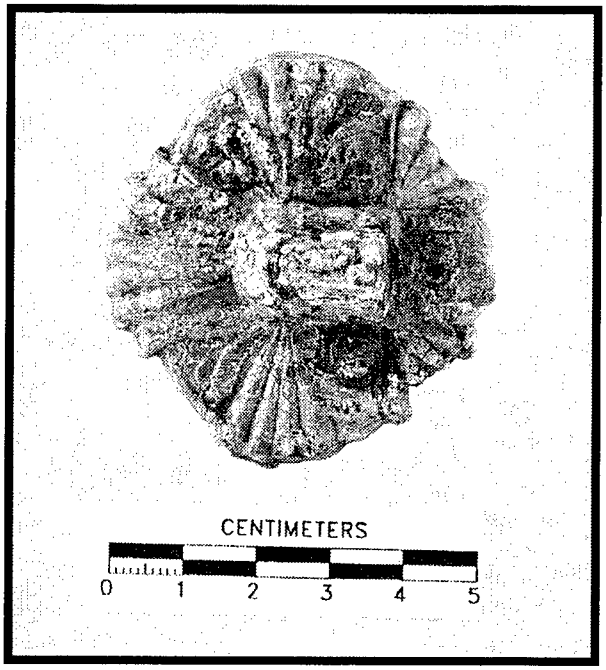


Figure 37. **Decorative casket element recovered from delineation backhoe trench N1000 E1306 at Site 16IV49.**

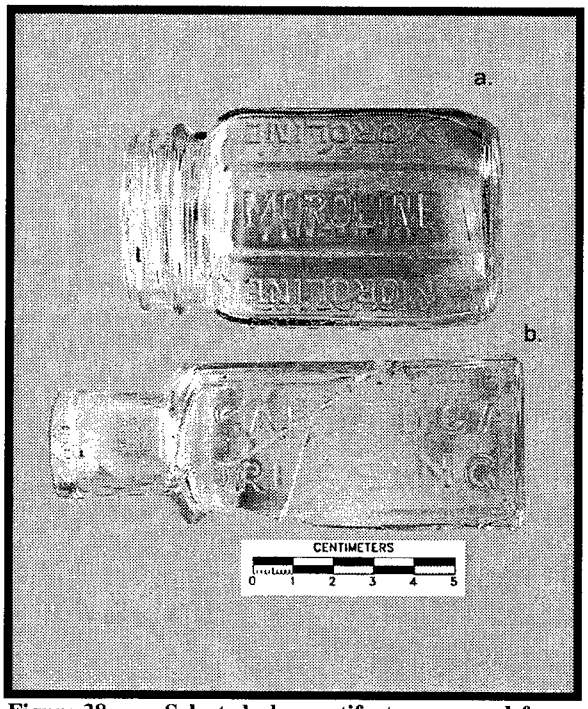


Figure 38. **Selected glass artifacts recovered from Site 16IV49: (a) octagonal machine-made hair tonic jar embossed with "MOROLINE" on each panel and an Owens Illinois Glass Co. mark on the base, and (b) mended glass shards forming a partial bottle with a tooled lip and "SARATOGA/DRESSING" printed on the side panel.**

Louisiana (Yakubik et al. 1986; Report Number: COELMN/PD-86/15) indicates that the decorative element recovered from the current project area is of a similar type. It was manufactured from cast *alfenide* and it dated post 1865.

All excavation in the area was halted after identification of the human remains, and all delineation backhoe trenches were backfilled completely. After additional historical research, it was determined that the casket hardware and the human remains likely represent an interment associated with the Braziel Baptist Church and cemetery complex depicted on a 1932 map of the Bayou Goula New Levee. In accordance with all state and local regulations concerning the unexpected discovery of human remains, identification of the burial was reported to the Iberville Parish Sheriff, the Atchafalaya Levee Board Police, and the parish coroner. After examination, the coroner retained possession of the remains. A full discussion of the human remains, the Braziel Baptist Church and cemetery complex, and recommendations for relocation of the cemetery will be discussed in a separate report currently being prepared for the U.S. Army Corps of Engineers, New Orleans District by R. Christopher Goodwin & Associates.

Of the 153 artifacts and ecofacts recovered from Site 16IV49, one originated from Stratum I, 16 were collected from Stratum III, 11 were recovered from Stratum IV, 33 originated from Stratum V, and 92 were collected from the backhoe trench backfill piles. Temporally diagnostic artifacts recovered from the site included machine-made glass shards, turn paste mold glass shards, tooled lip glass, cup bottom mold glass shards, wire nails, machine-cut nails, plain whiteware sherds, and plain ironstone sherds (Figure 38). On the basis of the recovered artifacts, it appears that different portions of Site 16IV49 served different functions historically. Obviously, the area that produced the decorative element from the casket and the human bone fragments is representative of a burial associated with the Braziel Baptist Church and cemetery complex. The remainder of the site produced artifacts indicative of domestic functions.

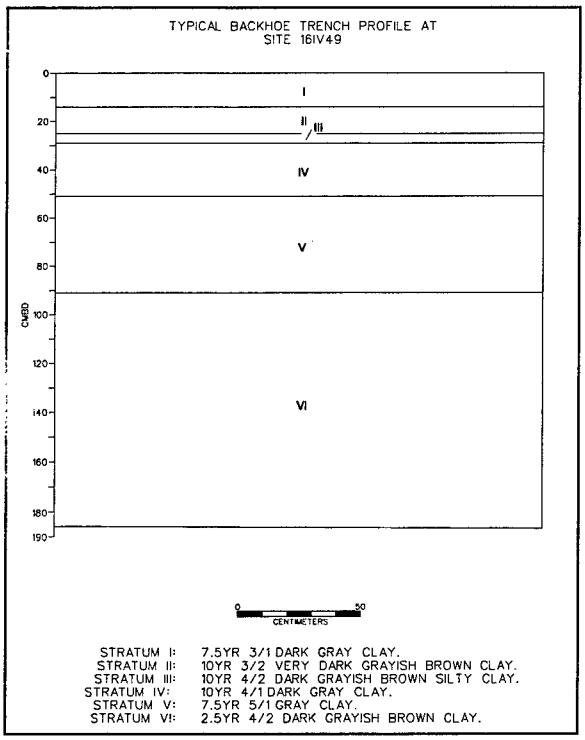


Figure 39. Profile of a typical backhoe trench at Site 16IV49.

Domestic artifacts recovered from the site include historic period ceramic sherds (imported brown stoneware, ironstone sherds, and whiteware sherds), bottle glass shards, and a cast iron stove part. The recovery of these artifacts suggests that one or more residences possibly existed within the vicinity of the site. In fact, Mississippi River Commission and Louisiana Department of Transportation maps of the area, as well as the 1932 Bayou Goula New Levee setback map prepared by the Office Board of State Engineers, depict several structures within the immediate vicinity. These structures include the Braziel Baptist Church and cemetery complex and six historic period residences and/or sheds. All of these structures were located in close proximity to the proposed centerline of the levee as it was drawn in 1932. This centerline is located approximately 10 m (32.8 ft) south of the survey transect of backhoe trenches that was excavated within the site boundary; thus, artifacts recovered from these trenches likely were affiliated with these structures.

Backhoe trenching revealed that Site 16IV49 contained intact cultural deposits ranging from approximately 30 to 150 cmbs (11.8 to 59 inbs) in depth. A typical backhoe trench excavated in this area extended to a maximum depth of 185 cmbs (72.8 inbs) and exhibited six strata in profile (Figure 39). Stratum I was described as a layer of dark gray (7.5YR 3/1) clay that ranged in depth from 0 to 15 cmbs (0 to 5.9 inbs); it consisted of fill deposited as a result of prior levee construction. Stratum II, a layer of very dark grayish brown (10YR 3/2) clay, extended from 15 to 25 cmbs (5.9 to 9.8 inbs). Stratum III ranged in depth from 25 to 29 cmbs (9.8 to 11.4 inbs), and it was characterized as a layer of dark grayish brown (10YR 4/2) silty clay. Stratum IV consisted of a layer dark gray (10YR 4/1) clay that extended from 29 to 51 cmbs (11.4 to 20 inbs). Stratum V was described as a layer of gray (7.5YR 5/1) clay that extended from 51 to 92 cmbs (20 to 36 inbs); this stratum produced numerous historic period brick fragments and glass shards. Finally, Stratum VI extended from 92 to 185 cmbs (36 to 72.8 inbs), and it was characterized as a layer of dark grayish brown (2.5YR 4/2) clay. The water table was encountered at an approximate depth of 185 cmbs (72.8 inbs); this impeded further excavation of the trenches.

Data collected from Site 16IV49 indicate that the site contains intact cultural deposits dating from the nineteenth to the early twentieth century, and at least one, and possibly more, human burials associated with the Braziel Baptist Church and cemetery complex. In addition, the cultural deposits may be associated with several now destroyed residences depicted on Mississippi River Commission and Louisiana Department of Transportation maps of the area, as well as on the 1932 map of the Bayou Goula New Levee setback. The site is located within the vicinity of the historically important Celeste and Cannonburg Plantations, and some of the cultural material recovered from the site may be associated with the operation of one or both of those plantations.

The results of fieldwork at Site 16IV49 indicate that it possesses extensive cultural deposits, including those related to the domestic occupation of the area, as well as those related to the religious use of the site area. These deposits are intact and they retain research potential. This site possesses the qualities of significance as defined by criteria [a and d] of the National Register of Historic Places criteria for evaluation (36 CFR



Figure 40. Overview photo of Segment AHP-2a facing west.

60.4 [a-d]). Site 16IV49 will likely produce additional data important to the understanding of four of the cultural themes outlined for Management Unit V in *Louisiana's Comprehensive Archaeological Plan,* including Influence of the Mississippi River on Historic Settlement, Plantation Archeology, Ethnic Enclaves, and Culture History (Smith et al. 1983). Mitigation of the proposed impacts to the site before construction of concrete slope paving and levee re-contouring, therefore, is recommended if avoidance of the site is not possible (see Appendix III). Additional excavation is particularly important at the Braziel Baptist Church and cemetery complex. However, in order to facilitate movement of interment(s) prior to installation of the proposed concrete slope paving and the levee re-contouring, excavations within this portion of the site must be executed in a painstaking manner, being careful to document fully all bioarcheological data, spatial relationships, and chronological relationships so that this information can be duplicated at any subsequent reburial location (see Appendix III).

Segment AHP-2a (High Probability Area #2a)

High Probability Area #2 of the Alhambra to Hohen-Solms project item was subdivided into two segments to facilitate control during the survey process. These segments were labeled Segment AHP-2a and AHP-2b. Segment AHP-2a originated approximately 200 m (656 ft) from the boundary of Sections 3 and 4 of Township 10S, Range 13E in Iberville Parish, Louisiana (Figure 2: oversized map). This segment extended in a northeasterly direction for approximately 405 m (1,328 ft) to its termination point within the north-central portion of Section 2 of Township 10S, Range 13E. The vast majority of this survey segment was situated at an approximate elevation of 7.6 m (25 ft) NGVD, soils of the Vacherie and Convent series were present. Vacherie and Convent soils are described as loamy and silty clays situated along stream courses; they tend to be very heavy and poorly drained (Spicer et al. 1976). Vegetation throughout the entire area of Segment AHP-2a consisted of manicured grass. The survey segment was bounded to the south by the existing flood control levee and to the north by a series of flooded borrow pits initially excavated during construction of the extant levee (Figure 40).

Segment AHP-2a is crossed by a dirt access road situated approximately 375 m (1,230 ft) from the beginning of the survey segment. This road measures approximately 5 m (16.4 ft) in width, and it provides access to the batture from Louisiana State Highway 405. Segment AHP-2a has a high probability for containing intact cultural deposits; numerous historic period maps of the area, including the Mississippi River Com-

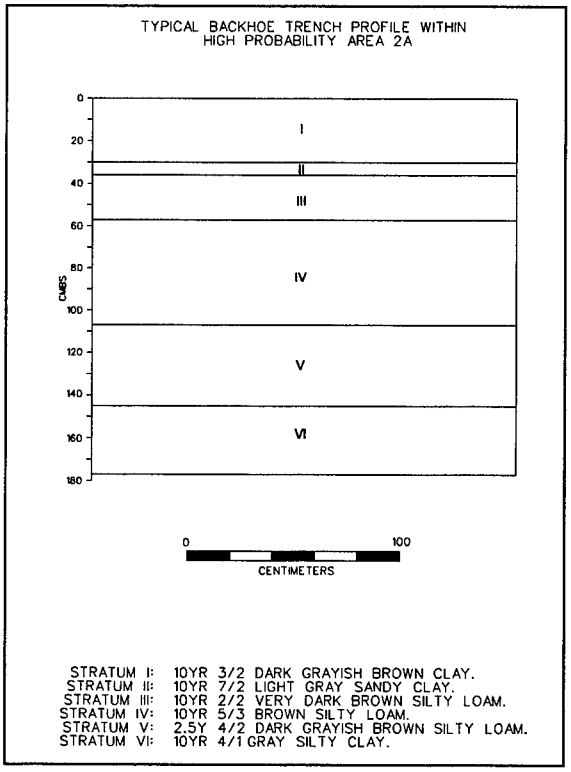


Figure 41. Profile of a typical backhoe trench within Segment AHP-2a.

mission maps and the design plans for the 1932 Bayou Goula New Levee setback, depict residences, sheds, barns, and other outbuildings in the area. Some of these buildings may have been associated with the operation of the Old Hickory Plantation during the nineteenth century.

During survey, 16 of 16 (100 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout the Area of Potential Effect encompassed by Segment AHP-2a, i.e., High Probability Area #2a (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 180 cmbs (70.8 inbs), and it exhibited six strata in profile (Figure 41). Stratum I consisted of a deposit of dark grayish brown (10YR 3/2) clay that ranged in depth from 0 to 30 cmbs (0 to 11.8 inbs). Stratum II extended from 30 to 36 cmbs (11.8 to 14.2 inbs); it was described as a layer of light gray (10YR 7/2) sandy clay. Stratum II was underlain by Stratum III, a layer of very dark brown (10YR 2/2) silty loam, which was encountered from 36 to 57 cmbd (14.2 to 22.4 inbs). Stratum IV consisted of a deposit of brown (10YR 5/3) silty loam; it ranged in depth from 57 to 107 cmbs (22.4 to 42.1 inbs). Stratum V extended from 107 to 145 cmbs (42.1 to 57.1 inbs), and it was characterized as a deposit of dark grayish brown (2.5YR 4/2) silty loam. Finally, Stratum VI, which varied from 145 to a maximum depth of 180 cmbs (57.1 to 70.8 inbs), was characterized as a layer of gray (10YR 4/1) silty clay. Due to an influx of groundwater, excavation of the backhoe trenches was terminated at approximately 180 cmbs (70.8 inbs).

Investigation of Segment AHP-2a, i.e., High Probability Area #2a of the Alhambra to Hohen-Solms project item, resulted in the identification and recordation of a single archeological site: 16IV50. Fieldwork conducted within Site 16IV50, the results of the laboratory analysis of the recovered cultural material, and management recommendations for the site, are discussed in detail below.

Site 16IV50

Site 16IV50 is located within the western two-thirds of High Probability Area #2 of the Alhambra to Hohen-Solms project item (Table 11; Figures 42 and 43). This site consists of a nineteenth to early twentieth century cultural deposit located on the batture within Sections 2 and 3 of Township 10S, Range 13E. It is situated at an elevation of approximately 7.6 to 9.1 m (25 to 30 ft) NGVD. Convent soils, consisting of poorly drained loams and clays, dominate in this area.

Site 16IV50 is oblong in shape and encompasses an area that measures approximately 1.26 ac (0.51 ha) in size. The site is located approximately 180 m (591 ft) south of the Mississippi River; it is bounded to the north by a long borrow pit, to the south by the existing artificial flood control structure, and to the east and west by extensions of the levee into the batture area (Figure 44). Historically, this area was part of the Old Hickory Plantation, which was in operation during the nineteenth century. A total of 181 artifacts and 13 faunal specimens were recovered during survey of the site area (Tables 17 and 18); all of this material originated from subsurface contexts.

During survey, 18 of 18 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16IV50; 10 (56 percent) of the 18 backhoe trenches produced cultural material (Table 17). This material consisted of 1 ceramic doll part; 2 earthenware drainage pipe fragments; 1 porcelain button; 1 Albany slip-glazed stoneware sherd; 1 hand-painted and 1 plain ironstone sherd; 1 scalloped-rim pearlware sherd; 1 plain hard paste porcelain sherd; 1 black-glazed redware sherd; 1 annular-decorated, 8 sponge-decorated, 5 molded/embossed, 1 overglazed hand-painted, and 32 plain whiteware sherds; 1 Rockingham/Bennington yellowware sherd; 18 machine- and hand-made brick fragments; 3 opaque white/milk glass shards; 2 pink "Depression" glass shards; 1 green applied string lip bottle glass shard; 1 white/milk glass lamp globe shard; 6 amber and 6 colorless machine-made base glass shards; 1 amber post bottom mold bottle glass shard; 1 amethyst-colored, 1 aqua, and 6 colorless pressed glass shards; 1 amber, 7 amethyst-colored, 3 colorless, and 1 dark green tooled lip glass shards; 1 amber, 1 aqua, 6 colorless, and 2 light aqua unidentified blown-in-mold bottle glass shards; 1 amber, 7 amethyst-colored, 4 colorless, 1 dark green, and 1 light green unidentified bottle glass shard; 1 metal pipe frag-



Figure 42. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16IV50.**



Figure 43. Overview photo of Site 16IV50 facing east.

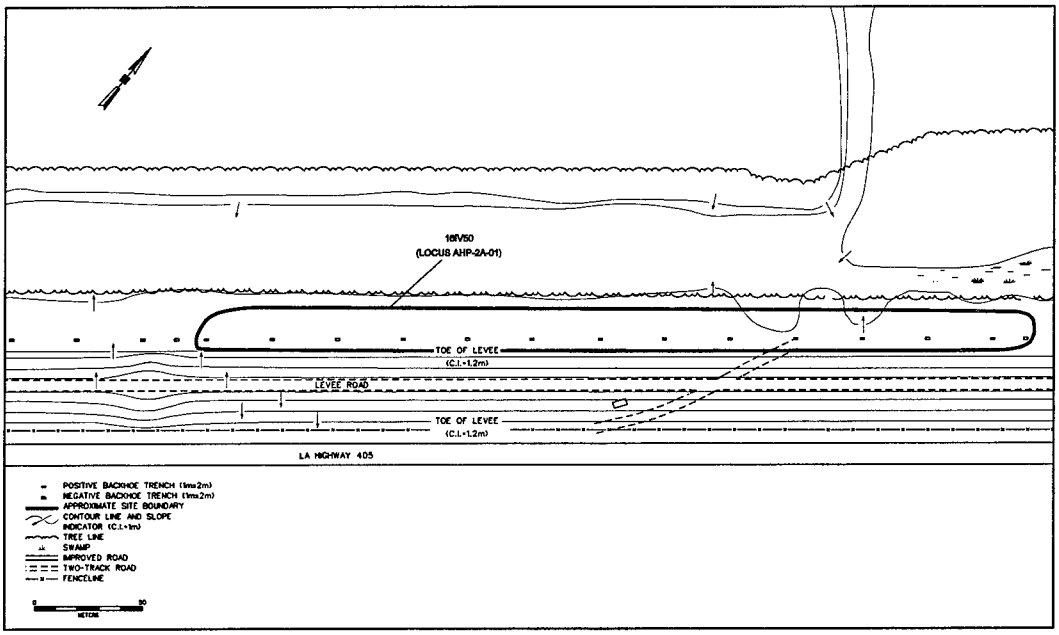


Figure 44. Plan view of Site 16IV50.

Table 17. Historic Period Artifacts Recovered from Site 16IV50.

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE	TOTAL
I		Ceramic	Activities	Doll Part(s)	Undetermined	Undetermined	1
			Clothing Items	Porcelain Button(s)	Complete	ca. 1840-1930 (UP)	1
			Whiteware	Plain	Body(s)	ca. 1820-1900+	1
					Rim(s)	ca. 1820-1900+	1
					Rim/Lip & Body	ca. 1820-1900+	1
			Yellowware	Rockingham/ Bennington	Body(s)	ca. 1830-1900	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	2
		Glass	"Depression" Glass	Opaque White/ Milk glass	Rim/Lip & Body	post ca. 1925; ca. 1928-1950s	3
			Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)	6
			Unidentified Blown-in-Mold Bottle Glass	Colorless	Body(s)	Undetermined	1
		Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830s-1890s+	3
				Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	3
II		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	3
		Glass	Tooled Lip	Dark Green	Lip(s)	ca. 1820s-1920s	1
III	1	Metal	Unidentified Metal Objects	Sheet Metal	Iron	Undetermined	7
	2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+	2
					Rim/Lip & Body	ca. 1820-1900+	3
		Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	Undetermined	2
		Glass	Tooled Lip	Colorless	Rim/Lip to Base	ca. 1820s-1920s	3
		Ceramic	Domestic Brown Stoneware	Albany Slip-Glazed Buff	Body(s)	ca. 1810-1900	1
			Ironstone	Hand-Painted	Rim(s)	Undetermined	1
				Porcelaneous Ware	Body(s)	post ca. 1880	1
			Porcelain, Hard Paste	Undecorated	Rim(s)	post ca. 1768	1
			Refined Redware	Black Glazed	Body(s)	Undetermined	1
			Whiteware	Annular-Decorated	Rim(s)	ca. 1820-1890	1
				Cut-Sponge Decoration	Rim/Lip to Base	ca. 1840s - 1870s	8
				Molded/ Embossed Decoration	Base(s)	Undetermined	1
					Body(s)	Undetermined	1
					Rim/Lip & Body	Undetermined	2
				Plain	Base(s)	ca. 1820-1900+	6
					Handle(s)	ca. 1820-1900+	1
					Rim(s)	ca. 1820-1900+	8
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	1
		Glass	Applied String Lip	Green	Lip(s)	Undetermined	1
			Machine-Made Base	Amber	Body & Base	post ca. 1898	6
			Pressed Glass	Colorless	Rim/Lip & Body	post ca. 1825	6
			Tooled Lip	Amber	Lip(s)	ca. 1820s-1920s	1
			Unidentified Blown-in-Mold Bottle Glass	Aqua	Neck(s)	Undetermined	1
				Colorless	Shoulder(s)	Undetermined	1
			Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	Undetermined	1
		Metal	Furniture	Stove Part(s)	Cast Iron	Undetermined	1
			Miscellaneous Clothing Items	Grommet(s)	Brass	Undetermined	1
			Miscellaneous Hardware	Hook(s) (Generic)	Iron	Undetermined	1
				Ring(s)	Iron	Undetermined	1
				Washer(s)	Iron	Undetermined	1

Table 17, continued

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE	TOTAL
II-III		Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	Undetermined	1
II-IV		Metal	Miscellaneous Hardware	Strap(s)	Iron	Undetermined	1
IV		Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	7
		Glass	Unidentified Blown-in-Mold Bottle Glass	Colorless	Body(s)	Undetermined	1
				Light Aqua	Body(s)	Undetermined	1
			Unidentified Bottle Glass (Kitchen)	Amethyst-Colored	Body(s)	ca. 1875-1920	5
				Colorless	Body(s)	Undetermined	1
				Light Green	Body(s)	Undetermined	1
		Metal	Construction Hardware	Pipe(s)	Iron	Undetermined	1
			Furniture	Stove Part(s)	Cast Iron	Undetermined	3
			Miscellaneous Hardware	Wire fragment(s)	Iron	post ca. 1830	1
			Nail(s)	Wire, Common	Iron	post ca. 1890	2
			Unidentified Metal Objects	Indeterminate	Iron	Undetermined	2
				Sheet Metal	Iron	Undetermined	1
V		Ceramic	Architectural	Earthenware Drainage/Sewage Pipe	Indeterminate	Undetermined	1
		Glass	Tooled Lip	Amethyst-Colored	Lip(s)	ca. 1875-1920	7
VI		Glass	Post Bottom Mold	Amber	Base(s)	post ca. 1850	1
			Unidentified Blown-in-Mold Bottle Glass	Amber	Neck(s)	Undetermined	1
			Unidentified Bottle Glass	Colorless	Indeterminate	Undetermined	1
		Metal	Miscellaneous Hardware	Miscellaneous	Iron	Undetermined	1
VII		Metal	Unidentified Metal Objects	Indeterminate	Iron	Undetermined	1
Backdirt		Ceramic	Architectural	Earthenware Drainage/Sewage Pipe	Body(s)	Undetermined	1
			Pearlware	Scalloped Rim, Embossed Design	Rim(s)	Undetermined	1
			Whiteware	Molded/ Embossed Decoration	Rim(s)	Undetermined	1
				Overglaze Hand-Painted	Body(s)	ca. 1820-1890	1
				Plain	Base(s)	ca. 1820-1900+	3
					Body(s)	ca. 1820-1900+	3
					Rim(s)	ca. 1820-1900+	2
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	2
		Glass	"Depression" Glass	Pink	Heel(s)	post ca. 1925;	2
			Light Globe	White/ Milk Glass	Body(s)	Undetermined	1
			Pressed Glass	Amethyst-Colored	Body(s)	ca. 1875-1920	1
				Aqua	Body(s)	post ca. 1825	1
			Unidentified Blown-in-Mold Bottle Glass	Colorless	Body(s)	Undetermined	2
					Heel(s)	Undetermined	1
				Light Aqua	Body(s)	Undetermined	1
			Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	Undetermined	1
				Amethyst-Colored	Body(s)	ca. 1875-1920	1
					Neck(s)	ca. 1875-1920	1
				Colorless	Body(s)	Undetermined	1
				Dark Green	Body(s)	Undetermined	1
		Metal	Furniture	Stove Part(s)	Cast Iron	Undetermined	2
			Miscellaneous Hardware	Miscellaneous Machinery/ Other Part(s)	Cast Iron	Undetermined	3
			Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830s-1890s+	5
Grand Total							**181**

Table 18. Faunal Specimens Recovered from Site 16IV50.

STRATUM	CLASS	GENUS	SPECIES	COMMON NAME	ELEMENT	MODIFICATION	TOTAL
III	Mammalia	Bos	taurus	Cow	Rib	Sawed	1
		Sus	scrofa	Domestic pig	Ulna	None	1
		Undetermined	Undetermined	Even-toed ungulates	Humerus	Hack	1
				Unidentified Mammal	Shaft fragment	Carnivore-gnawed	1
						Cut	3
						Hack	3
IV	Mammalia	Undetermined	Undetermined	Unidentified Mammal	Miscellaneous fragment	Sawed	1
Backdirt	Mammalia	Bos	taurus	Cow	Tibia	Hack	1
		Undetermined	Undetermined	Unidentified Mammal	Shaft fragment	None	1
Grand Total							**13**

ment; 6 stove parts; 1 clothing grommet; 1 iron hook; 4 unidentified metal fragments; 3 miscellaneous machine parts; 1 iron ring; 1 iron strap fragment; 1 washer; 1 wire fragment; 11 machine-cut and 2 wire nails; 8 pieces of sheet metal; and 13 faunal specimens.

The faunal assemblage recovered from Site 16IV50 consisted of 1 pig ulna fragment, 1 cow tibia fragment, 1 cow rib fragment, 1 unidentified mammal humerus fragment, and 9 unidentified mammal bone fragments (Table 18). One of the unidentified mammal bone fragments and the single cow rib fragment exhibited evidence of saw cut marks. In addition, the humerus fragment, the single cow tibia fragment, and 1 unidentified mammal bone fragment exhibited evidence of hack marks.

Of the 194 artifacts and ecofacts collected from Site 16IV50, 24 were recovered from Stratum I, 4 were collected from Stratum II, 83 were derived from Stratum III, 28 originated in Stratum IV, 8 were identified within Stratum V, 4 were collected from Stratum VI, 1 was recovered from Stratum VII, and 40 were collected from the backhoe trench and backdirt piles. In addition, two artifacts could not be provenienced precisely: a brick fragment was recovered from Strata II – III, and a miscellaneous hardware fragment was collected from Strata II - IV. Temporally diagnostic artifacts recovered from Site 16IV50, including whiteware, yellowware, Albany slip-glazed stoneware, opaque white/milk glass, machine-made bottle glass, tooled lip bottle glass, pressed glass, amethyst-colored glass, and machine-cut nails indicate that the site contains cultural deposits dating from the nineteenth to the early twentieth centuries (Figures 45 and 46). In addition, two of the plain whiteware sherds cross-mended and they exhibited a maker's mark belonging to the Homer Laughlin Company. This mark contained the superimposed letters H and Lm, as well as the words "R LAUGHLIN/HUDSON" (Figure 47); it dates ca. 1903.

As was the case with Sites 16IV48 and 16IV49, Site 16IV50 produced a diversity of domestic artifacts, as well as construction materials and a limited number of faunal specimens (Tables 17 and 18). Domestic artifacts included historic period ceramic sherds (whiteware, pearlware, yellowware, and Albany slip-glazed stoneware), porcelain buttons, and glass shards ("Depression" glass, machine-made bottle glass, tooled lip glass, pressed glass, and post bottom mold glass). Construction materials recovered from Site 16IV50 consisted of brick fragments (machine- and hand-made), pieces of earthenware sewer pipe, and nails (machine-cut and wire). Miscellaneous hardware recovered from the site included an iron strap, wire fragments, an iron pipe fragment, and miscellaneous iron machinery parts. In addition, a single stovepipe fragment was recovered during survey.

The artifacts and ecofacts recovered from the area indicate that Site 16IV50 possibly represents the remains of one or more dwellings. It is likely that the site is associated with the now destroyed buildings that are depicted on several Mississippi River Commission maps of the area, as well as those shown on the 1932 design plans for the Bayou Goula New Levee setback, prepared by the Board of State Engineers. A total of 14 structures were identified on these maps. These structures fall within approximately 5 m (16.4 ft) of backhoe trenches 10 - 13 as they are depicted on the site plan view. These structures

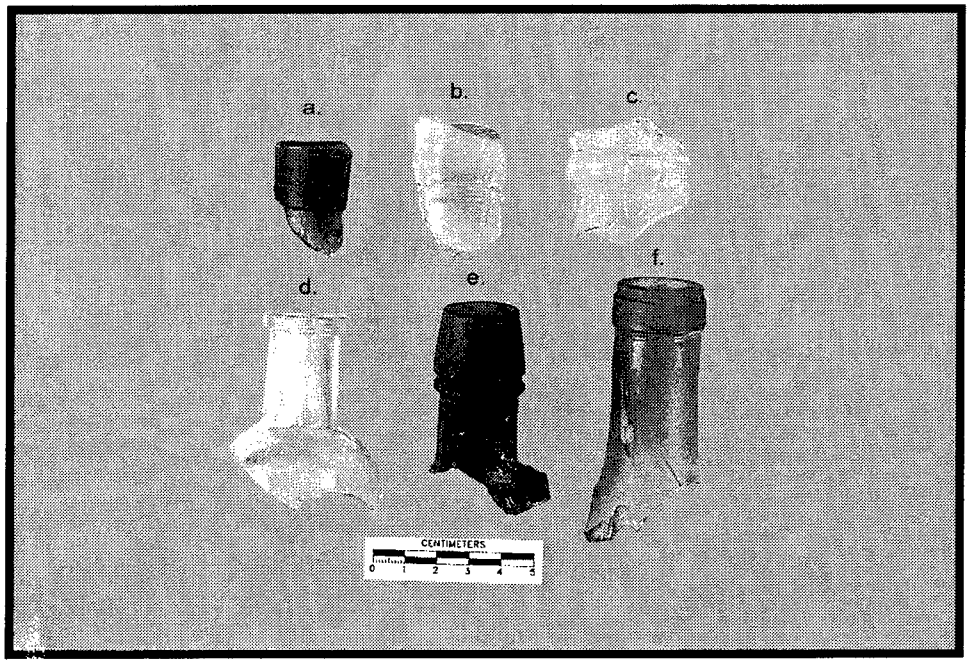


Figure 45. **Selected glass artifacts recovered from Site 16IV50: (a) bottle fragment with a tooled lip; (b) amethyst-colored (manganese solarization) bottle fragment with a tooled lip; (c) blown-in-mold bottle fragment with a ball neck; (d) bottle fragment with a tooled lip; (e) bottle fragment with a tooled lip; and (f) bottle fragment with an applied string lip.**

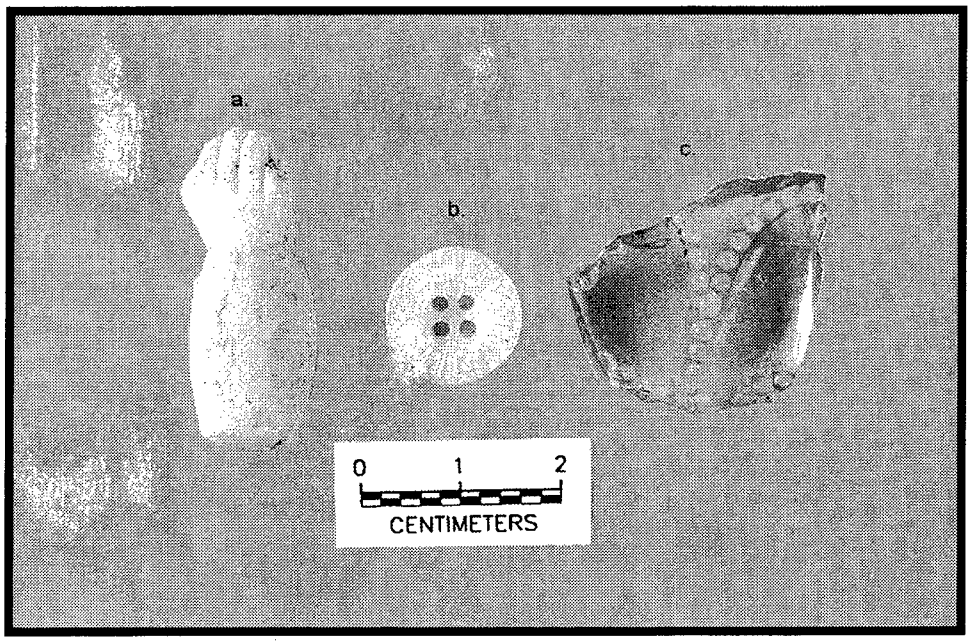


Figure 46. **Selected historic period artifacts recovered from Site 16IV50: (a) ceramic doll part; (b) porcelain four hole button with a "pie crust" border; and (c) opalescent pressed glass shard with "bead and bark" pattern (Northwood Glass Co.).**

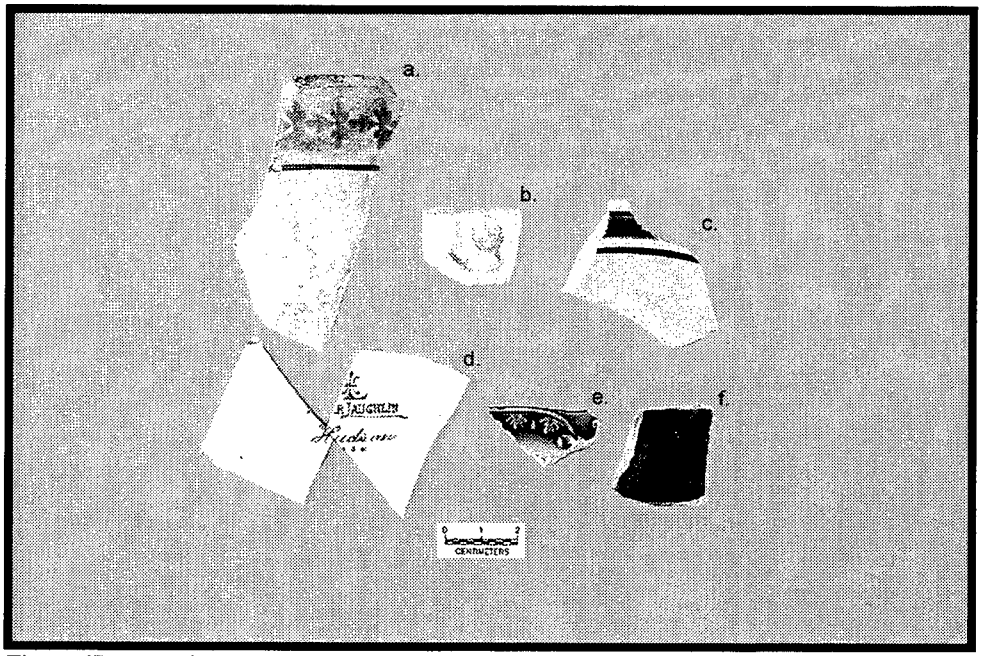


Figure 47. **Selected historic period ceramic sherds recovered from Site 16IV50: (a) whiteware sherd with cut sponge decoration; (b) overglaze hand painted whiteware sherd; (c) annular decorated whiteware sherd; (d) 2 mending plain whiteware sherds marked with "(superimposed stylized H and L [Homer Laughlin maker's mark])/[HOME]R LAUGHLIN/Hudson (script)/...4(?) 3N"; (e) scalloped rim pearlware sherd embossed with a vine and leaf design; and (f) Rockingham/Bennington yellowware sherd.**

possibly represent workers cabins, residences, or other facilities, some of which may have been associated with the Old Hickory Plantation.

Backhoe trenching at Site 16IV50 revealed that with the exception of fill added during construction of the existing levee, the site contains intact cultural deposits ranging in depth from approximately 15 to 90 cmbs (5.9 to 35.4 inbs). A typical backhoe trench excavated within the site area extended to a depth of 190 cmbs (74.8 inbs) and exhibited five strata in profile (Figure 48). Stratum I was described as a layer of dark grayish brown (10YR 3/2) clay that ranged in depth from 0 to 17 cmbs (0 to 6.7 inbs); it consisted of fill deposited during the levee construction process. This stratum was underlain by Stratum II, a layer of very dark brown (10YR 2/2) silty loam that extended from 17 to 47 cmbs (6.9 to 18.5 inbs). Stratum III ranged in depth from 47 to 73 cmbs (18.5 to 28.7 inbs), and it was described as a layer of brown (10YR 5/3) silty loam. Stratum IV was characterized as a layer dark grayish brown (2.5YR 4/2) silt loam that extended from 73 to 146 cmbs (28.7 to 57.5 inbs). Finally, Stratum IV was underlain by Stratum V, a layer of gray (10YR 4/1) silty clay; it extended from 146 to 190 cmbs (57.5 to 74.8 inbs). The water table was encountered at approximately 190 cmbs (74.8 inbs); excavation of the various backhoe trenches was terminated at that point.

In addition, one of the backhoe trenches excavated within Site 16IV50, Backhoe Trench 10, produced evidence of a cultural feature. This feature, noted in plan view at approximately 87 cmbs (34.3 inbs), consisted of a cluster of artifacts, including a large piece of sheet metal. The metal was identified at the top of Stratum III, a deposit of dark gray (10YR 4/1) silty clay. Further excavation of the backhoe trench revealed a second, dense deposit of artifacts at a depth of approximately 115 cmbs (45.2 inbs) (Figures 49 and 50). Originally, it appeared that the two clusters of artifacts represented separate, superimposed features. Closer inspection of the backhoe trench profile, however, revealed that all of the recovered cultural material originated from same feature. This feature falls within the vicinity of an historic period structure depicted on Mississippi River Commission maps of the area, as well as on the 1932 design plans of the Bayou Goula New

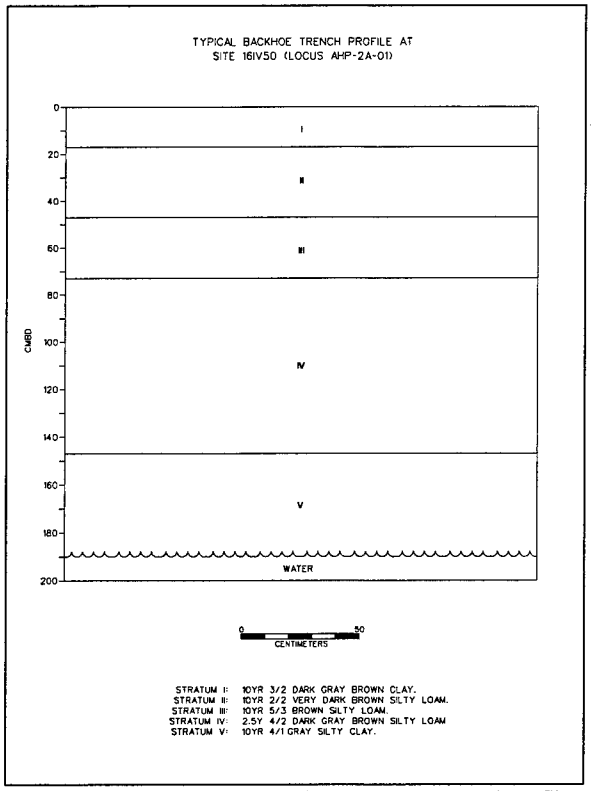


Figure 48. Profile of a typical backhoe trench at Site 16IV50.



Figure 50. Photo of Feature 1 plan view at Site 16IV50.

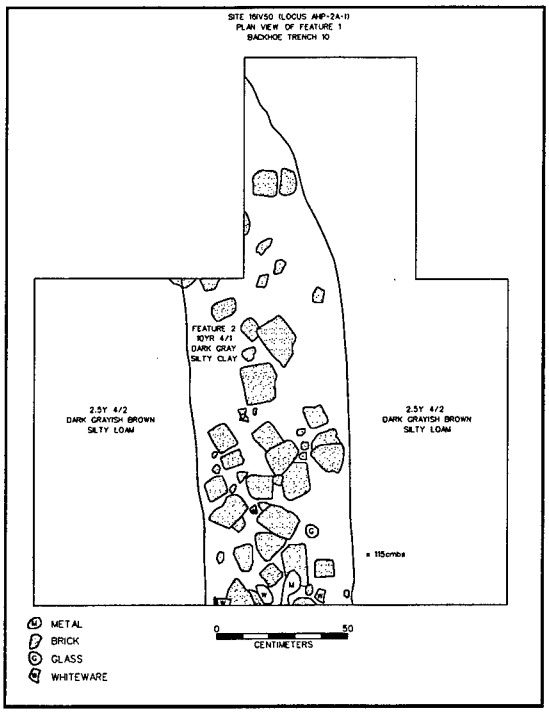


Figure 49. Plan view of Feature 1 at Site 16IV50.

Levee, and it may represent a builder's trench; it measured approximately 60 cm (23.6 in) in width. Cultural material recovered from the feature included 5 plain whiteware sherds, 2 handmade brick fragments, 3 colorless tooled lip glass shards, and 7 sheet metal fragments (Table 17). The possible builder's trench extended from approximately 44 cmbs (17.3 inbs) to at least 115 cmbs (45.2 inbs), the base of excavation (Figures 51 and 52). Excavation of the trench was terminated at 115 cmbs (45.2 inbs), in order to preserve the remainder of the feature in situ. After the feature was drawn in both plan view and in profile and photographed, the feature was covered with plastic and the backhoe trench was backfilled completely.

Archeological data collected during survey indicate that Site 16IV50 contains intact nineteenth to early twentieth century cultural deposits associated with the remnants of at least one, and possibly more, historic period structures. This site may be associated with several now destroyed buildings depicted on Mississippi River Commis-

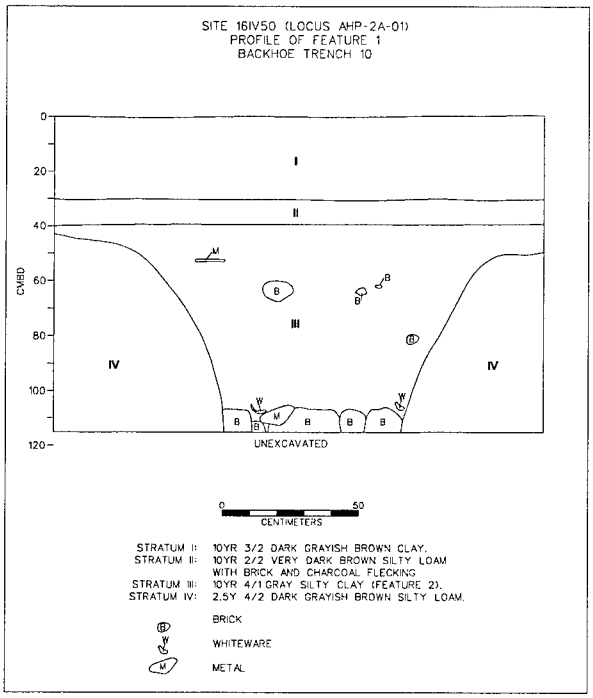


Figure 51. Profile of Feature 1 at Site 16IV50.



Figure 52. Photo of Feature 1 profile at Site 16IV50.

sion maps of the area, as well as those shown on the 1932 design plans of the Bayou Goula New Levee setback. The structural remains identified during survey likely are those of workers cabins associated with the Old Hickory Plantation. The results of survey, including the recovery of numerous historic period artifacts and the recordation of one cultural feature, indicate that Site 16IV50 possesses intact cultural deposits that retain research potential. Site 16IV50 possesses the qualities of significance under criteria [a and d] of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site may provide significant archeological data relating to at least three of the cultural themes indicated in *Louisiana's Comprehensive Archaeological Plan* (Smith et al. 1983). They include Culture History, the Influence of the Mississippi River of Historic Settlement, and Plantation Archeology. Thus, avoidance of Site 16IV50 or mitigation prior to the implementation of concrete slope paving construction and levee re-contouring is recommended.

Segment AHP-2b (High Probability Area #2b)

Segment AHP-2b, High Probability Area #2b of the Alhambra to Hohen-Solms project item, originated within the north-central portion of Section 2 of Township 10S, Range 13E, and extended for approximately 345 m (1,131 ft) to its termination point in the north-central part of Section 14 of Township 10S, Range 14E (Figure 2: oversized map). This survey segment extended in a northeasterly direction; it consisted of an open grassy area that was bounded to the south by the artificial flood control structure and to the north by numerous borrow pits that were excavated for fill during construction of the extant levee (Figure 53). This survey segment was situated at approximately 7.6 m (25 ft) NGVD, and the area was dominated by soils belonging to the Vacherie series. Vacherie soils, which consist of poorly drained, slowly permeable silty loams, are distributed along the natural levees of the larger streams and rivers found throughout Louisiana (Spicer et al. 1976). This area was assessed as having a high probability for intact cultural deposits in part because of the numerous structures depicted on historic period maps of the proposed project area.

During survey, 14 of 14 (100 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout the Area of Potential Effect associated with Segment AHP-2b (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 185 cmbs (72.8 inbs), and it exhibited five strata in profile (Figure 54). Stratum I extended from 0 to 25 cmbs (0 to 9.8 inbs), and it was described as a layer of dark brown (10YR 3/2) clay. Stratum I was underlain by Stratum II, a layer of brown (10YR 5/3) silty loam; it reached from 25 to 48 cmbs (9.8 to 18.9



Figure 53. Overview photo of Segment AHP-2b facing west.

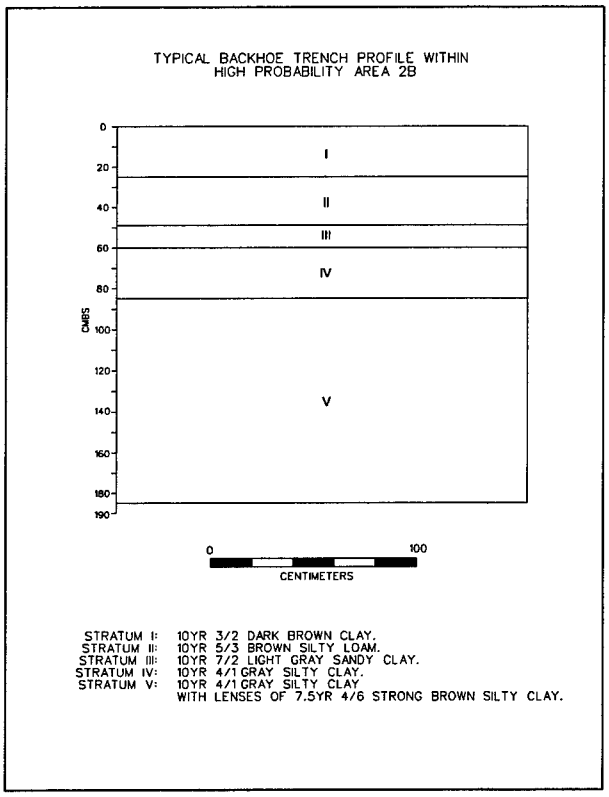


Figure 54. Profile of a typical backhoe trench within Segment AHP-2b.

inbs). Stratum III consisted of a layer of light gray (10YR 7/2) sandy clay that ranged in depth from 48 to 60 cmbs (18.9 to 23.6 inbs). Stratum IV was characterized as a layer of dark gray (10YR 4/1) silty clay; it extended from 60 to 85 cmbs (23.6 to 33.1 inbs). Finally, Stratum V reached from 85 to 185 cmbs (33.1 to 72.8 inbs), and it was characterized as a layer of gray (10YR 4/1) silty clay interbedded with lenses of strong brown (7.5YR 4/6) silty clay.

Survey of High Probability Area #2b (Segment AHP-2b) of the Alhambra to Hohen-Solms project item resulted in the identification and recordation of a single archeological site: 16IV51. The cultural material recovered from this site, as well as a National Register assessment and management recommendations for the site, are discussed in detail below.

Site 16IV51

Site 16IV51 consists of a late eighteenth to early twentieth century historic period artifact scatter. It is located in the eastern portion Segment AHP-2b, i.e., High Probability Area #2b of the Alhambra to Hohen-Solms project item. This site is situated on the batture within Section 14 of Township 10S, Range 14E, at an approximate elevation of 7.6 m (25 ft) NGVD (Table 11; Figures 55 and 56). Site 16IV51 is oblong in shape and encompasses an area that measures approximately 0.65 ac (0.26 ha) in size. Soils located within the site area belong to the Convent series, which consist of poorly drained clays and loams.

Site 16IV51 is located approximately 150 m (492 ft) from the bankline of the Mississippi River. It is bounded to the north by a long, narrow borrow pit that provided fill used during the construction of the existing flood control levee, and to the south by the existing levee (Figure 57). Historically, this area was part of the Old Hickory Plantation. During survey, 55 historic period artifacts and 30 faunal specimens were recovered from the site area (Tables 19 and 20). All of this material originated from subsurface contexts.

During survey, 11 of 11 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16IV51. A total of five of the 11 (45 percent) planned backhoe trenches produced cultural material (Table 19). This material consisted of 1 finger-painted, 1 mocha-decorated, and 5 plain creamware sherds; 1 salt-glazed domestic brown stoneware sherd; 1 "negative" blue transfer-printed, 1 annular-decorated, 1 mocha-decorated, 3 scalloped rim, and 2 undecorated pearlware sherds; 1 black-glazed redware sherd; 2 engine-turned, 1 mocha-decorated, 4 transfer-printed, 1 unidenti-



Figure 55. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16IV51.**



Figure 56. Overview photo of Site 16IV51 facing east.

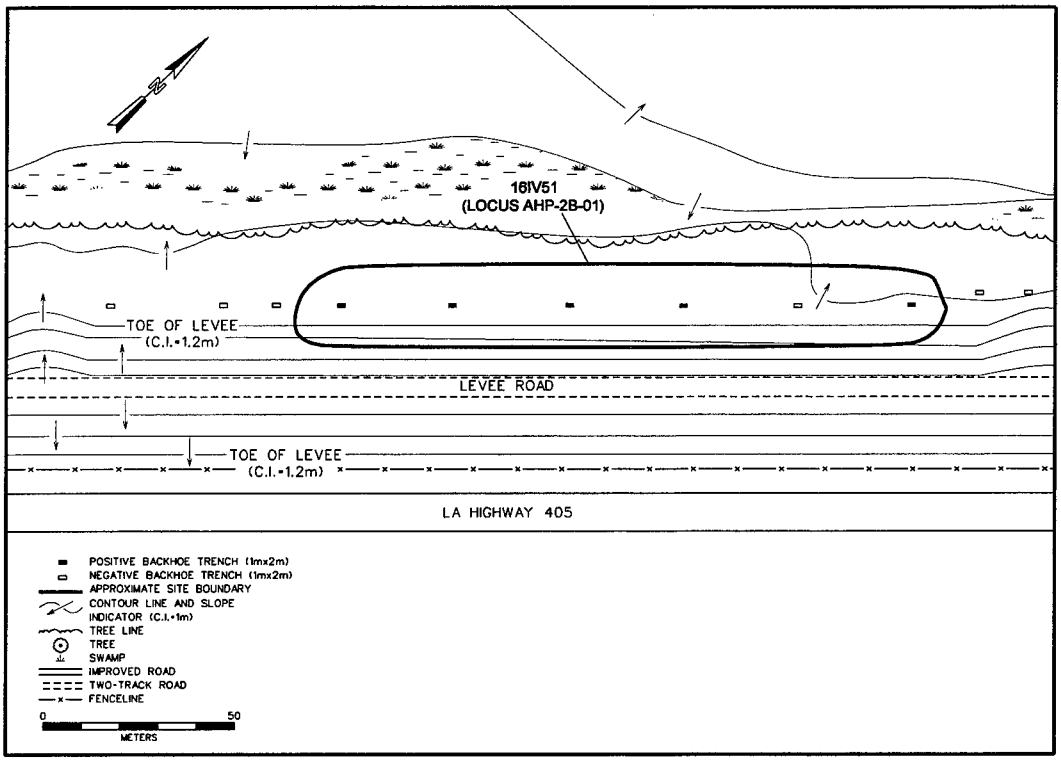


Figure 57. Plan view of Site 16IV51.

Table 19. Historic Period Artifacts Recovered from Site 16IV51.

STRATUM	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE	TOTAL
V	Ceramic	Creamware	Finger-Painted	Body(s)	ca. 1790-1820	1
		Domestic Brown Stoneware	Salt-Glazed Buff	Body(s)	Undetermined	1
		Pearlware	"Negative" Blue Transfer-Printed	Base(s)	ca. 1818-1830	1
			Annular-Decorated	Body(s)	ca. 1790-1820	1
			Scalloped Rim, Impressed Curved Lines	Rim(s)	ca. 1795-1845	2
			Undecorated	Base(s)	ca. 1780-1830	1
		Refined Redware	Black Glazed	Body(s)	Undetermined	1
		Tobacco Pipes	Ball Clay (Kaolin) Stem(s)	Undetermined	Undetermined	1
		Whiteware	Engine-Turned	Rim(s)	Undetermined	2
			Plain	Body(s)	ca. 1820-1900+	1
			Transfer-Printed	Body(s)	Post ca. 1820; ca. 1820-1860	1
				Indeterminate	Post ca. 1820; ca. 1820-1860	1
			Unidentified Decoration	Body(s)	Undetermined	1
	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	1
			Brick, Handmade, Partial	Undetermined	Undetermined	1
	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Body(s)	Undetermined	3
				Shoulder(s)	Undetermined	1
			Dark Green	Body(s)	Undetermined	1
			Yellow Green (Olive)	Body(s)	Undetermined	1
	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. Late 1830s-1890s+	2
			Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	1
			Wire, Unidentified	Iron	Post ca. 1890	1
	Other	Unidentified Material	Unidentifiable Fired Earth	Undetermined	Undetermined	1
	Stone	Other Miscellaneous Stone	Limestone fragment(s)	Undetermined	Undetermined	1
VI	Ceramic	Creamware	Undecorated, Light Tint	Body(s)	ca. 1775-1820	1
		Pearlware	Mocha-Decorated	Body(s)	ca. 1795-1890	1
		Whiteware	Mocha-Decorated	Body(s)	ca. 1820-1890	1
Backdirt	Ceramic	Creamware	Mocha-Decorated	Base(s)	ca. 1785-ca. 1835	1
			Undecorated, Light Tint	Body(s)	ca. 1775-1820	4
		Pearlware	Scalloped Rim, Impressed Straight Lines	Rim(s)	ca. 1795-1840	1
			Undecorated	Body(s)	ca. 1780-1830	1
		Whiteware	Plain	Body(s)	ca. 1820-1900+	2
			Transfer-Printed	Body(s)	Post ca. 1820; ca. 1820-1860	2
	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	2
			Brick, Glazed	Undetermined	Undetermined	1
	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Base(s)	Undetermined	1
				Body(s)	Undetermined	1
	Metal	Miscellaneous Hardware	Ring(s)	Iron	Undetermined	1
		Nail(s)	Hand-Wrought, Type 1/2nn	Iron	ca. 1769-1799	1
			Hand-Wrought, Type 2k	Iron	ca. 1769-1810	1
			Machine-Cut, Stamped Head	Iron	ca. Late 1830s-1890s+	2
			Machine-Cut, Unidentified Head Style	Iron	ca. 1790s-1890s+	2
Grand Total						**55**

Table 20. Faunal Specimens Recovered from Site 16IV51.

STRATUM	CLASS	GENUS	SPECIES	COMMON NAME	ELEMENT	MODIFICATION	TOTAL
V	Mammalia	Sus	Scrofa	Domestic pig	Miscellaneous tooth fragment	None	5
					Molar	None	1
					Premolar	None	2
					Tibia	Carnivore-gnawed	2
						Hack	1
		Undetermined	Undetermined	Unidentified Mammal	Miscellaneous fragment	None	2
					Shaft fragment	None	1
	Vertebrata	Undetermined	Undetermined	Unidentified Vertebrate	Miscellaneous fragment	None	5
VI	Mammalia	Bos	Taurus	Cow	Shaft fragment	Carnivore-gnawed	4
						Rodent-gnawed	1
		Sus	Scrofa	Domestic pig	Canine tooth	None	1
		Undetermined	Undetermined	Unidentified Mammal	Miscellaneous fragment	None	1
					Shaft fragment	None	2
Backdirt	Mammalia	Sus	Scrofa	Domestic pig	Canine tooth	None	1
		Undetermined	Undetermined	Unidentified Mammal	Shaft fragment	None	1
Grand Total							**30**

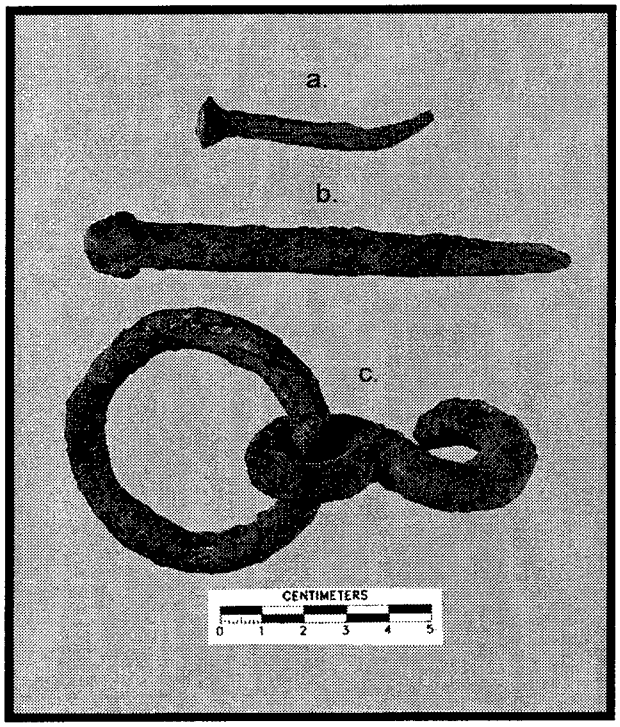


Figure 58. Selected historic period iron artifacts recovered from Site 16IV51: (a) hand-wrought, type 2k iron nail; (b) hand-wrought, type 1/2nn iron nail; and (c) unidentified iron ring with "S" hook attached.

fied decorated, and 3 plain whiteware sherds; 1 kaolin pipestem fragment; 5 brick fragments; 1 dark green, 1 yellow-green, and 6 aqua unidentified bottle glass shards; 1 iron ring; 2 hand-wrought, 1 wire, and 7 machine-cut nails; 1 limestone fragment; 1 piece of fired earth; and 30 faunal specimens (Figure 58).

The faunal specimens recovered from Site 16IV51 consisted of 1 pig molar, 2 pig premolars, 2 pig canines, 5 unidentified pig tooth fragments, 3 pig tibia fragments, 5 cow long bone shaft fragments, 7 unidentified mammal bone fragments, and 5 unidentified vertebrate bone fragments (Table 20). In addition, two of the pig tibia fragments exhibited evidence of carnivore gnawing, and one contained a hack mark. Evidence of carnivore gnawing was observed on five of the cow long bone shaft fragments, and one displayed rodent gnaw marks. None of the other faunal specimens exhibited any modifications.

Of the 85 artifacts and ecofacts recovered from the site area, 48 were collected from Stratum V, 12 were derived from Stratum VI, and 25 originated from the backhoe trench backdirt piles. Temporally diagnostic artifacts recovered

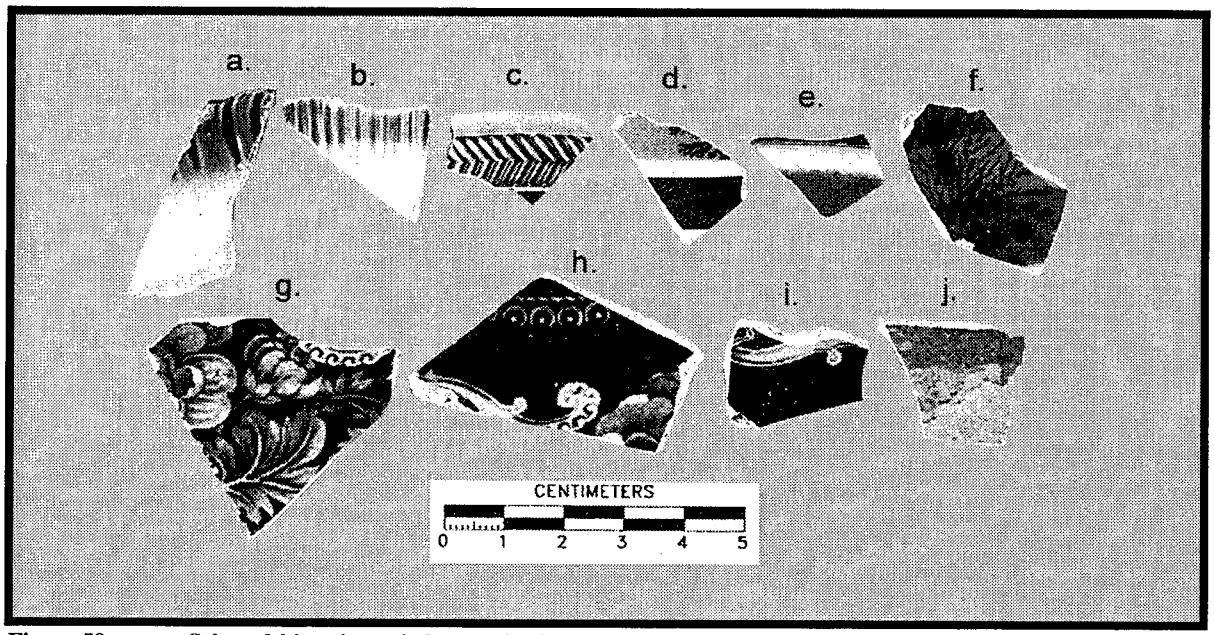


Figure 59. **Selected historic period ceramic sherds recovered from Site 16IV51: (a) scalloped rim pearlware sherd with impressed curved lines; (b) scalloped rim pearlware sherd with impressed straight lines; (c) whiteware sherd with chevron engine-turned design; (d) mocha decorated whiteware sherd; (e) annular-decorated pearlware sherd; (f) mocha-decorated pearlware sherd; (g) transfer-printed whiteware sherd; (h) "negative" blue transfer-printed pearlware sherd; (i) transfer-printed whiteware sherd; and (j) transfer-printed whiteware sherd.**

from Site 16IV51 suggest a date range extending from the late eighteenth to early twentieth centuries (Figure 59). These artifacts included finger-painted and mocha-decorated creamware; transfer-printed, annular-decorated, and scalloped-rim pearlware; transfer-printed and mocha-decorated whiteware; machine-cut, wire, and hand-wrought nails.

A variety of domestic artifacts and construction materials were recovered from Site 16IV51 (Table 19). The domestic artifact sub-assemblage included historic period ceramic sherds (creamware, stoneware, pearlware, and whiteware sherds), while construction materials recovered from the site consisted of brick fragments (machine-made, hand-made, and glazed) and nails (machine-cut, wire, and hand-wrought). It appears based on its position and artifact content that Site 16IV51 represents the remains of one or more historic period structures. While they are likely associated with the Old Hickory Plantation, some of the artifacts recovered from the site, e.g., creamware and pearlware, also suggest the presence of even earlier occupation within the site area.

Fieldwork conducted within the vicinity of the site indicated that, with the exception of fill added during construction of the existing artificial control structure, Site 16IV51 may contain intact cultural deposits ranging in depth from approximately 30 to 135 cmbs (11.8 to 53.1 inbs). A typical backhoe trench excavated within the site area extended to a depth of 180 cmbs (70.9 inbs), and it exhibited six strata in profile (Figure 60). Stratum I was described as a layer of dark brown (10YR 3/2) clay that ranged in depth from 0 to 10 cmbs (0 to 3.9 inbs); it coincided with fill used during the construction of the artificial flood control structure and subsequent silt deposits. Stratum I was underlain by Stratum II, a layer of brown (10YR 5/3) silty loam that extended from 10 to 20 cmbs (3.9 to 7.9 inbs). Stratum III reached from 20 to 40 cmbs (7.9 to 15.7 inbs), and it was described as a layer of very dark brown (10YR 3/3) silty loam; this stratum produced numerous artifacts and it appeared to represent natural levee soils. Stratum IV was described as a layer of gray (10YR 4/1) silty clay; it ranged in depth from 40 to 54 cmbs (15.7 to 21.3 inbs). Stratum IV was underlain by Stratum V, a

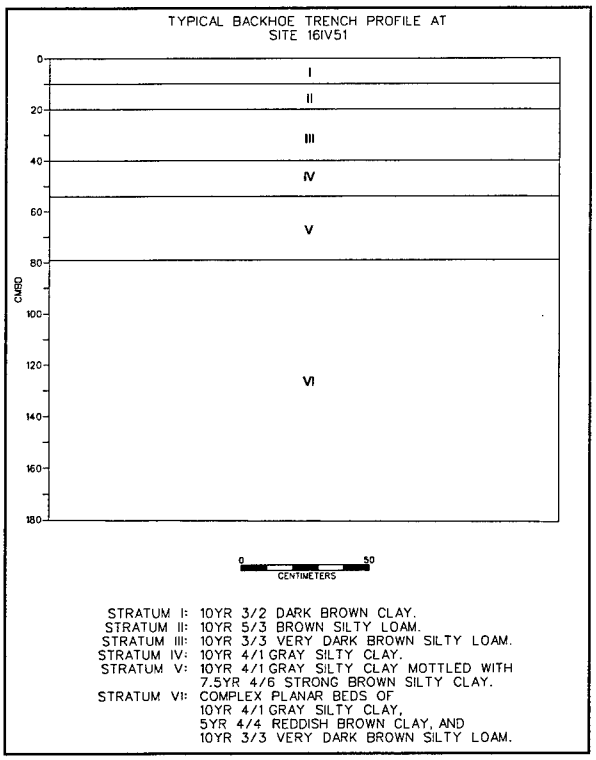


Figure 60. Profile of a typical backhoe trench at Site 16IV51.

layer of gray (10YR 4/1) silty clay mottled with strong brown (7.5YR4/6) silty clay that extended from 54 to 79 cmbs (21.3 to 31.1 inbs). Finally, Stratum VI was composed of multiple layers of interbedded clays and loam, described as gray (10YR 4/1) silty clay, reddish brown (5YR 4/4) clay, and very dark brown (10YR 3/3) silty loam; this stratum extended from 79 to 180 cmbs (31.1 to 70.8 inbs). The water table was encountered at approximately 180 cmbs (70.8 inbs). Backhoe trenches were terminated once excessive amounts of groundwater hindered excavation.

Data collected from Site 16IV51 indicate that the site consists of a late eighteenth to early twentieth century artifact scatter; this scatter appears to be associated with the Old Hickory Plantation, though some of the artifacts recovered from the site may be associated with an earlier occupation of the area. While the archeological material is indicative of a domestic occupation possibly associated with Old Hickory Plantation, the Mississippi River Commission Maps, as well as the 1932 map of the Bayou Goula New Levee setback, do not depict historic period structures in the vicinity of the site area.

Although no cultural features were identified during the Phase I cultural resources investigation of Site 16IV51, backhoe trenching revealed that the site may contain intact cultural deposits that may possess research potential. Site 16IV51 may possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation 36 CFR 60.4 [a-d]. Additional testing of the site area may result in the recovery of archeological data important to the understanding at least three of the cultural themes highlighted in *Louisiana's Comprehensive Archaeological Plan* (Smith et al. 1983). These include Plantation Archeology, Culture History, and the Influence of the Mississippi River on Historic Settlement. It is possible that additional testing of the site may provide new data regarding a fourth cultural theme, i.e., Ethnic Enclaves. As a result, avoidance of or Phase II National Register testing and evaluation of this potentially significant cultural resource is recommended.

Segment AHP-3 (High Probability Area #3)

Segment AHP-3, High Probability Area #3 of the Alhambra to Hohen-Solms project item, began within the vicinity of the boundary between Sections 24 and 25 of Township 10S, Range 14E in Ascension Parish Louisiana (Figure 2: oversized map). This segment extended in a southeasterly direction for approximately 735 m (2,378 ft), and terminated at the end of the Alhambra to Hohen-Solms project item approximately 100 m (328 ft) from the boundary between Sections 28 and 29 of Township 10S, Range 14E. The vast majority of this survey segment was situated at an approximate elevation of 7.6 m (25 ft) NGVD, and it was dominated by soils of the Commerce series. Commerce soils, poorly drained, silty clay loams located on natural levees of prominent stream and river courses, are found throughout the area (Spicer et al. 1976). Vegetation throughout this portion of the Area of Potential Effect consisted of manicured grass. This survey segment is bounded to the southwest by the existing flood control structure, and to the northeast by a series of inundated borrow pits excavated during construction of the extant levee (Figure 61).



Figure 61. Overview photo of Segment AHP-3 facing north.

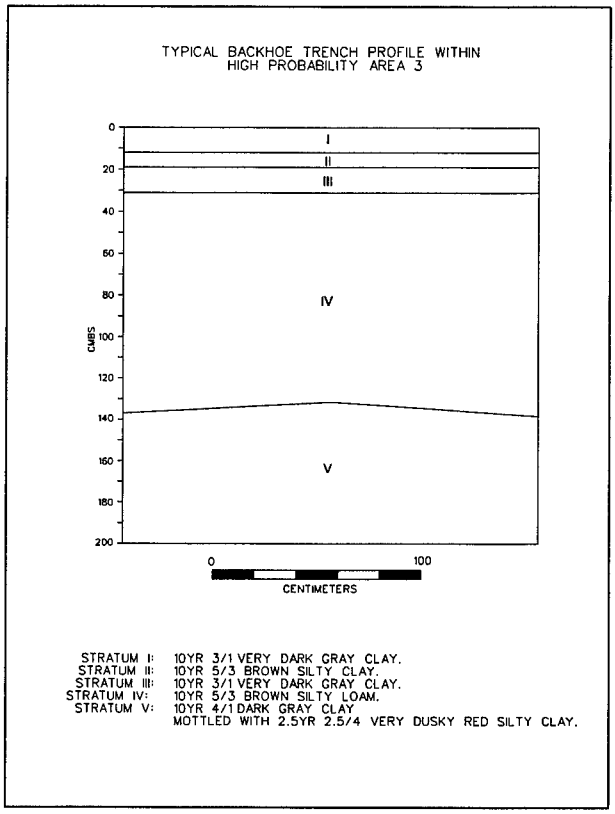


Figure 62. Profile of a typical backhoe trench within Segment AHP-3.

In addition, Segment AHP-3 is crossed by two man-made features: a dirt access road and a Louisiana International Gas Company natural gas pipeline. The natural gas pipeline was identified approximately 165 m (541 ft) from the origin of the survey segment, while the access road was recorded approximately 540 m (1,771 ft) from the pipeline corridor. This unimproved dirt road provides access to the batture from Louisiana State Route 405; it measured approximately 5 m (16.4 ft) in width.

Segment AHP-3 was assessed as having a high probability for containing intact cultural deposits in part because numerous historic period maps of the area, including the Mississippi River Commission maps and the design plans for the 1932 Bayou Goula New Levee setback, depicted numerous buildings approximately 100 to 125 m (328 to 410 ft) southwest of the survey segment. Some of these buildings may have been associated with the Germania and Mulberry Grove Plantations, both of which operated during the nineteenth century. Numerous buildings associated with the Mulberry Grove Plantation, including the plantation house and several workers cabins, still exist today and they are listed on the National Register of Historic Places.

During survey, 24 of 25 (96 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout the Area of Potential Effect associated with this survey segment. The remaining backhoe trench was not excavated because it fell within the berm covering the Louisiana International Gas Company natural gas pipeline. A typical backhoe trench excavated within this survey segment extended to a depth of 200 cmbs (78.7 inbs) and exhibited five strata in profile (Figure 62). Stratum I was described as a layer of very dark gray (10YR 3/1) clay that ranged in depth from 0 to 12 cmbs (0 to 4.7 inbs). Stratum II extended from 12 to 18 cmbs (4.7 to 7.1 inbs), and it consisted of a layer of brown (10YR 5/3) silty clay. Stratum II was underlain by Stratum III, a deposit of very dark gray (10YR 3/1) clay that extended from 18 to 32 cmbs (7.1 to 12.6 inbs). Stratum IV consisted of a layer of brown (10YR 5/3) silty loam; it ranged in depth from 32 to 137 cmbs (12.6 to 53.9 inbs). Finally, Stratum V extended from 137 cmbs (53.9 inbs) to a maximum excavated depth of 200 cmbs (78.8 inbs); it was described as a layer of dark gray (10YR 4/1) clay mixed with dusky red (2.5YR 2.5/4) silty clay.

Despite this intensive examination of Segment AHP-3, High Probability Area #3 of the

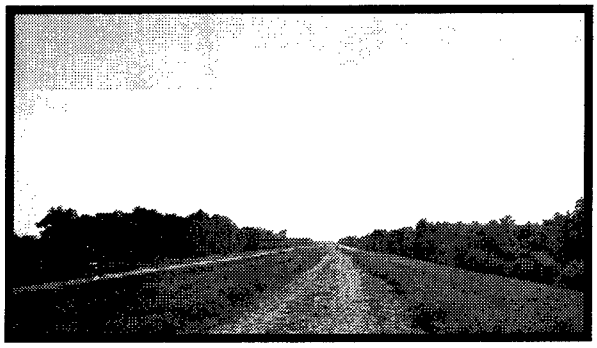


Figure 63. Overview photo of Segment AMP-1 facing northeast.

Alhambra to Hohen-Solms project item, no cultural resources were identified during survey. No additional testing of the survey segment is recommended.

Segment AMP-1 (Moderate Probability Area #1)

Segment AMP-1, Moderate Probability Area #1 of the Alhambra to Hohen-Solms project item, originated within the northwestern portion of Section 7 of Township 10S, Range 13E, and it extended for a distance of approximately 235 m (770 ft) to its terminating point within the northwestern part of Section 6 of Township 10S, Range 13E (Figure 2: oversized map). This survey segment extended in a northeasterly direction from an open grassy area that was bounded to the southeast by the artificial flood control structure and to the northwest by borrow pits that were excavated during construction of the extant levee in 1932 (Figure 63). This survey segment was situated at approximate elevation of 6.1 m (20 ft) NGVD, and it was composed of soils belonging to the Vacherie series. Vacherie soils consist of poorly drained, slowly permeable silty loams that frequently are distributed along the natural levees of large streams and rivers such as the Mississippi River (Spicer et al. 1976).

On the basis of the previously completed historic period map analysis, this area was assessed as having a moderate probability for containing intact cultural deposits, in part because of its location near several known plantations that operated during the nineteenth and twentieth centuries. No historic period structures or other cultural features were noted on Mississippi River Commission maps of the area or on the 1932 design plans for the Bayou Goula New Levee setback.

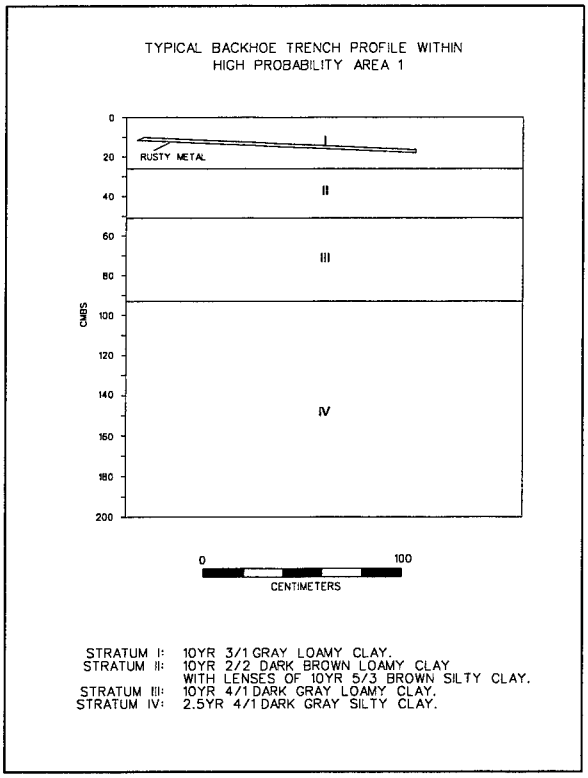


Figure 64. Profile of a typical backhoe trench within Segment AMP-1.

During survey, 5 of 5 (100 percent) planned backhoe trenches were excavated successfully at 50 m (164 ft) intervals throughout the Area of Potential Effect associated with Segment AHP-1 (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 200 cmbs (78.7 inbs), and it exhibited four strata in profile (Figure 64). Stratum I ranged in depth from 0 to 26 cmbs (0 to 10.2 inbs), and it was described as a layer of gray (10YR 3/1) loamy clay. Stratum I was underlain by Stratum II, a layer of dark brown (10YR 2/2) loamy clay mixed with brown (10YR 5/3) silty clay; it extended from 26 to 52 cmbs (10.2 to 20.4 inbs). Stratum III consisted of a layer of dark gray (10YR 4/1) loamy clay that ranged in depth from 52 to 93 cmbs (20.4 to 36.6 inbs). Finally, Stratum IV consisted of a layer of dark gray (2.5YR 4/1) silty clay; it extended from 93 to 200 cmbs (36.6 to 78.7 inbs).

Despite the successful excavation of 5 of 5 (100 percent) planned backhoe trenches within the Area of Potential Effect associated with Moderate Probability Area #1 of the Alhambra to Hohen-Solms project item (Segment AMP-1), no cultural resources were identified. It was later determined, however, that the boundaries of Site 16IV49 extended into this area. See the above discussion of Site 16IV49 for details about that cultural resource.

Segment AMP-2 (Moderate Probability Area #2)

Segment AMP-2, Moderate Probability Area #2 of the Alhambra to Hohen-Solms project item, originated at the boundary of Sections 5 and 6 of Township 10S, Range 13E (Figure 2: oversized map). This survey segment extended in a northeasterly direction for approximately 600 m (1,968 ft) to its termination within the north-central portion of Section 3 of Township 10S, Range 13E. Segment AMP-2 was covered entirely with grass and it was situated at elevations that ranged from 6.1 to 7.6 m (20 to 25 ft) NGVD (Figure 65). This survey segment contained soils of the both the Vacherie and Convent series. Both soils series consist of poorly drained silts and loams that are found along the natural levees of rivers and streams throughout the area (Spicer et al. 1976). This survey segment also was bounded to the south by the extant levee and to the north by a series of inundated borrow pits excavated during construction of the existing flood control levee. In addition, three natural gas pipelines crossed Segment AMP-2. These included two pipelines belonging to the Shell Corporation and a single Southern Natural Gas Company natural gas pipeline. The identified pipelines were located at approximately 50 m (164 ft), 100 m (328 ft), and 200 m (656 ft) from the origin of Segment AMP-2. Segment AMP-2, like Segment AMP-1, was designated as having a moderate potential for containing intact cultural deposits because it too was situated near a historic plantation (Old Hickory Plantation) that operated during the nineteenth century. No structures were identified on Mississippi River Commission maps of the area or on the 1932 design plans for the Bayou Goula New Levee setback.



Figure 65. Overview photo of Segment AMP-2 facing west.

During survey, 18 of 18 (100 percent) planned backhoe trenches were excavated successfully at 50 m (164 ft) intervals throughout the Area of Potential Effect associated with Segment AMP-2 (Table 11). A typical backhoe trench excavated along this survey segment extended to a depth of 190 cmbs (78.7 inbs), and exhibited four strata in profile (Figure 66). Stratum I extended from 0 to 50 cmbs (0 to 19.7 inbs), and it was described as a layer of very dark gray (10YR 3/1) clayey loam; it represented recent fill associated with construction of the extant flood control structure and subsequent high water deposits. Stratum I was underlain by Stratum II, a layer of grayish brown (10YR 5/2) silty clay that ranged in depth from 50 to 62 cmbs (19.7 to 24.4 inbs). Stratum III was described as a layer of dark gray (10YR 4/1) silty clay that extended from 62 to 130 cmbs (24.4 to 51.2 inbs). Finally, Stratum IV was characterized as a layer of brown (10YR 5/3) silty clay that extended from 130 to 190 cmbs (51.2 to 74.8 inbs). Excavation of the backhoe trenches was terminated at approximately 190 cmbs (74.8) due to an influx of groundwater.

Backhoe trenching of segment AMP-2, i.e., Moderate Probability Area #2 of the Alhambra to Hohen-Solms project item, resulted in the identification and recordation of a single archeological site, Site 16IV52. The cultural material recovered from Site 16IV52, as well as its National Register of Historic Places assessment and management recommendations, are discussed in detail below.

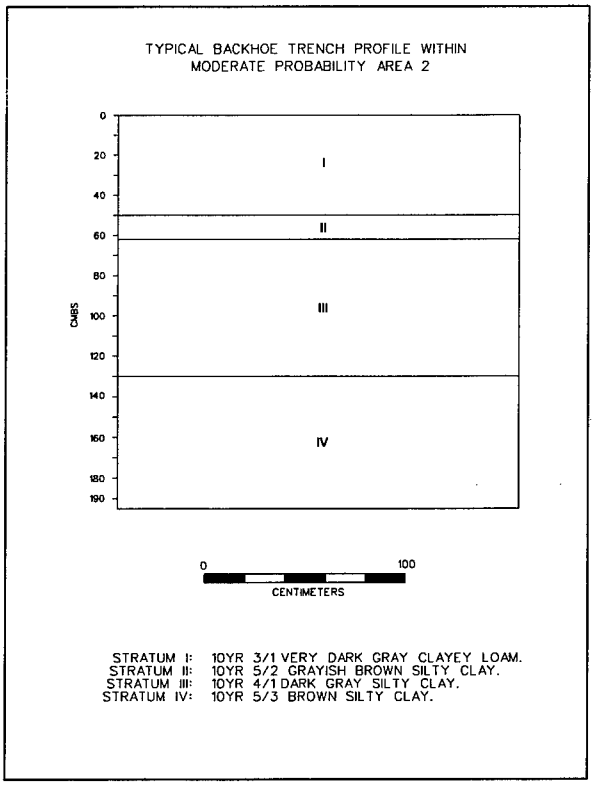


Figure 66. Profile of a typical backhoe trench within Segment AMP-2.

Site 16IV52

Site 16IV52 consists of a deposit of historic period artifacts that was identified within the eastern portion of Moderate Probability Area #2 of the Alhambra to Hohen-Solms project item (Segment AMP-2); it dates from the early nineteenth to the early twentieth centuries. This site is located on the batture within Sections 4 and 5 of Township 10S, Range 13E (Table 11; Figures 67 and 68). Elevations within the vicinity of the site range from 6.1 to 7.6 m (20 to 35 ft) NGVD. Soils in this area belong to the Convent series and they consist of poorly drained loams and clays.

Site 16IV52 is oblong in shape and encompasses an area that measures approximately 0.48 ac (0.19 ha) in size. This site, located approximately 200 m (656 ft) from the bankline of the Mississippi River, is bounded to the north by a long, narrow borrow pit excavated during the construction of the existing artificial flood control structure, and to the south by the extant artificial levee (Figure 69). Historically, this area was part of the Old Hickory Plantation. A total of 65 artifacts were recovered from the site area (Table 21); no faunal material was recovered from the site.

During survey, 11 of 11 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16IV52. Only 5 of the 11 (45 percent) planned backhoe trenches produced cultural material (Table 21). This material consisted of 4 Albany slip-glazed stoneware sherds, 1 salt-glazed domestic gray stoneware sherd with brown glaze, 1 annular-decorated pearlware sherd, 2 plain hard paste porcelain sherds, 18 plain whiteware sherds, 1 plain yellowware sherd, 5 pieces of brick, 3 flat glass shards, 1 colorless lamp glass shard, 24 amethyst-colored tooled lip glass shards, 1 yellow-green turn paste mold glass shard, 1 light aqua unidentified bottle glass shard, 1 wire nail, and 2 unidentified metal fragments.

Of the 65 artifacts recovered from the site, 42 were collected from Stratum II, and 23 were recovered from the backhoe trench backfill piles. Temporally diagnostic artifacts recovered from the site, including whiteware, pearlware, yellowware, Albany slip-glazed stoneware, tooled-lip glass shards, turn paste mold glass shards, and wire nails, suggest that the site dates from the early nineteenth to the early twentieth centuries (Figure 70).

Fieldwork at Site 16IV52 resulted in the recovery of a variety of domestic artifacts (Table 21). These artifacts included both historic period ceramics (whiteware, yellowware, stoneware, and porcelain sherds), and glass shards (lamp glass, amethyst-colored glass, tooled lip and turn paste mold glass shards). Construction material recovered from the site consisted of brick fragments and wire nails. While this artifact assemblage suggests that Site 16IV52 may contain within its border the remains of an historic period structure(s), no evidence of buildings was noted during the previously completed historic period map analysis of this portion of the Area of Potential Effect.

Backhoe trenching within the vicinity of Site 16IV52 revealed that, with the exception of fill added during construction of the existing artificial flood control structure, the site area may contain intact cultural deposits ranging in depth from approximately 25 to 135 cmbs (9.8 to 53.1 inbs). A typical backhoe trench extended



Figure 67. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16IV52.**



Figure 68. Overview photo of Site 16IV52 facing west.

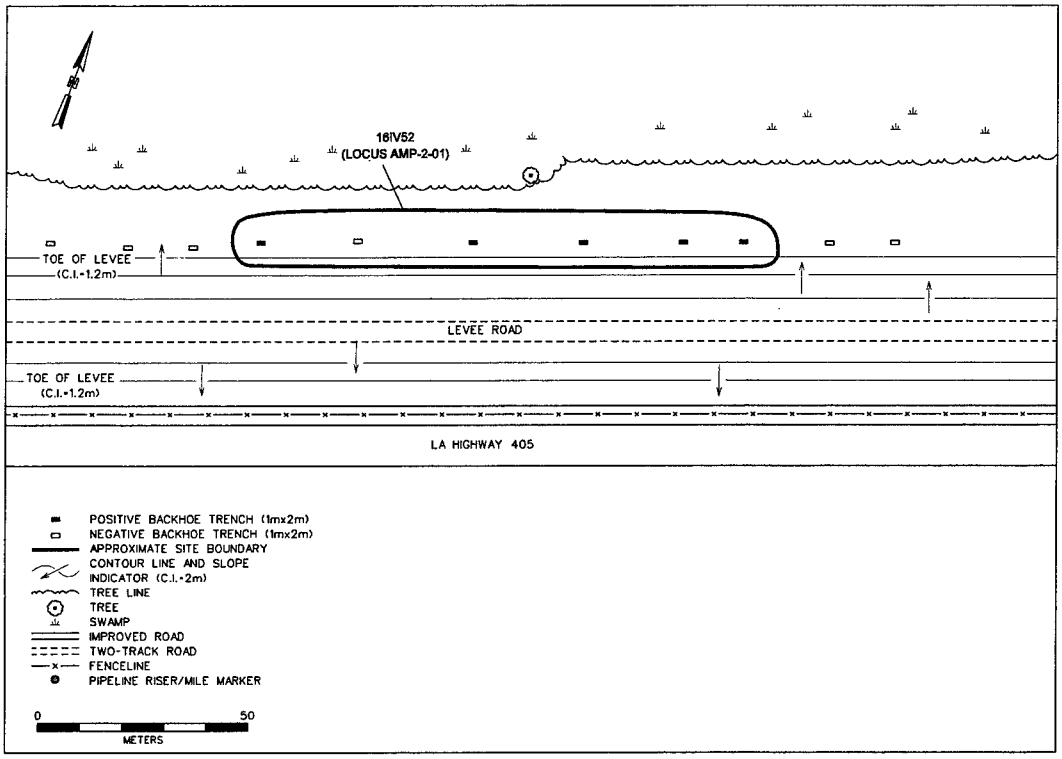


Figure 69. Plan view of Site 16IV52.

Table 21. Historic Period Artifacts Recovered From Site 16IV52.

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE	TOTAL
II		Ceramic	Whiteware	Plain	Rim/Lip & Body	ca. 1820-1900+	8
					Undetermined	ca. 1820-1900+	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	2
		Glass	Flat Glass Shard(s)	No Color Assigned	Undetermined	Undetermined	3
			Lamp Glass	Colorless	Body(s)	Undetermined	1
			Tooled Lip	Amethyst-Colored	Rim/Lip to Base	ca. 1875-1920	24
		Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890	1
			Unidentified Metal Objects	Indeterminate	Iron	Undetermined	2
Backdirt	1	Ceramic	Pearlware	Annular-Decorated	Rim(s)	ca. 1790-1820	1
			Yellowware	Plain	Lid(s)	ca. 1830-1900	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	Undetermined	1
				Brick, Handmade, Partial	Undetermined	Undetermined	1
		Glass	Unidentified Bottle Glass	Light Aqua	Base(s)	Undetermined	1
		Ceramic	Coarse Earthenware	Albany Slip-Glazed on Buff	Body(s)	post ca. 1805 (Albany slip)	4
			Domestic Gray Stoneware	Salt-Glazed w/Brown Lead Glaze	Shoulder(s)	Undetermined	1
			Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768	2
			Whiteware	Plain	Base(s)	ca. 1820-1900+	2
					Body(s)	ca. 1820-1900+	3
					Handle(s)	ca. 1820-1900+	1
					Rim(s)	ca. 1820-1900+	3
		Construction Materials	Architectural Stone	Brick, Partial	Undetermined	Undetermined	1
		Glass	Turn Paste Mold	Yellow Green (Olive)	Body(s)	ca. 1870s-1920s	1
Grand Total							**65**

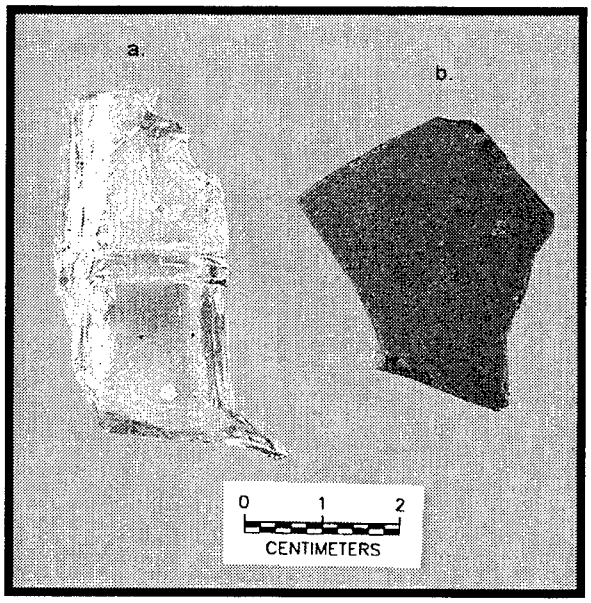


Figure 70. **Selected historic period artifacts recovered from Site 16IV52: (a) amethyst-colored (manganese solarization) tooled lip fragment possibly from a liquor bottle and (b) salt-glazed domestic gray stoneware sherd with brown lead glazed interior.**

to a depth of 170 cmbs (70 inbs) and exhibited four strata in profile (Figure 71). Stratum I consisted of a layer of dark grayish brown (10YR 4/2) loamy clay that extended from 0 to 36 cmbs (0 to 14.2 inbs); it was characterized as fill associated with the construction of the modern flood control structure. It was underlain by Stratum II, a layer of grayish brown (10YR 5/2) silty clay that ranged in depth from 36 to 47 cmbs (14.2 to 18.5 inbs). Stratum III consisted of a layer of alternating lenses of grayish brown (10YR 5/2) silty clay and dark gray (10YR 4/1) silty clay; it extended from 47 to 87 cmbs (18.5 to 34.3 inbs). Finally, Stratum IV, a layer of light gray (10YR 7/1) clayey silt, ranged in depth from 87 to 176 cmbs (34.3 to 69.3 inbs). Backhoe trenching was terminated at that depth because the inflow of groundwater prohibited further excavation.

In addition, during testing Backhoe Trench 11, produced evidence of a cultural feature (Figures 72 and 73). This feature was noted in profile at a depth of approximately 60 cmbs (23.6 inbs). This probable builder's trench and brick pier

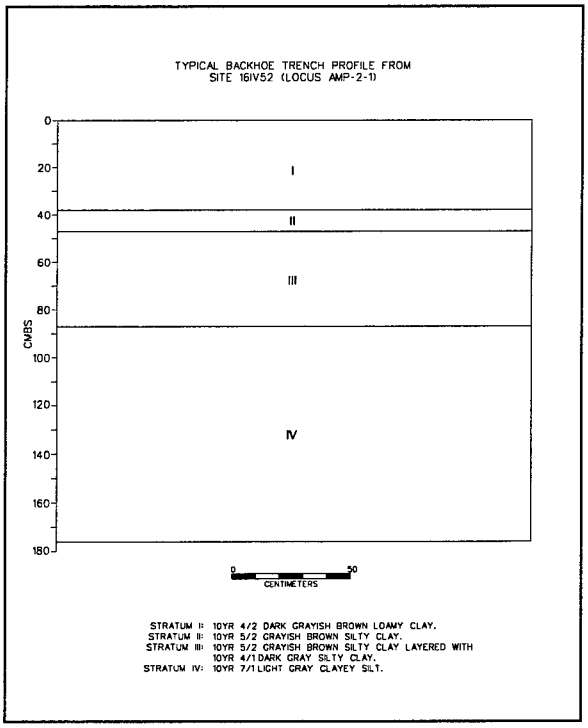


Figure 71. Profile of a typical backhoe trench at Site 16IV52.

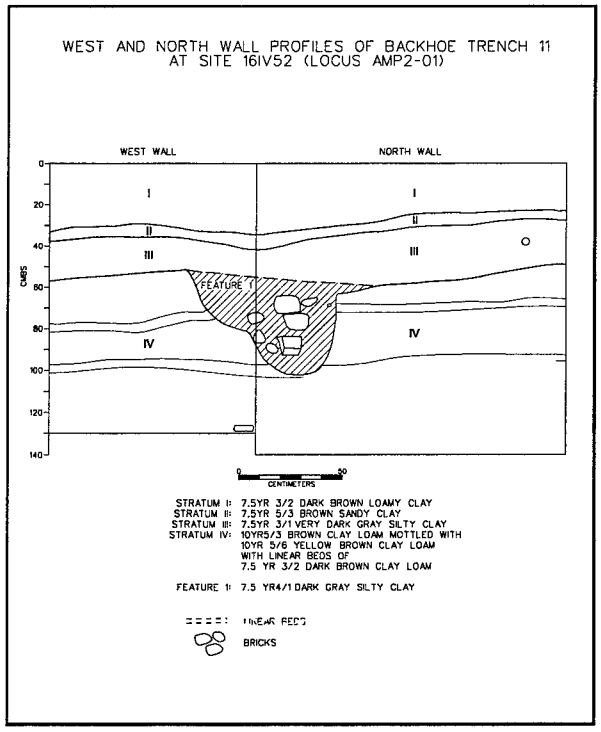


Figure 72. Profile of Feature 1 at Site 16IV52.

measured approximately 70 cm (27.6 in) in width and it produced 1 annular-decorated pearlware sherd, 1 plain yellowware sherd, 2 brick fragments, and 1 light aqua unidentified bottle glass shard (Table 21); numerous large brick fragments also were noted within the feature matrix but not collected. On the basis of the recovery of diagnostic historic period ceramic sherds, it appears that the feature dates from the early to mid nineteenth century. Only the edge of the feature was exposed during backhoe trenching; however, the feature was visible in both the north and west wall profiles of the backhoe trench. It extended from approximately 55 to 100 cmbs (21.6 to 39.4 inbs). After the feature was drawn in profile and photographed, it was covered with plastic and the backhoe trench was backfilled, preserving the feature in situ.

The results of fieldwork, including the recovery of numerous historic period artifacts and a single cultural feature, indicate that Site 16IV52 may possess intact cultural deposits that may retain research potential. The site may possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) and it may



Figure 73. Photo of Feature 1 profile at Site 16IV52.

produce data relating to three of the cultural themes identified in *Louisiana's Comprehensive Plan* as significant for Management Unit V, i.e., Plantation Archeology, Culture History, and the Influence of the Mississippi River on Historic Settlement (Smith et al. 1983). Avoidance or Phase II National Register eligibility testing and evaluation of this site prior to the initiation of the proposed concrete slope paving and levee recontouring project is recommended.

The Hohen-Solms to Modeste Project Item (M-185 to M-179-R)

The current cultural resources survey and archeological inventory of the Hohen-Solms to Modeste project item in Ascension Parish, Louisiana, resulted in the identification of three historic period archeological sites: Sites 16AN68 - 16AN70 (Table 11). Descriptions of the survey segments examined along the proposed project item, as well as each of the identified archeological sites, are presented below.

Segment HSHP-1 (High Probability Area #1)

Segment HSHP-1, High Probability Area #1 of the Hohen-Solms to Modeste project item, originated within the northern portion of Section 40 of Township 10S, Range 14E, and it extended in a southeasterly direction for approximately 590 m (1,935 ft) to its termination point at a natural gas pipeline within the southeastern portion of Section 42 of Township 10S, Range 14E (Figure 2: oversized map). The pipeline is owned and operated by the Montgomery Pipeline Company. Segment HSHP-1 was situated at an approximate elevation of 7.6 m (25 ft) NGVD, and it contained soils of the Commerce series. Commerce soils, which mainly consist of poorly drained, silty loams, dominate the natural levees of streams and larger rivers in south-central Louisiana (Spicer et al. 1976). Vegetation found throughout the Area of Potential Effect associated with Segment HSHP-1 primarily consisted of manicured grass. This survey segment was bounded to the west by the extant levee and to the east by a series of now, inundated borrow pits that were excavated during construction of the existing flood control levee (Figure 74). Finally, a single unimproved dirt road measuring approximately 5 m (16.4 ft) in width crossed the survey segment at approximately 410 m (1,345 ft) from its origin. This road provides access to the Mississippi River batture from Louisiana State Highway 405.

The identification of residences, sheds, and other buildings on historic period maps of the area, as well as on the 1932 design plans for the Bayou Goula New Levee setback, resulted in this portion of the project item being assessed as having a high probability for containing intact cultural deposits. These structures may have been associated with the Babin and/or Africa Plantations, both of which operated during the nineteenth and early twentieth centuries.



Figure 74. Overview photo of Segment HSHP-1 facing west.

During survey, 22 of 22 (100 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout the Area of Potential Effect associated with this survey segment (Table 11). A typical backhoe trench excavated within this segment extended to a depth of 180 cmbs (70.8 inbs), and exhibited six strata in profile (Figure 75). Stratum I ranged in depth from 0 to 13 cmbs (0 to 5.1 inbs), and it was described as a layer of dark grayish brown (10YR 4/2) loamy clay. Stratum I was underlain by Stratum II, a layer of pale brown (10YR 6/3) silty clay that reached from 13 to 30 cmbs (5.12 to 11.8 inbs). Stratum III, described as a deposit of dark gray (10YR 4/1) silty clay, extended from 30 to 70 cmbs (11.8 to 27.6 inbs). Stratum IV was characterized as a layer of brown (10YR 4/3) silty clay encountered from 70 to 90 cmbs (27.6 to 35.4 inbs). Stratum V extended from 90 to 100 cmbs (35.4 to 39.4 inbs); it was a layer of very dark gray (10YR 3/1) silty clay. Finally, Stratum VI was identified from 100 to 180 cmbs (39.4 to 70.8 inbs); it was described as a layer of brown (10YR 4/3) silty clay.

Phase I cultural resources survey and archeological inventory of Segment HSHP-1 resulted in the identification and recordation of a single archeological site. The National Register of Historic Places assessment and management recommendations for Site 16AN69, as well as the analysis of the cultural material recovered from the site, are discussed in detail below.

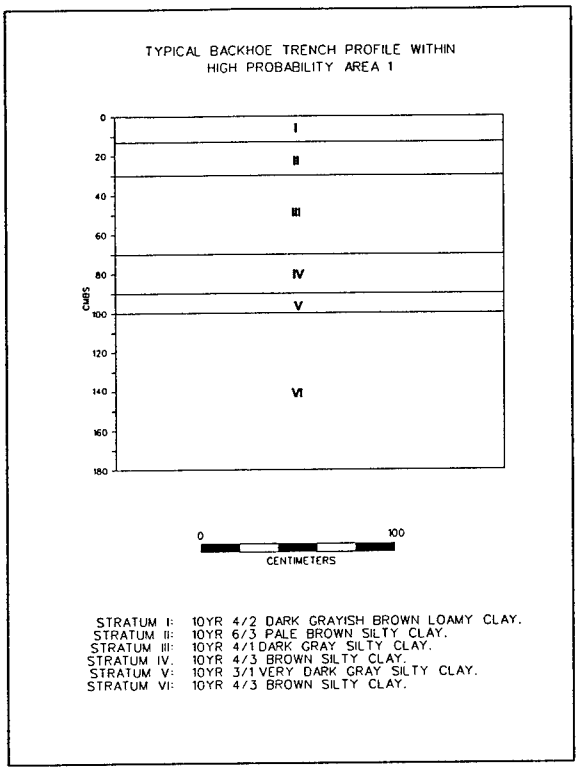


Figure 75. Profile of a typical backhoe trench within Segment HSHP-1.

Site 16AN69

Site 16AN69 consists of a historic period artifact scatter dating from the late eighteenth to early twentieth centuries; it was identified during survey of High Probability Area #1 of the Hohen-Solms to Modeste project item (Segment HSHP-1). This site is located on the batture within Sections 40 and 41 of Township 10S, Range 14E (Table 11; Figures 76 and 77). The site was situated at an elevation of approximately 6.1 to 7.6 m (20 to 25 ft) NGVD. Soils located within the site area belong to the Commerce series, which is characterized by poorly drained silts and loams.

Site 16AN69 is oblong in shape and encompasses an area that measures approximately 1.22 ac (0.48 ha) in area. The site is located approximately 180 m (591 ft) from the bankline of the Mississippi River; it is bounded to the east by a series of long borrow pits excavated during construction of the existing artificial flood control structure, to the south by a two track road, and to the west by the existing levee (Figure 78). Historically, this area was part of the Modeste/Babin/Africa Plantations. A total of 346 historic period artifacts and 14 faunal specimens were recovered from the site area during survey (Tables 22 and 23). All of this material originated from subsurface contexts.

During survey, 13 of 13 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16AN69; 12 of the 13 (92 percent) backhoe trenches produced artifacts dating from the late eighteenth to the early twentieth centuries (Table 22). This material consisted of 2 ceramic figurine fragments; 1 annular-decorated, 1 unidentified-decorated, and 1 plain creamware sherd; 1 salt-glazed domestic brown stoneware sherds; 2 salt-glazed domestic gray stoneware sherds; 1 mold-decorated and 10 undecorated ironstone sherds; 2 "negative" blue transfer-printed, 3 annular-decorated, 3 embossed, 1 engine-turned, 1 finger painted (common cable), 1 flow blue, 2 scalloped-rim, 13 plain, 1 impressed, and 6 underglazed hand-painted pearlware sherds; 3 plain and 2 underglazed hand-painted hard paste porcelain sherds; 1 unidentified ceramic sherd; 1 kaolin pipestem fragment; 3 annular-decorated, 4 decal-decorated, 10 molded/embossed, 96 plain, 1 sponge-decorated, 1 stenciled-pattern, 4 transfer-printed, and 2 underglazed hand-painted whiteware sherds; 13 pieces of brick; 1 piece of shoe leather; 1 aqua continuous thread lip bottle glass shard; 1 colorless crown finish bottle glass shard; 4 colorless lamp glass shards; 1 amber, 22 colorless, and 2 light green machine-made bottle glass shards; 1 amethyst-colored and 3 opaque white/milk glass pressed glass shards; 13 light green turn paste mold bottle glass shards; 1 aqua and 1 colorless unidentified blown-in-mold bottle glass shards; 1 amethyst-colored and 1 colorless unidentified mold technique bottle glass shard; 2 amber, 2 amethyst-colored, 13 aqua, 6 colorless, 2 dark green, 1 light aqua, 9 light green, 2 opaque white/milk, and 3 yellow-green unidentified bottle glass shards; 1 aqua fire-damage glass shard; 6 iron spikes; 1 barbed wire fragment; 1 iron can fragment; 17 machine-cut, 24 unidentified, and 3 wire nails; 1 iron hoe fragment; 1 sheet metal fragment; 3 unidentified iron fragments; 1 shell button; 1 unidentified synthetic fragment; and 14 faunal specimens.

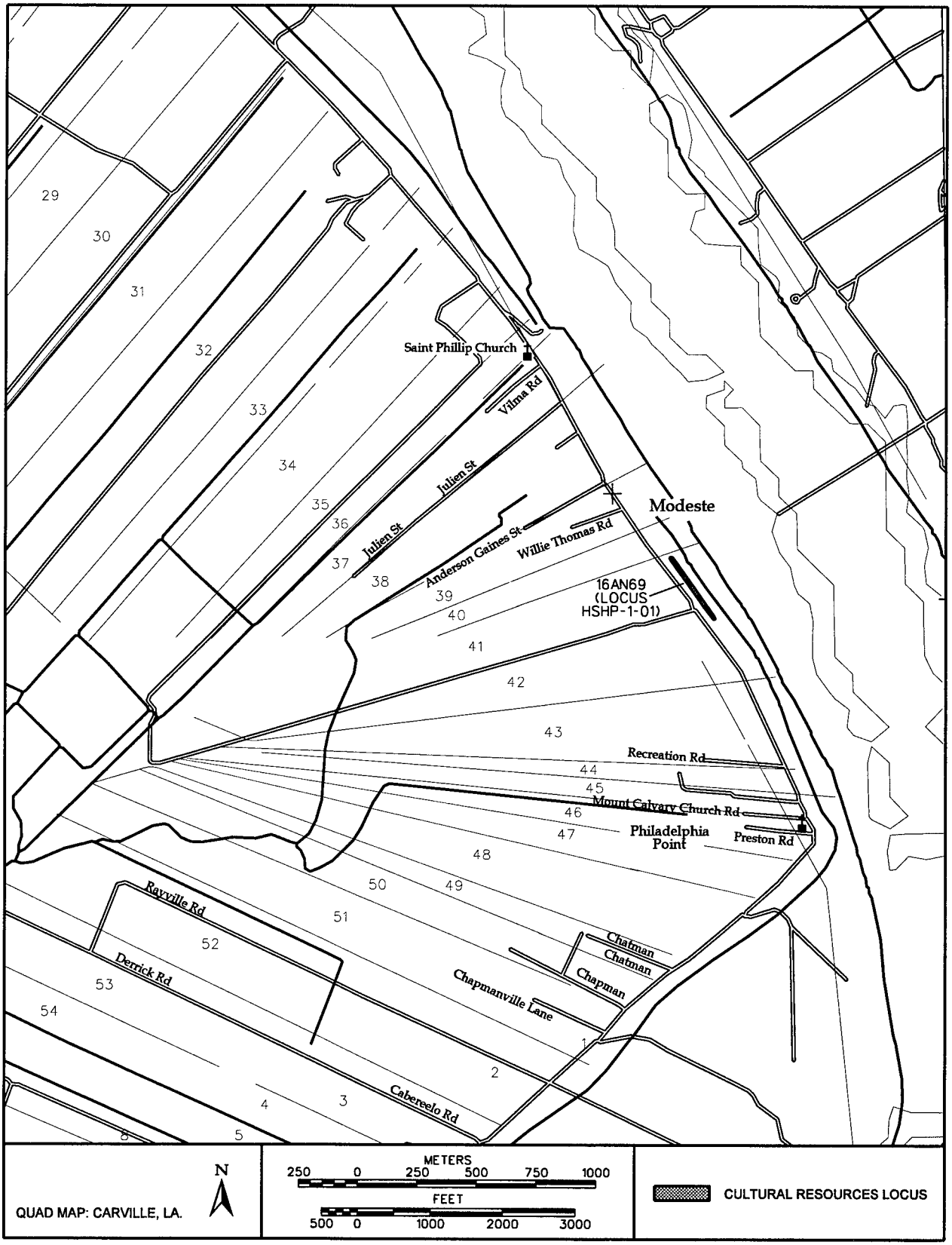


Figure 76. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16AN69.**



Figure 77. Overview photo of Site 16AN69 facing north.

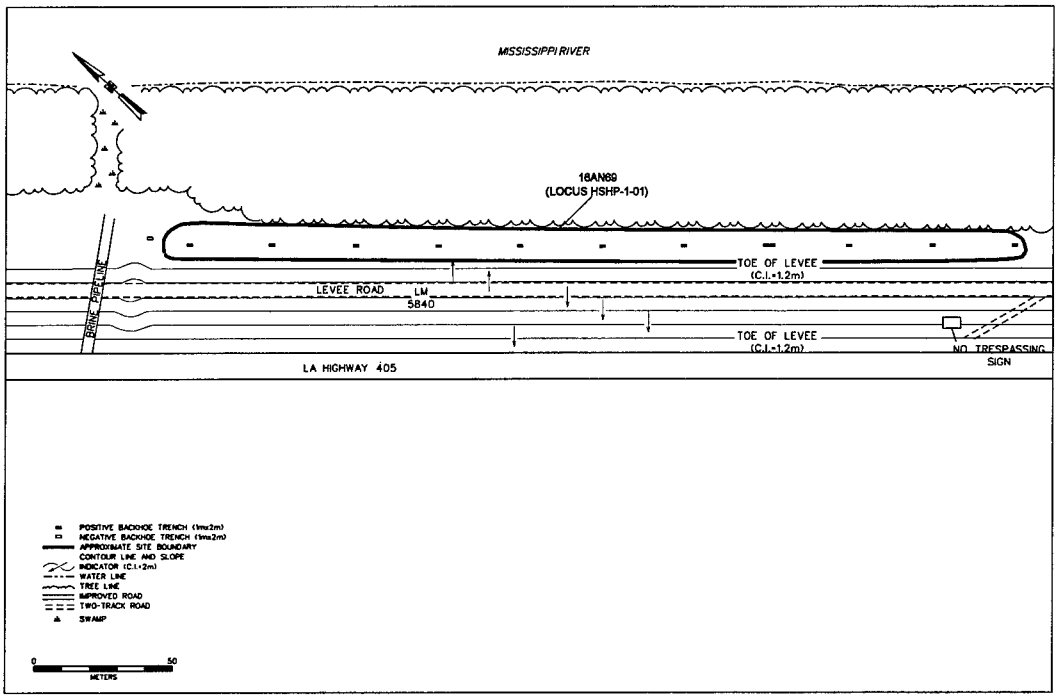


Figure 78. Plan view of Site 16AN69.

Table 22. Historic Period Artifacts Recovered from Site 16AN69.

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
III		Ceramic	Whiteware	Plain	ca. 1820-1900+	2
		Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	1
		Glass	Machine-Made Bottle Glass	Colorless	post ca. 1898	2
			Pressed Glass	Opaque White/ Milk Glass	post ca. 1825	2
			Turn Paste Mold	Light Green	ca. 1870s-1920s	13
			Unidentified Bottle Glass (Kitchen)	Colorless	Undetermined	1
				Light Green	Undetermined	7
		Metal	Construction Hardware	Spike(s)	Undetermined	1
			Miscellaneous Hardware	Barbed Wire fragment(s)	ca. 1868-1890s	1
			Nail(s)	Unidentified	Undetermined	1
				Wire, Unidentified	post ca. 1890	1
IV	1	Ceramic	Whiteware	Molded/ Embossed Decoration	Undetermined	7
				Plain	ca. 1820-1900+	17
		Metal	Construction Hardware	Spike(s)	Undetermined	2
			Nail(s)	Machine-Cut, Stamped Head	ca. late 1830s-1890s+	1
				Machine-Cut, Unidentified Head Style	ca. 1790s-1890s+	3
				Unidentified	Undetermined	2
			Unidentified Metal Objects	Sheet Metal	Undetermined	1
V		Ceramic	Whiteware	Plain	ca. 1820-1900+	3
		Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	2
		Glass	Machine-Made Bottle Glass	Colorless	post ca. 1898	19
		Metal	Construction Hardware	Spike(s)	Undetermined	1
VI		Ceramic	Activities	Figurine(s)	Undetermined	1
VII			Ironstone	Undecorated White	ca. 1813-1900+	1
			Porcelain, Hard Paste	Undecorated	post ca. 1768	1
			Whiteware	Plain	ca. 1820-1900+	8
		Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	3
		Glass	Machine-Made Bottle Glass	Colorless	post ca. 1898	1
				Light Green	post ca. 1898	1
			Pressed Glass	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
			Unidentified Molded Technique	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
VII		Glass, cont.	Unidentified Bottle Glass (Kitchen)	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
				Aqua	Undetermined	13
				Yellow Green (Olive)	Undetermined	1
		Metal	Nail(s)	Machine-Cut, Unidentified Head Style	ca. 1790s-1890s+	1
				Unidentified	Undetermined	8
				Wire, Unidentified	post ca. 1890	1
		Shell	Shell (Clothing)	Shell Button(s)	Undetermined	1
		Synthetic	Unidentified Material	Unidentifiable Synthetic Material	Undetermined	1
	2	Ceramic	Pearlware	Annular	ca. 1790-1820	1
				Finger-painted (Commonwealth)	ca. 1790-1840	1
				Underglaze Hand-painted	ca. 1780-1870+	1
			Whiteware	Plain	ca. 1820-1900+	6
				Transfer-printed	post ca. 1820; ca. 1820-1860	2
				Underglaze Hand-painted	ca. 1820-1890	1
		Glass	Machine-Made Bottle Glass	Light Green	post ca. 1898	1
			Unidentified Bottle Glass (Kitchen)	Dark Green	Undetermined	1

Table 22, continued

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
VII, cont.	2, cont.	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	ca. 1790s-1890s+	1
				Unidentified	Undetermined	2
		Ceramic	Domestic Gray Stoneware	Salt-glazed, undecorated	ca. 1790-1910	1
			Ironstone	Undecorated White	ca. 1813-1900+	1
			Pearlware	Engine-turned	Undetermined	1
			Porcelain, Hard Paste	Undecorated	post ca. 1768	1
			Whiteware	Decal Decorated	post ca. 1880	3
				Molded/ Embossed Decoration	Undetermined	2
				Plain	ca. 1820-1900+	12
				Stenciled Pattern	Undetermined	1
		Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	2
		Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Undetermined	2
				Light Aqua	Undetermined	1
				Light Green	Undetermined	1
				Opaque White / Milk Glass	Undetermined	1
				Yellow Green (Olive)	Undetermined	1
		Metal	Nail(s)	Unidentified	Undetermined	3
				Wire, Common	post ca. 1890	1
			Tools	Hoe(s)	Undetermined	1
			Unidentified Metal Objects	Indeterminate	Undetermined	1
	1	Ceramic	Ironstone	Undecorated White	ca. 1813-1900+	1
			Porcelain, Hard Paste	Underglaze Hand-painted	Undetermined	1
			Whiteware	Decal Decorated	post ca. 1880	1
				Molded/ Embossed Decoration	Undetermined	1
				Plain	ca. 1820-1900+	8
				Sponged/Spatter Decorated	ca. 1850-1920+; ca. 1880-1920	1
		Glass	Lamp Glass	Colorless	Undetermined	4
			Unidentified Blown-in-Mold Bottle Glass	Aqua	Undetermined	1
			Unidentified Bottle Glass (Kitchen)	Amber	Undetermined	1
				Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
				Colorless	Undetermined	1
				Light Green	Undetermined	1
			Unidentified Fire-damaged or Melted Glass	Aqua	Undetermined	1
		Metal	Nail(s)	Unidentified	Undetermined	2
			Unidentified Metal Objects	Indeterminate	Undetermined	1
		Ceramic	Ironstone	Mold Decorated	ca. 1840-1900	1
			Whiteware	Plain	ca. 1820-1900+	1
		Glass	Continuous Thread Lip	Aqua	post ca. mid-1850s	1
			Machine-Made Bottle Glass	Amber	post ca. 1898	1
			Unidentified Blown-in-Mold Bottle Glass	Colorless	Undetermined	1
Backdirt		Ceramic	Activities	Figurine(s)	Undetermined	1
			Creamware	Annular	ca. 1780-1815	1
				Undecorated	ca. 1762-1820	1
				Unidentified Decorated	Undetermined	1
			Domestic Brown Stoneware	Salt-glazed Buff	Undetermined	1
			Domestic Gray Stoneware	Salt-glazed, undecorated	ca. 1790-1910	1
			Ironstone	Porcelaneous Ware	post ca. 1880	2
				Undecorated White	ca. 1813-1900+	5
			Pearlware	"Negative" Blue Transfer-Printed	ca. 1818-1830	2
				Annular	ca. 1790-1820	2
				Embossed Patterns	ca. 1800-1820	2
				Embossed w/Overglaze Hand-painted	ca. 1800-1820	1
				Flow Blue	ca. 1840-1870+	1

Table 22, continued

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
Backdirt, cont.		Ceramic, cont.	Pearlware, cont.	Scalloped Rim, impressed straight lines	ca. 1795-1840	2
				Undecorated	ca. 1780-1830	13
				Underglaze Hand-painted	ca. 1780-1870+	5
				Un-scalloped, impressed rim	ca. 1825-1891	1
			Porcelain, Hard Paste	Undecorated	post ca. 1768	1
				Underglaze Hand-painted	Undetermined	1
			Tobacco Pipes	Ball Clay (Kaolin) Stem(s)	Undetermined	1
			Unidentified Ceramics	Unidentified Kitchen Ceramic	Undetermined	1
			Whiteware	Annular Decorated	ca. 1820-1890	3
				Plain	ca. 1820-1900+	39
				Transfer-printed	post ca. 1820; ca. 1820-1860	2
				Underglaze Hand-painted	ca. 1820-1890	1
		Construction Materials	Architectural Stone	Brick, Glazed	Undetermined	1
				Brick, Handmade, Partial	Undetermined	4
		Fauna	Clothing Items	Shoe Leather fragment(s)	Undetermined	1
		Glass	Crown Finish	Colorless	post ca. 1892	1
			Pressed Glass	Opaque White/ Milk Glass	post ca. 1825	1
			Unidentified Molded Technique	Colorless	Undetermined	1
			Unidentified Bottle Glass (Kitchen)	Amber	Undetermined	1
				Colorless	Undetermined	2
				Dark Green	Undetermined	1
				Opaque White / Milk Glass	Undetermined	1
				Yellow Green (Olive)	Undetermined	1
		Metal	Construction Hardware	Spike(s)	Undetermined	2
			Miscellaneous Kitchen	Can(s)	Undetermined	1
			Nail(s)	Machine-Cut, Stamped Head	ca. late 1830s-1890s+	3
				Machine-Cut, Unidentified Head Style	ca. 1790s-1890s+	8
				Unidentified	Undetermined	6
			Unidentified Metal Objects	Unknown Function	Undetermined	1
Grand Total						**346**

Table 23. Faunal Specimens Recovered from Site 16AN69.

STRATUM	FEATURE	CLASS	GENUS	SPECIES	ELEMENT	MODIFICATION	TOTAL
VI	1	Mammalia	Unidentified	Unidentified	Miscellaneous fragment	Cut	1
					Tibia	None	1
	2	Mammalia	Bos	taurus	Illium	Clean cut	1
					Tibia	Clean cut	1
			Unidentified	Unidentified	Miscellaneous fragment	Clean cut	2
						None	2
			Unidentified	Unidentified	Miscellaneous fragment	None	1
Backdirt		Invertebrata	Crassostrea	virginica	Invertebrate shell fragment	None	1
		Mammalia	Bos	taurus	Radius	Clean cut	1
					Tibia	Clean cut	1
			Unidentified	Unidentified	Illium	Clean cut	1
					Miscellaneous fragment	None	1
Grand Total							**14**

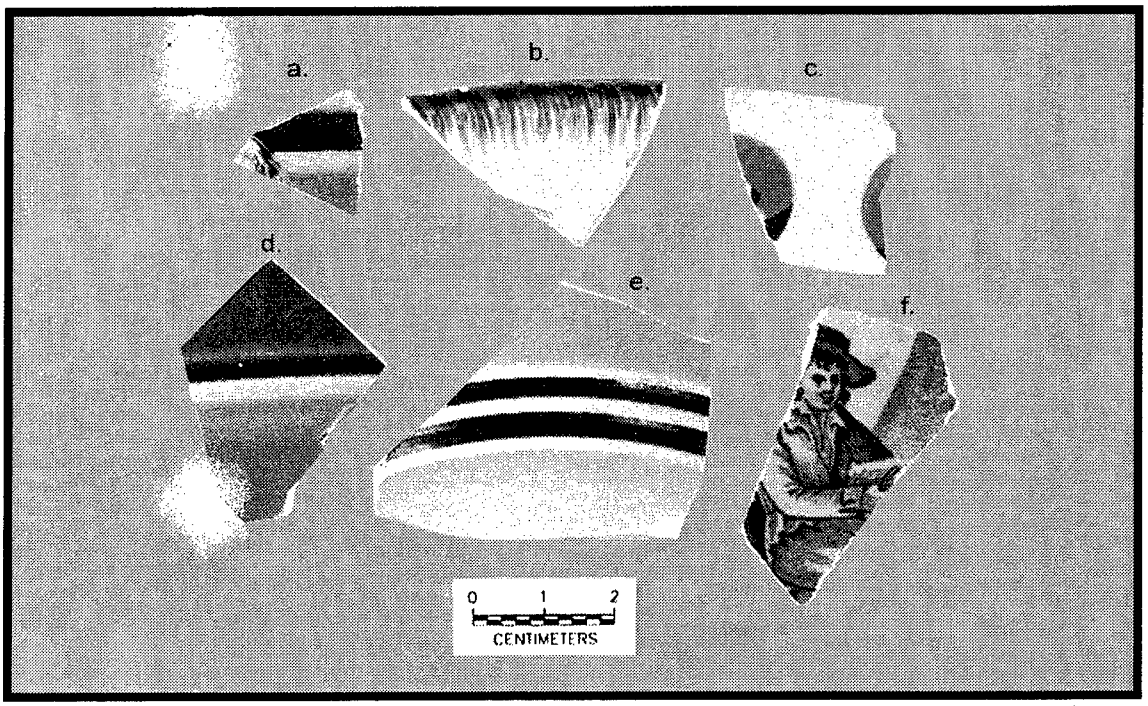


Figure 79. **Selected historic period ceramic sherds recovered from Site 16AN69: (a) finger-painted pearlware sherd; (b) unscalloped, impressed rim pearlware sherd; (c) finger-painted pearlware sherd; (d) annular pearlware sherd; (e) annular pearlware sherd; and (f) transfer-printed pearlware sherd.**

The faunal specimens recovered from the site consisted of 1 oyster shell fragment, 1 cow illium fragment, 1 cow radius midshaft fragment, 2 cow tibia midshaft fragments, 1 unidentified mammal illium fragment, 7 unidentified mammal bone fragments, and 1 unidentified mammal tibia fragment. The cow illium, tibia, and radius fragments, as well as the single unidentified mammal tibia fragment and a single unidentified mammal bone fragment exhibited clean cuts due to sawing (Table 23).

Of the 360 artifacts and ecofacts recovered from Site 16AN69, 32 were collected from Stratum III, 33 originated in Stratum IV, 25 were recovered from Stratum V, 107 were identified in Stratum VI, 31 were collected from Stratum VII, and 132 were recovered from the backhoe trench backfill piles. Temporally diagnostic artifacts recovered from the site included machine-made bottle glass; pressed glass; turn paste mold glass; amethyst-colored glass; continuous thread lip bottle glass; crown finish bottle glass; annular-decorated creamware; salt-glazed domestic gray stoneware; ironstone; plain, transfer-printed, decal-decorated, and

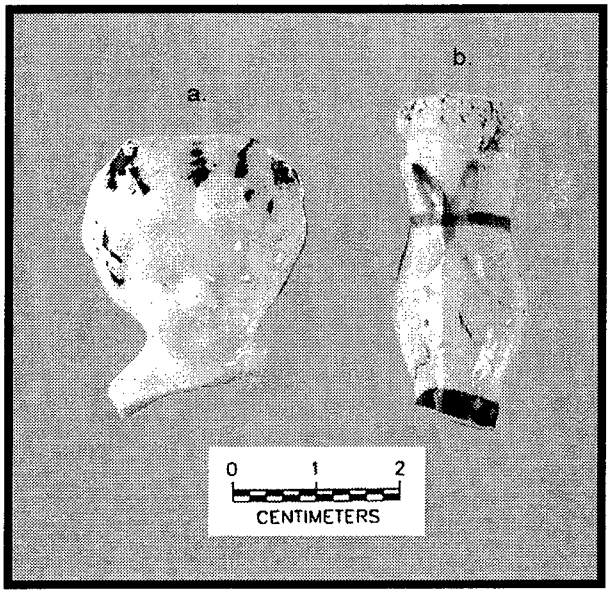


Figure 80. **Selected historic period ceramic doll parts recovered from Site 16AN69: (a) porcelain doll head with remnants of overglaze painted black hair and (b) porcelaneous doll leg fragment with underglaze hand-painted dark blue bow and dark brown shoe.**

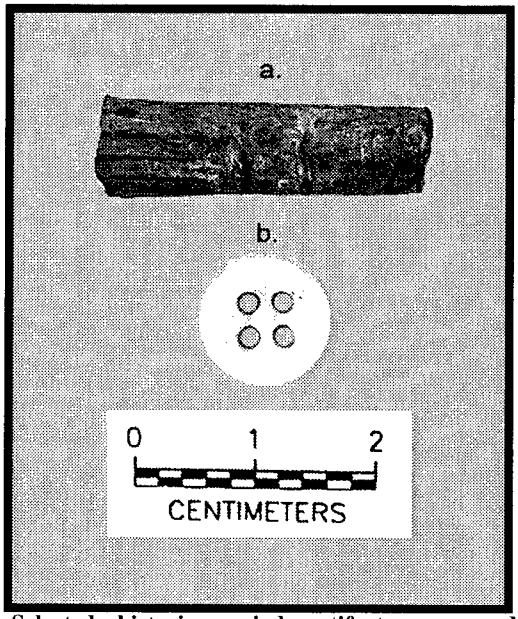


Figure 81. Selected historic period artifacts recovered from Site 16AN69: (a) molded ball clay (Kaolin) tobacco pipe stem fragment a 2.5 mm (0.098 in) bore and alternating areas of dots and single lines perpendicular to stem axis changing to lines running parallel to stem axis ("quarter cockled with odd dot stem" type) and (b) porcelain four hole button.

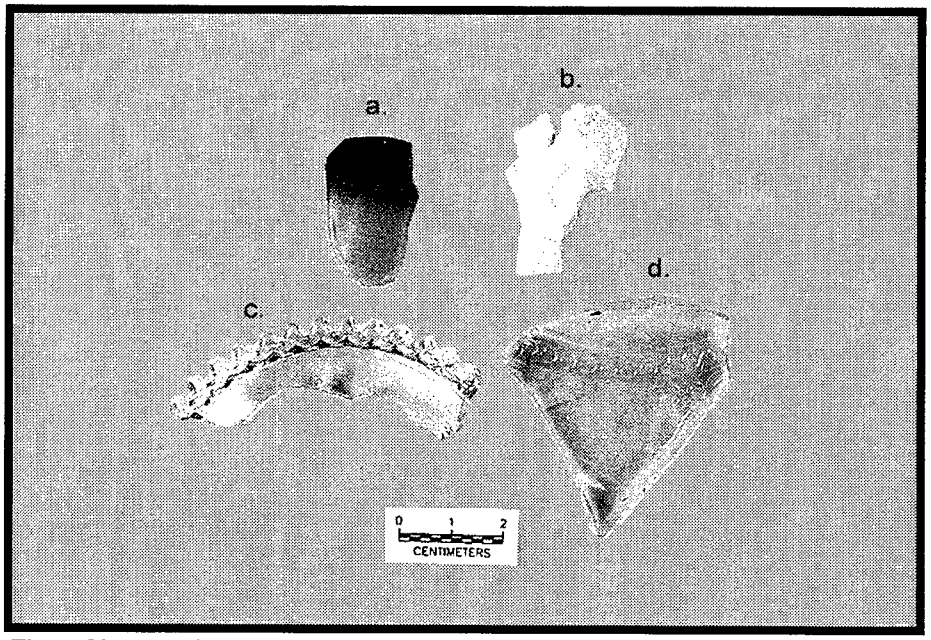


Figure 82. Selected historic period glass artifacts recovered from Site 16AN69: (a) layered art glass shard consisting of opaque blue glass overlaid with a layer of colorless glass grading into dark red glass; (b) pressed opaque white/milk figural dish glass fragment of tree limb with cut branches; (c) colorless lamp glass fragment with a crenate lip; and (d) light blue "depression" glass shard similar to "Philbe" pattern Fire-King dinnerware by Hocking Glass Co.

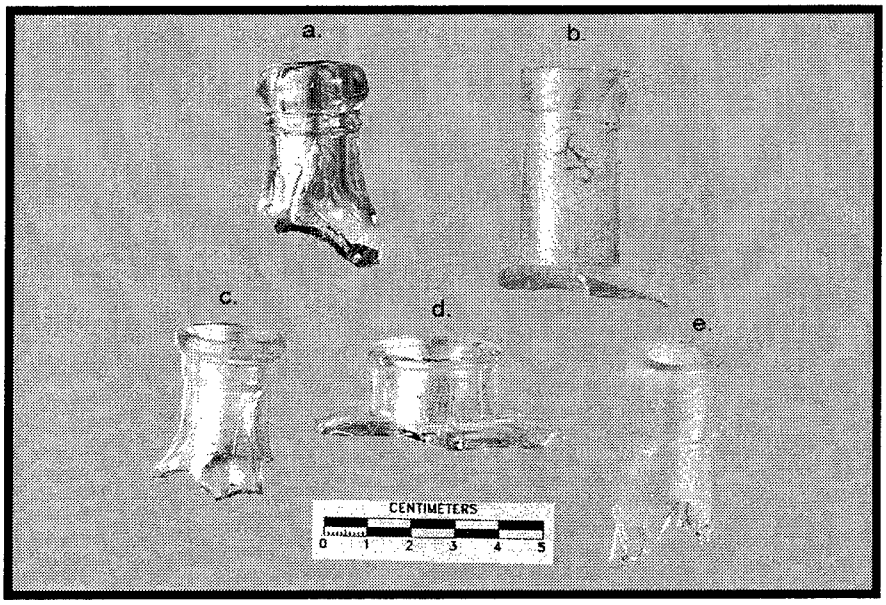


Figure 83. **Selected historic period bottle glass fragments recovered from Site 16AN69: (a) bottle glass fragment with a tooled lip and a Perry Davis closure; (b) panel medicine bottle fragment with a tooled lip; (c) amethyst-colored (manganese solarization) bottle fragment with a tooled prescription lip finish; (d) ink bottle fragment with a tooled lip; and (e) machine-made bottle glass fragment with a ball neck finish.**

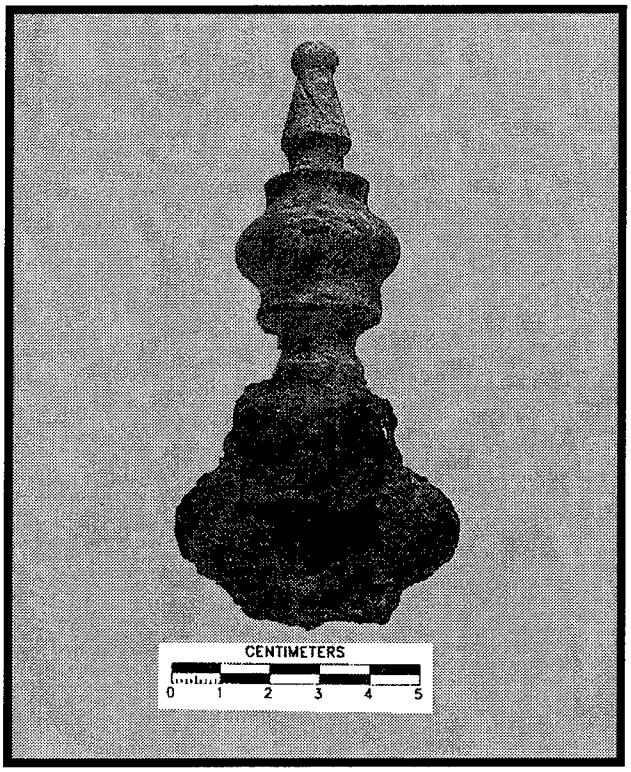


Figure 84. **Brass fence post ornament attached to an iron bracket clamp recovered from Site 16AN69.**

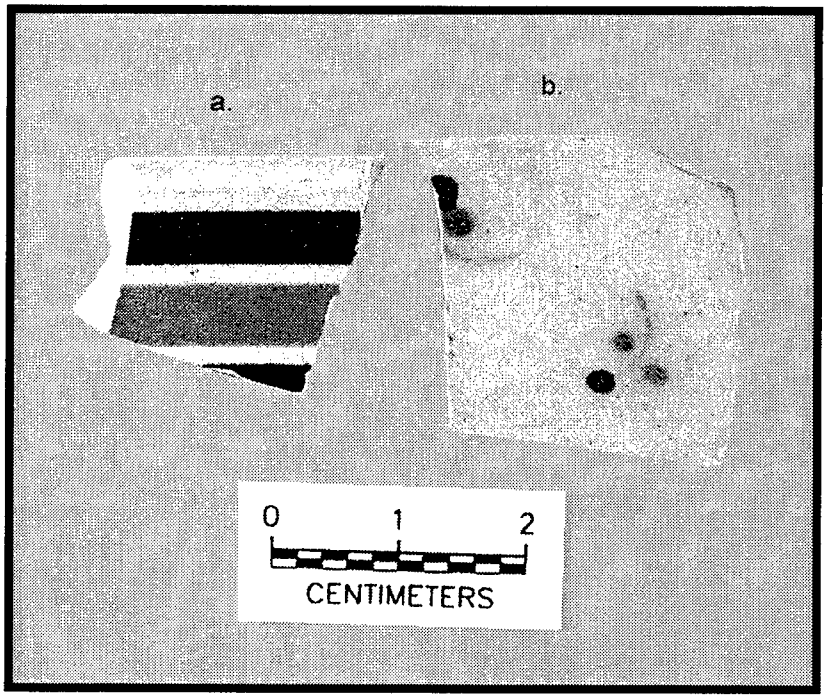


Figure 85. **Selected historic period ceramic sherds recovered from Site 16AN69: (a) annular creamware sherd and underglaze hand-painted creamware sherd.**

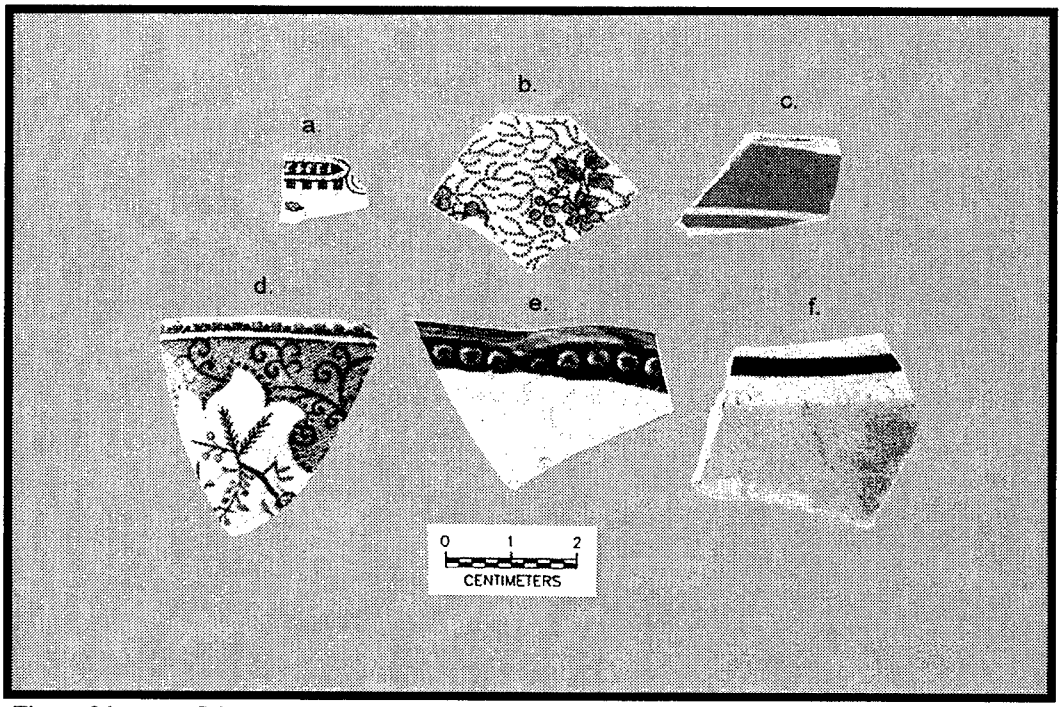


Figure 86. **Selected historic period ceramic sherds recovered from Site 16AN69: (a) transfer-printed whiteware sherd; (b) transfer-printed whiteware sherd; (c) annular-decorated whiteware sherd; (d) transfer-printed whiteware sherd; (e) scalloped rim whiteware sherd with mold decorated bead and leaf design; and (f) annular-decorated whiteware sherd.**

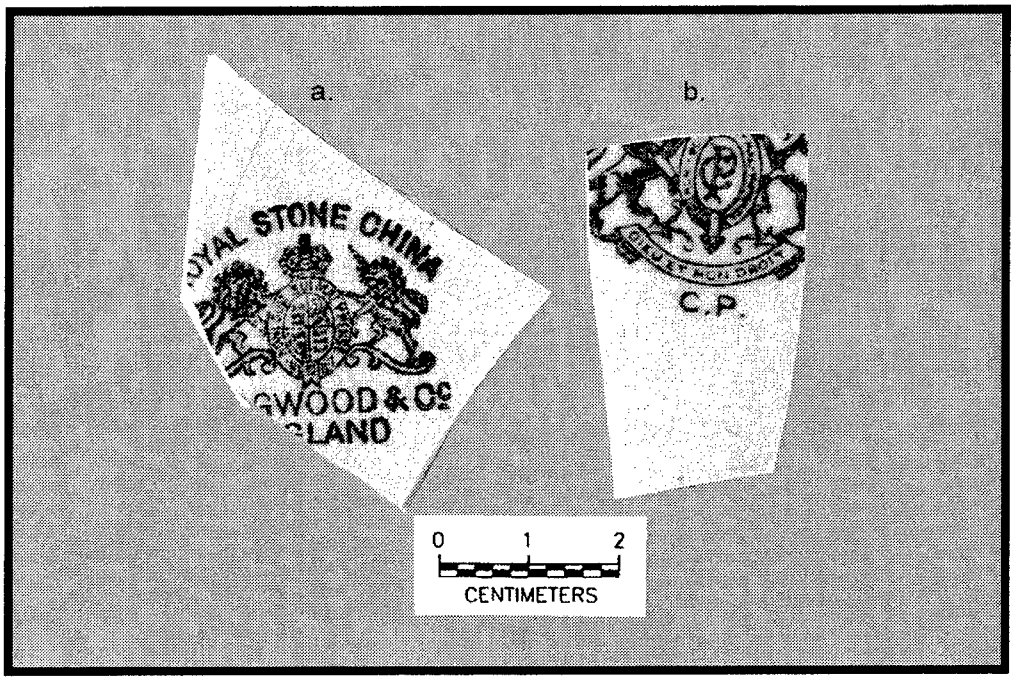


Figure 87. **Selected historic period ceramic sherds recovered from Site 16AN69 (a) plain whiteware sherd marked with British Royal Arms style maker's mark "ROYAL STONE CHINA" over mark and "[WED]GWOOD & CO/ENGLAND" beneath mark and (b) plain whiteware with a partial British Royal Arms maker's mark and a superimposed "CP" in shield and "C.P." underneath (Potter's Co-operative Company).**

molded/embossed whiteware; "negative" blue transfer-printed, annular-decorated, finger-painted, flow blue, and scalloped-rim pearlware; machine-cut and wire nails, suggests an early nineteenth to early twentieth century period of occupation (Figures 79 – 86). The laboratory analysis of the recovered cultural material resulted in the identification of two plain whiteware sherds exhibiting maker's marks (Figure 87). The first mark was composed of the words "ROYAL STONE CHINA" and "...GWOOD & CO/ENGLAND" around a British Royal Arms insignia (Kovel and Kovel 1986). This mark was attributed to the Wedgwood Company and it dates post 1860. The second mark consisted of a partial British Royal Arms insignia, under which appeared the phrase "DIED ET MON DAOIT" and the letters C.P. This mark dates from ca. 1885 to 1895 (Kovel and Kovel 1986).

As Figures 88 – 90 depict, several varieties of pearlware, whiteware, and historic period glass artifacts were recovered from the site area. Of the pearlware types noted in the artifacts recovered from the site, undecorated pearlware was recovered most commonly; it ranges in date from ca. 1780 to 1830. Underglaze hand-painted and annular pearlware types also represented significant percentages of the pearlware noted during laboratory analysis. The former ranges in date from ca. 1780 to 1870, while the latter was produced between ca. 1790 and 1820. An examination of Figure 89 indicates that undecorated whiteware sherds comprise, by far, the most common whiteware type recovered from the site area. This ceramic type ranges in date from ca. 1820 to 1900. The second most common whiteware type noted in the artifact assemblage was molded/embossed whiteware. The remainder of the whiteware varieties identified within the historic period ceramic sub-assemblage comprised less than approximately five percent each. Finally, a wide variety of historic period glass artifacts were recovered from Site 16AN69 (Figure 90). The most common glass artifacts recovered included colorless machine-made bottle glass, light green turn paste mold glass, aqua unidentified bottle glass, light

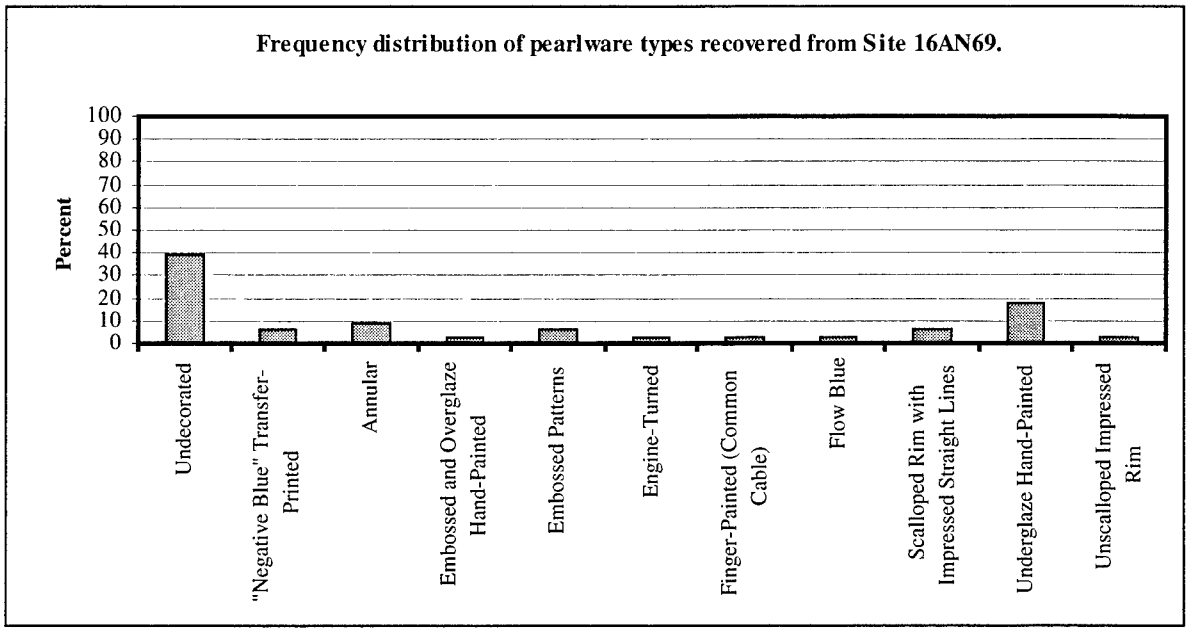


Figure 88. **Frequency distribution of pearlware types recovered from Site 16AN69.**

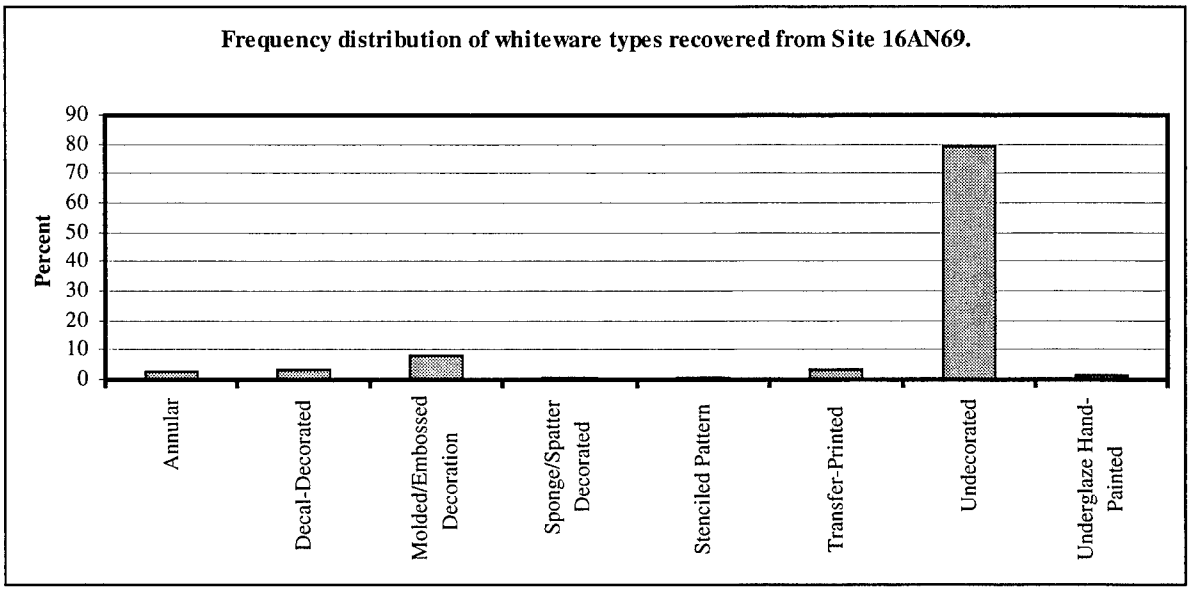


Figure 89. **Frequency distribution of whiteware types recovered from Site 16AN69.**

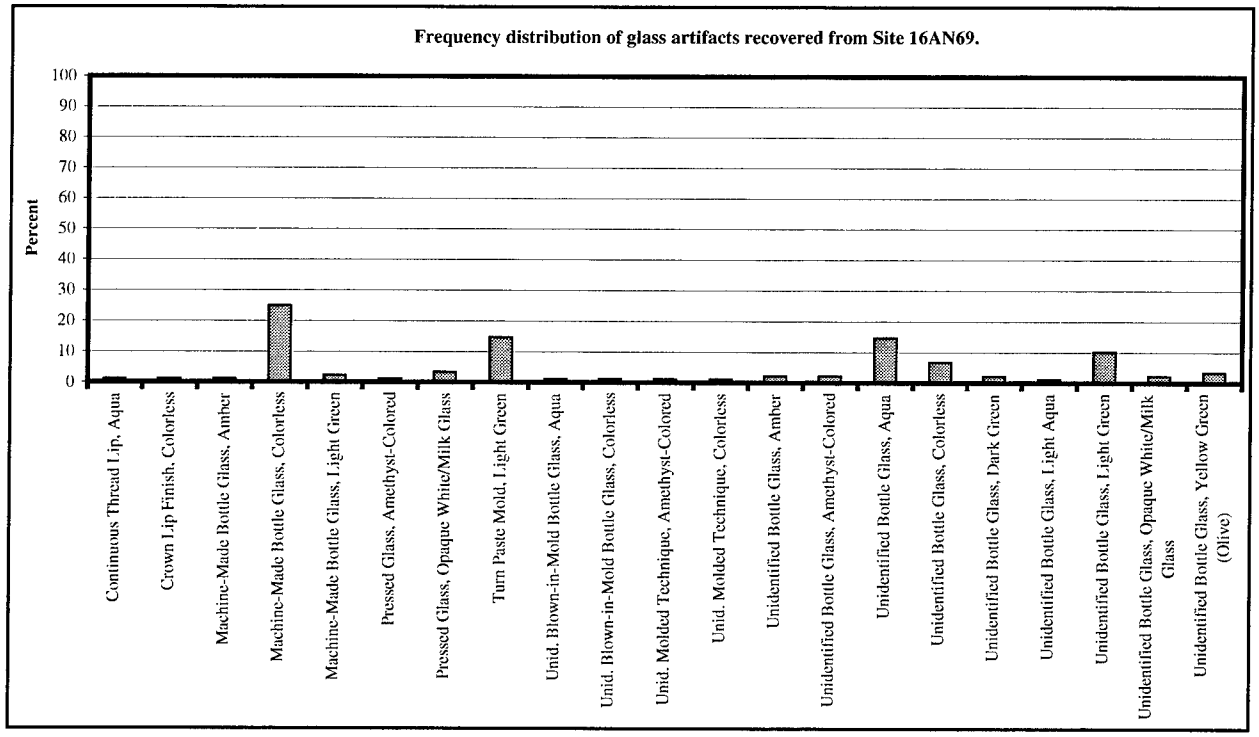


Figure 90. Frequency distribution of glass artifacts recovered from Site 16AN69.

green unidentified bottle glass, and colorless unidentified bottle glass. While the majority of these glass types cannot be dated specifically, turn paste molded bottle glass ranges from ca. 1870 to 1920.

In addition to frequency distributions, mean ceramic dates were calculated for the historic period ceramic sherds recovered from the different strata at Site 16AN69. These dates were derived applying South's (1977) mean ceramic dating formula, and they reflect mean dates for Strata II, IV, VI, and VII, respectively. Stratum III and V did not produce a meaningful mean ceramic dates because they yielded only 3 plain whiteware sherds. Sample sizes included in the date calculation for Strata II, III, IV, VI, and VII were 66, 16, 97, 46, and 13 sherds respectively. Application of South's dating formula resulted in dates of 1853 for Stratum II, 1853 for Stratum III, 1837 for Stratum IV, 1799 for Stratum VI, and 1860 for Stratum VII. While the mean dates for Strata II through VI increase in age relative to the depth of the deposits, there was an apparent reversal in the observed trend within Stratum VII. While this reversal may reflect any number of post-depositional processes that have occurred at Site 16AN69, it is most likely a reflection of small sample size, with only 13 sherds included in the analysis. Mean ceramic dates calculated from data collected from Site 16AN69 indicate that this site contains at least one historic period occupation dating between approximately 1800 and 1850.

Occupation of Site 16AN69 produced numerous domestic artifacts dating from this time range (Table 22). These include historic period ceramic sherds (creamware, whiteware, ironstone, porcelain, pearlware, and stoneware), miscellaneous ceramic artifacts (kaolin pipestem and ceramic figurine fragments), glass shards (machine-made bottle glass, pressed glass, turn paste mold glass, blown-in-mold bottle glass, continuous lip thread bottle glass, crown finish bottle glass, and unidentified bottle glass), a metal hoe, shoe leather, and a shell button. Construction materials recovered from the site include brick fragments (hand-made and glazed), nails (machine-cut and wire), iron spikes, and barbed wire fragments. The artifacts and ecofacts recovered from Site 16AN69 likely represent the remains of one or more historic period structures. In fact, according to detailed map analysis, it appears that the site possibly is associated with 11 historic period buildings depicted

on Mississippi River Commission maps of the area. Of these 11 structures, four represent residences/cabins located within approximately 5 m (16.4 ft) of Backhoe Trenches 1, 6, and 7. In addition, Backhoe Trenches 3, 4, and 9 were excavated within approximately 10 m (32.8 ft) of a "cottage," a "store," and a "cabin," respectively.

Backhoe trenching in the area revealed that Site 16AN69 contained intact historic period cultural deposits that ranged in depth from 30 to 120 cmbs (11.8 to 47.2 inbs). A typical backhoe trench located within the confines of Site 6AN69 was excavated to a depth of 200 cmbs (78.7 inbs), and it exhibited seven strata in profile (Figure 91). Stratum I consisted of a layer of very dark gray (10YR 3/1) clay that extended from 0 to 11 cmbs (0 to 4.3 inbs). Stratum II was characterized as a layer of brown (7.5YR 4/2) silty loam; it ranged in depth from 11 to 21 cmbs (4.3 to 8.3 inbs). Stratum III, a deposit of very dark gray (10YR 3/1) clay, extended from 21 to 38 cmbs (8.3 to 14.9 inbs). Stratum IV was encountered from 38 to 58 cmbs (14.9 to 22.8 inbs), and it was described as a layer of brown (10YR 5/3) silty clay mottled with gray (7.5YR 4/1) silty loam. Stratum IV was underlain by Stratum V, a layer of pale brown (10YR 6/3) silty clay; it extended from 58 to 61 cmbs (22.8 to 24 inbs). Stratum VI ranged in depth from 61 to 90 cmbs (24 to 35.4 inbs); it was characterized as a layer of dark gray (5YR 4/1) silty clay. Finally, Stratum VII was characterized as a layer of gray (10YR 5/1) clay mottled with strong brown (7.5YR 4/6) silty clay; it ranged in depth from 90 to 200 cmbd (35.4 to 78.7 inbs).

In addition, two cultural features were identified and recorded during backhoe trenching within the Site 16AN69 area. Feature 1 was noted in Backhoe Trench 8 (Figures 92 and 93). This feature consisted of a shallow deposit, i.e., a 10 cm (3.9 in) thick band, of black (10YR 2/1) silt mixed with charcoal and historic artifacts (Figures 94 and 95) These artifacts consisted of 1 ceramic figurine fragment; 2 plain ironstone sherds; 2 hard paste porcelain sherds; 1 decal-decorated, 1 molded/embossed, 1 sponge-decorated, and 16 plain whiteware sherds; 3 hand-made brick fragments; 4 colorless lamp glass shards; 1 colorless and 1 light green machine-made glass shard; 1 amethyst-colored

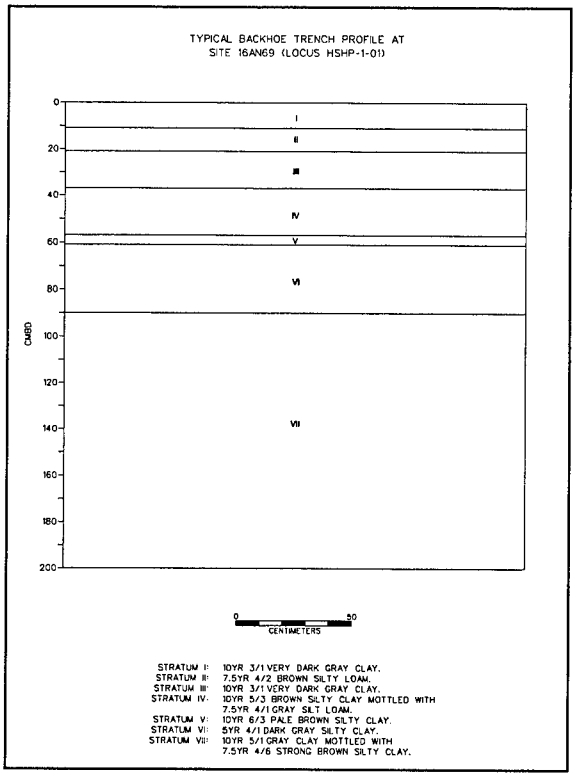


Figure 91. **Profile of a typical backhoe trench at Site 16AN69.**

pressed glass shard; 1 aqua unidentified blown-in-mold bottle glass shard; 1 amethyst-colored unidentified molded technique glass shard; 1 amber, 2 amethyst-colored, 1 colorless, 1 light green, and 1 yellow-green, and 13 aqua unidentified bottle glass shards; 1 aqua fire-damaged glass shard; 1 machine-cut, 1 wire, and 10 unidentified nails; 1 unidentified metal fragment; 1 shell button; 1 unidentified synthetic artifact; and 2 unidentified mammal bone fragments, one of which exhibited a cut mark and one of which possibly represented a rabbit tibia fragment (Tables 22 and 23). This apparent midden feature was encountered between 86 to 93 cmbs (33.8 to 36.6 cmbs).

The second cultural feature, i.e., Feature 2, was identified within Backhoe Trench 10; it was identified at 120 cmbs (47.2 inbs) (Figures 96 and 97). Feature 2 measured approximately 150 cm (59 in) in width and it produced 1 annular-decorated, 1 finger-painted (common cable), and 1 underglazed hand-painted pearlware sherd; 1

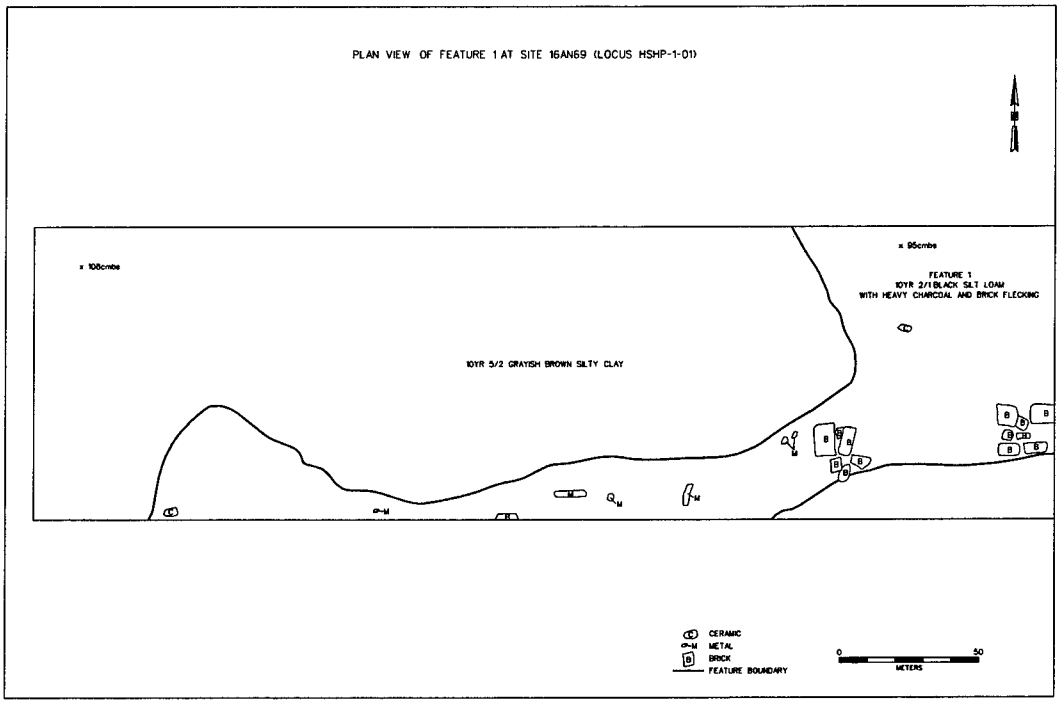


Figure 92. **Plan view of Feature 1 at Site 16AN69.**



Figure 93. **Photo of Feature 1 plan view at Site 16AN69.**

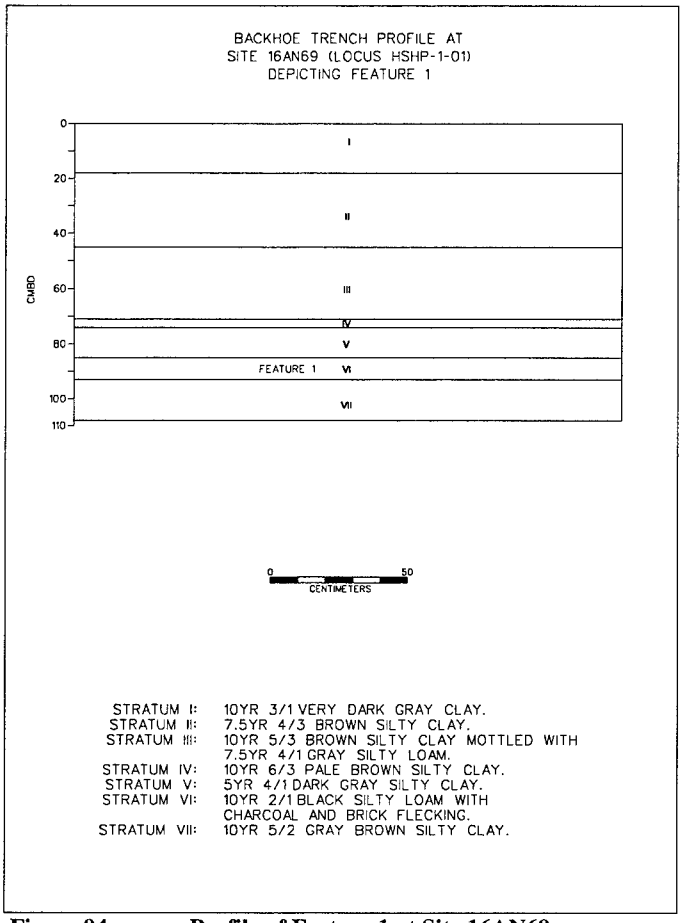


Figure 94. Profile of Feature 1 at Site 16AN69.



Figure 95. Photo of Feature 1 profile at Site 16AN69.

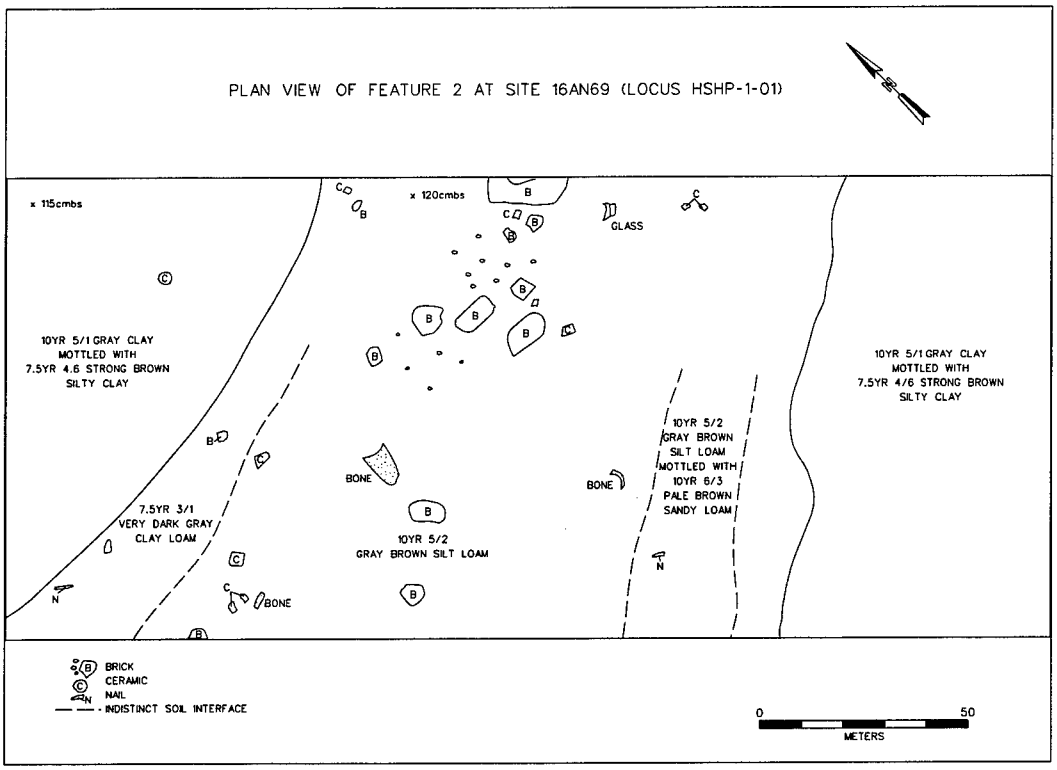


Figure 96. Plan view of Feature 2 at Site 16AN69.

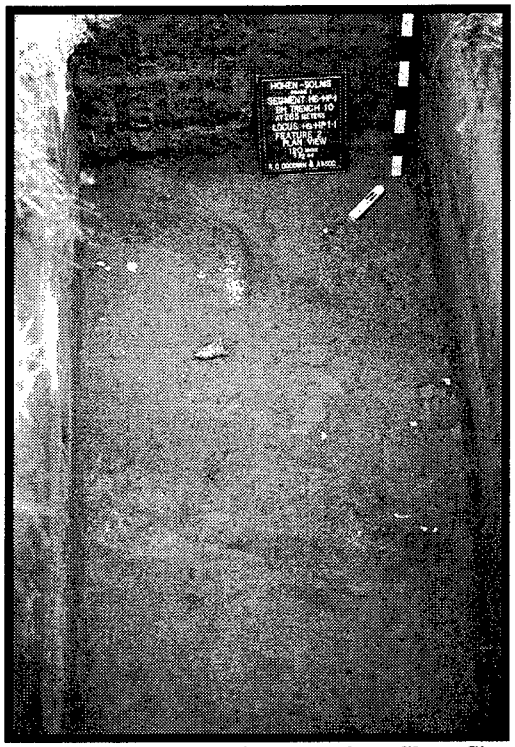


Figure 97. Photo of Feature 2 profile at Site 16AN69.

underglazed hand-painted, 2 transfer-printed, and 6 plain whiteware sherds; 1 light green machine-made bottle glass; 1 dark green unidentified bottle glass; 1 machine-cut and 2 unidentified nails; 1 cow illium and tibia fragment; and 4 unidentified mammal bone fragments (Tables 22 and 23). This feature appeared to represent the remains of a builder's trench, and it was located within approximately 30 m (98.4 ft) of several historic period cabins that are depicted on Mississippi River Commission maps of the area.

Archeological data collected during survey indicates that Site 16AN69 dates from the late eighteenth to early twentieth centuries, and that it represents a deposit that may be associated with at least one of the 11 now destroyed structures depicted on historic period Mississippi River Commission maps of the area. Those buildings appear to have included worker's cabins, a store, and other facilities associated with Modeste/Babin/Africa Plantations. The intact archeological deposits and the cultural features recorded within the limits of Site 16AN69 possess research potential. Site 16AN69 possesses the qualities of significance as defined by criterion [a and d] of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Additional investigation of Site 16AN69 may produce important data relevant to the cultural themes of Plantation Archeology, the Influence of the Mississippi River on Historic Settlement, and Culture History identified within *Louisiana's Comprehensive Archaeological Plan* (Smith et al 1983). Avoidance or mitigation of the proposed impacts to the site prior to the implementation of the concrete slope paving and levee re-contouring project is recommended.

Segment HSHP-2 (High Probability Area #2)

Segment HSHP-2, High Probability Area #2 of the Hohen-Solms to Modeste project item, originated within the northeastern portion Section 47 of Township 10S, Range 14E in Ascension Parish, Louisiana. This segment extended for approximately 360 m (1,181 ft) in a southwesterly direction to its termination point within the east-central part of Section 48 of Township 10S, Range 14W (Figure 2: oversized map). Elevations throughout this survey segment ranged from an approximate elevation of 6.1 to 7.6 m



Figure 98. Overview photo of Segment HSHP-2 facing north.

(20 to 25 ft) NGVD, and this area was dominated by soils of the Commerce series. Commerce soils are characterized by poorly drained, silty clay loams (Spicer et al. 1976) Vegetation located throughout the Area of Potential Effect consisted only of manicured grass. This survey segment is bounded to the northwest by the extant levee and to the southeast by borrow pits excavated during construction of the existing flood control structure (Figure 98). In addition, Segment HSHP-2 is crossed by an unimproved dirt access road that provides access to the batture from Louisiana State Route 405. This access road measures approximately 5 m (16.4 ft) in width and it is located approximately 135 m (443 ft) from the beginning of Segment HSHP-2.

During survey, 12 of 12 (100 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout this portion of the Area of Potential Effect. A typical backhoe trench excavated within this survey segment extended to a depth of 200 cmbs (78.7 inbs), and exhibited five strata in profile (Figure 99). Stratum I was characterized as a layer of interbedded very dark gray (10YR 3/1) clay, brown (7.5YR 4/3) silt, and dark gray (10YR 3/1) silty clay; it ranged in depth from 0 to 38 cmbs (0 to 14.7 inbs). Stratum I was underlain by Stratum II, a deposit of grayish brown (10YR 5/2) silty clay that was encountered from 38 to 56 cmbs (14.7 to 22 inbs). Stratum III was composed of a layer of dark gray (10YR 3/1) clay that extended from 56 to 90 cmbs (22 to 35.4 inbs). Stratum IV consisted of a layer of brown (7.4YR 4/3) silty clay; it ranged in depth

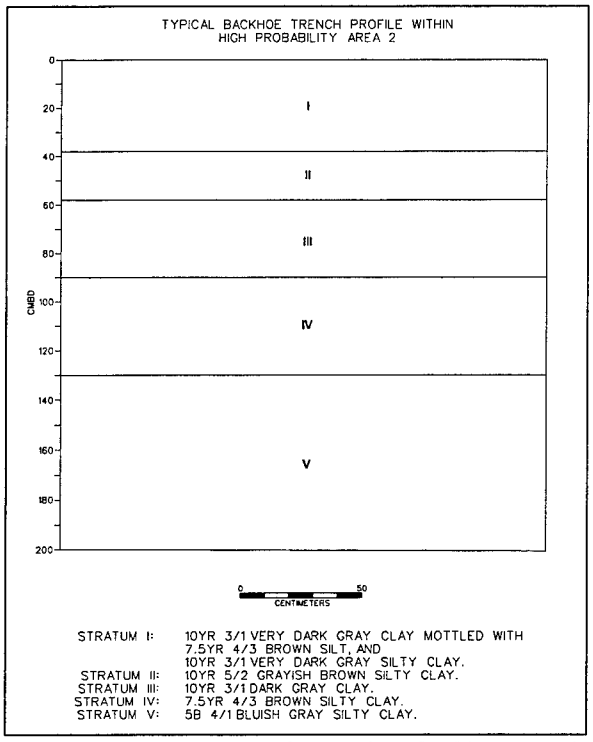


Figure 99. **Profile of a typical backhoe trench within Segment HSHP-2.**



Figure 100. **Overview photo of Segment HSHP-3 facing north.**

from 90 to 130 cmbs (35.4 to 51.2 inbs). Finally, Stratum V extended from 130 to 200 cmbs (51.2 to 78.8 inbs); it was described as a layer of bluish gray (5B 4/1) clay.

Despite this intensive examination of Segment HSHP-2, High Probability Area #2 of the Hohen-Solms to Modeste project item, no cultural resources were identified. No additional testing of this survey segment is recommended.

Segment HSHP-3 (High Probability Area #3)

Segment HSHP-3, High Probability Area #3 of the Hohen-Solms to Modeste project item, originated at an unimproved dirt access road positioned within the northeastern portion of Section 51 of Township 10S, Range 14E in Ascension Parish, Louisiana and extended for approximately 304 m (997 ft) to its termination point within the southeastern part of Section 4 of Township 11S, Range 14E (Figure 2: oversized map). This survey segment extended in a southwesterly direction; it was characterized as an open grassy area that was bounded to the northwest by the artificial flood control structure and to the southeast by a linear borrow pit excavated during construction of the extant levee in 1932 (Figure 100). This survey segment was situated at an approximate elevation of 7.6 m (25 ft) NGVD, and it was dominated by soils belonging to the Commerce soil series, i.e., poorly drained, slowly permeable silty loams (Spicer et al. 1976). It was determined on this basis of historic period map analysis that this area appeared to possess a high probability for containing intact cultural deposits, in part because of its proximity to numerous historic period structures associated with the Arlington, Delicia, and Pelico Plantations, all of which operated during the nineteenth century.

During survey, 10 of 10 (100 percent) planned backhoe trenches were excavated successfully at 30 m (98.4 ft) intervals throughout Segment HSHP-3 (Table 11). A typical backhoe trench extended to a depth of 200 cmbs (78.7 inbs) and exhibited six strata in profile (Figure 101). Stratum I ranged in depth from 0 to 10 cmbs (0 to 3.9 inbs); and was characterized as a layer of very dark gray (10YR 3/1) clay. Stratum I was underlain by Stratum II, a deposit of gray (5YR 5/1) silty loam; it was encountered from 10 to 60 cmbs (3.9 to 23.6 inbs). Stratum III consisted of a layer of gray (5YR 5/1) silty clay mottled with strong brown (10YR 5/6) silty clay; it ranged in depth from 60 to 150 cmbs (23.6 to 59.1 inbs). Stratum IV was described as a layer of dark gray (10YR 4/1) clay that extended from 150 to 162 cmbs (59.1 to 63.8 inbs). Stratum V, a layer of dark yellowish brown

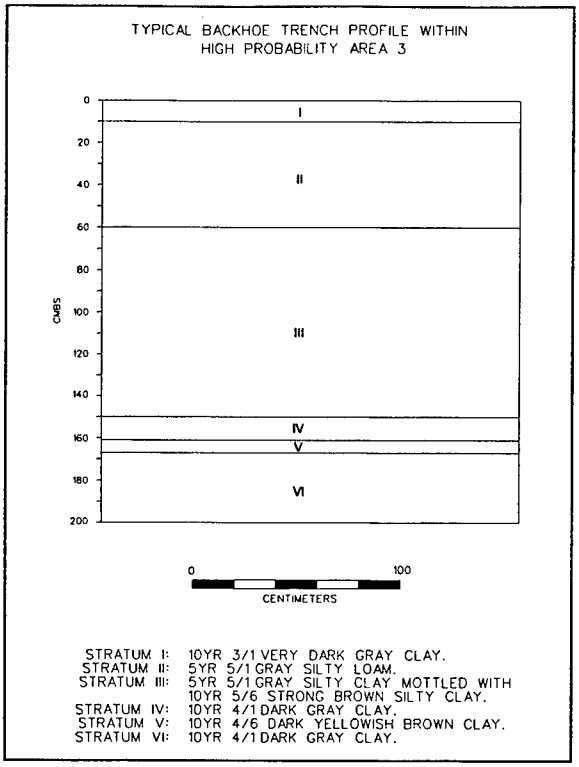


Figure 101. **Profile of a typical backhoe trench within Segment HSHP-3.**

(10YR 4/6) clay, extended from 162 to 167 cmbs (63.8 to 65.7 inbs). Finally, Stratum VI was classified as a layer of dark gray (10YR 4/1) clay that ranged in depth from 167 to 200 cmbs (65.7 to 78.7 inbs).

Despite the successful excavation of 10 of 10 (100 percent) planned backhoe trenches within the Area of Potential Effect associated with High Probability Area #3 of the Hohen-Solms to Modest project item (Segment HSHP-3), no cultural resources were identified. No additional testing of Segment HSHP-3 is recommended.

Segment HSMP-1 (Moderate Probability Area #1)

Segment HSMP-1, Moderate Probability Area #1 of the Hohen-Solms to Modeste project item, originated within the northeastern portion of Section 37 of Township 10S, Range 14E. This survey segment extended in a southeasterly direction for approximately 825 m (2,706 ft) to its termination point within the northern part of Section 40 of Township 10S, Range 14E (Figure 2: oversized map). Segment HSMP-1 was covered entirely with grass and it had elevations ranging from 6.1 to 7.6 m (20 to 25 ft) NGVD. This area exclusively contained poorly drained, silty and loamy soils of the Commerce series (Spicer et al. 1976). This survey segment was bounded to the southwest by the extant levee and to the northeast by numerous inundated, linear borrow pits excavated during construction of the existing flood control structure (Figure 102). Both a single natural gas pipeline, owned and operated by the United Gas Pipeline Company, and an unimproved access road crossed Segment HSMP-1. The access road measured approximately 5 m (16.4 ft) in width and was located at approximately 325 m (1,066 ft) from the beginning of the survey segment. The natural gas pipeline crossed Segment HSMP-1 at approximately 150 m (492 ft) from its origin.



Figure 102. **Overview photo of Segment HSMP-1 facing north.**

Segment HSMP-1 was designated as having a moderate potential for containing intact cultural deposits. This segment fell within the vicinity of the Modeste Plantation, which operated during the nineteenth century. While no structures were depicted on the Mississippi River Commission maps of the area, the 1932 design plans for the Bayou Goula New Levee setback indicated that 25 buildings were situated within or adjacent to the site area. These 25 buildings, which consisted of 23 structures/cabins, the Modeste Post Office and Store, and a Welcome Store were located in the immediate vicinity of the Area of Potential Effect.

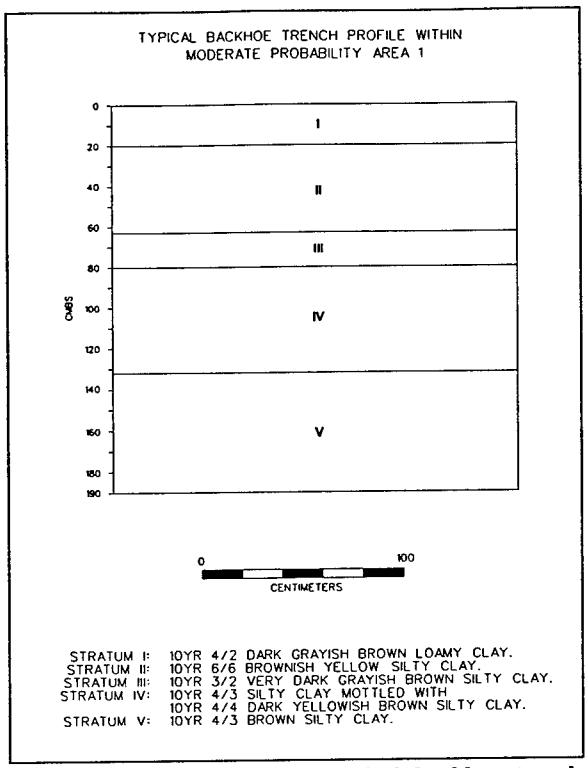


Figure 103. Profile of a typical backhoe trench within Segment HSMP-1.

During survey, 36 of 36 (100 percent) planned backhoe trenches were excavated successfully at 50 m (164 ft) intervals throughout Segment HSMP-1 (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 190 cmbs (7.48 inbs), and it exhibited five strata in profile (Figure 103). Stratum I ranged in depth from 0 to 20 cmbs (0 to 19.7.9 inbs); it was described as a layer of dark grayish brown (10YR 4/2) loamy clay representing recent fill associated with construction of the extant flood control structure. Stratum I was underlain by Stratum II, a layer of brownish yellow (10YR 6/6) silty clay that extended from 20 to 62 cmbs (7.9 to 24.4 inbs). Stratum III, a deposit of dark grayish brown (10YR 3/2) silty clay, reached from 62 to 80 cmbs (24.4 to 31.5 inbs). Stratum IV was characterized as a layer of brown (10YR 4/3) silty clay mixed with yellowish brown (10YR 4/4) silty clay; it extended from 80 to 134 cmbs (31.5 to 52.8 inbs). Finally, Stratum V ranged in depth from 134 to 190 cmbs (52.8 to 74.8 inbs). Excavation of these backhoe trenches was terminated at approximately 190 cmbs (74.8), due to an influx of groundwater.

Survey of segment HSMP-1, i.e., High Probability Area #1 of the Hohen-Solms to Modeste project item, resulted in the identification and recordation of a single archeological site. A description of material recovered from Site 16AN70, as well as and assessment of its National Register of Historic Places eligibility follow.

Site 16AN70

Site 16AN70, an early nineteenth to early twentieth century historic period artifact scatter, was identified during backhoe trenching of the northern portion of Moderate Probability Area #1 within the Hohen-Solms to Modeste project item (Segment HSMP-1). This site is located on the batture within Sections 37 - 40 of Township 10S, Range 14E (Table 11; Figures 104 and 105). It is situated at an elevation ranging from 7.6 to 9.1 m (25 to 30 ft) NGVD. Soils located within the site area are characterized by poorly drained silty soils of the Commerce series.

Site 16AN70 is oblong in shape and encompasses an area approximately 3.04 ac (1.2 ha) in size. The site is located approximately 100 m (328 ft) from the right descending bankline of the Mississippi River. It is bounded to the east by a long, narrow borrow pit excavated during construction of the existing flood control structure, to the north by a natural gas pipeline, to the west by the existing levee, and to the south by a two track dirt road (Figure 106). Historically, this area was part of Modeste/Babin/Africa Plantations. A total of 691 artifacts and 196 faunal specimens were recovered from the site during survey (Tables 24 and 25). All of this material originated from subsurface contexts.

During survey, 32 of 32 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16AN70. A total of 23 of the 32 (72 percent) planned backhoe trenches produced cultural material (Table 24). This material consisted of 312 historic period ceramic sherds, 25 pieces of construction. material, 314 glass shards, 36 metal fragments, 1 piece of architectural marble, and three synthetic artifacts. The historic period ceramic artifacts consisted of 7 twentieth century white-bodied

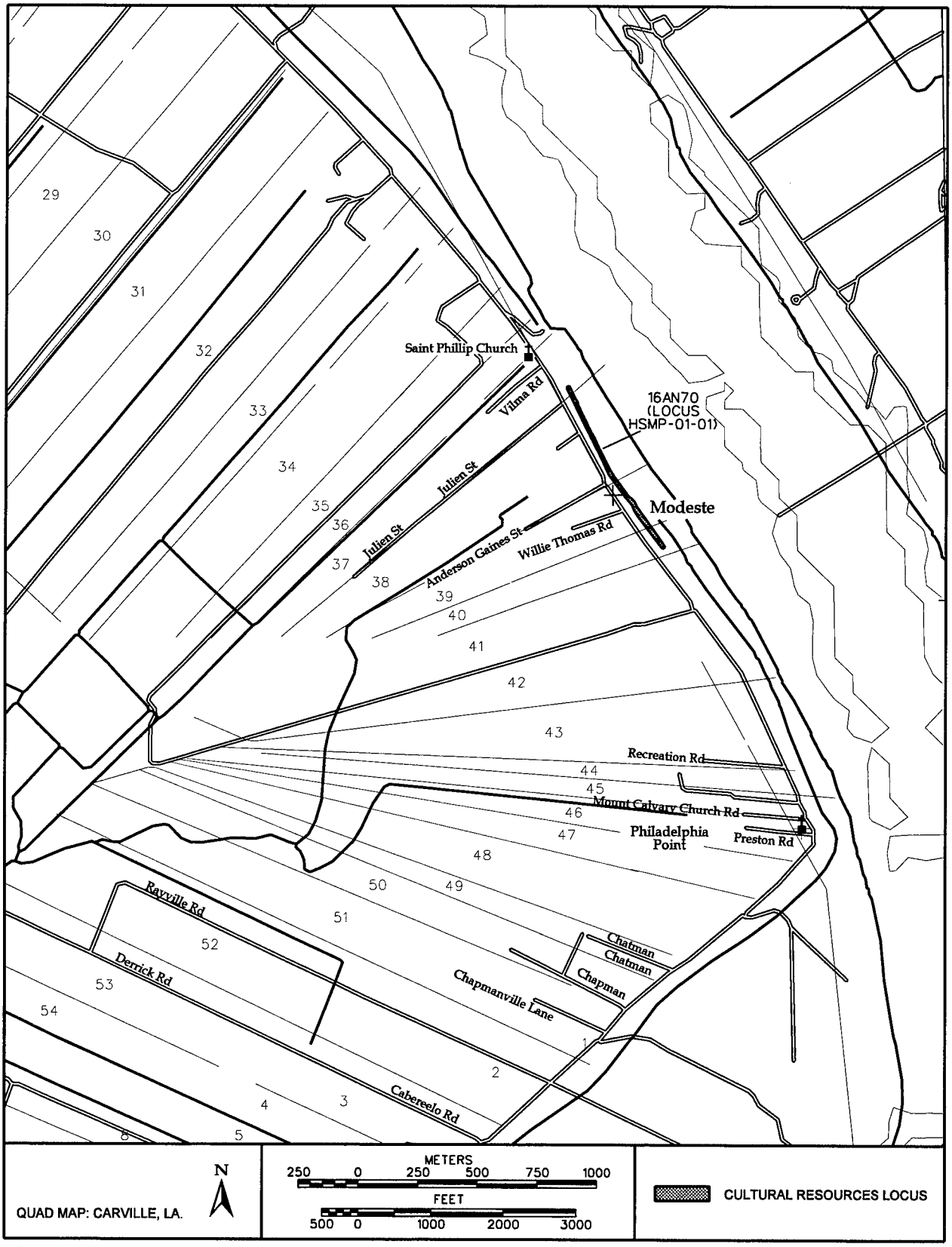


Figure 104. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16AN70.**



Figure 105. Overview photo of Site 16AN70 facing north.

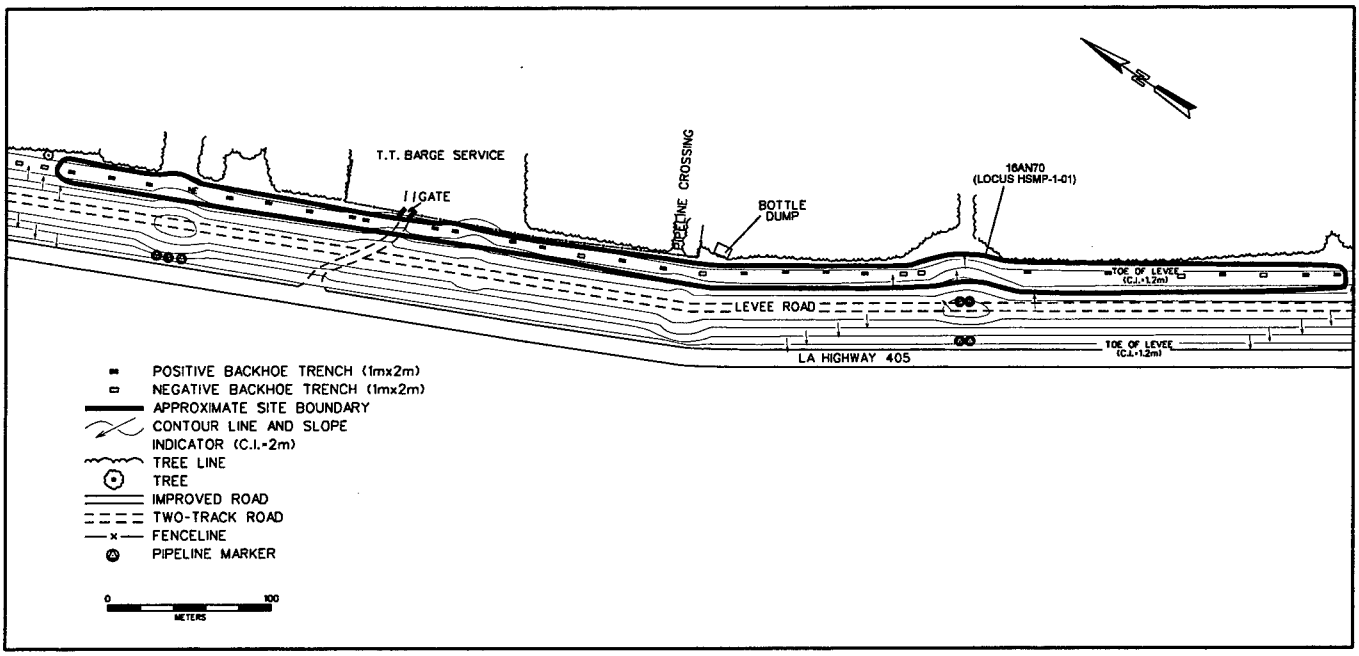


Figure 106. Plan view of Site 16AN70.

Table 24. Historic Period Artifacts Recovered from Site 16AN70.

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
I		Glass	Contact Molded	Opaque White / Milk Glass	Undetermined	2
			Unidentified Blown-in-Mold Bottle Glass	Colorless	Undetermined	1
II		Ceramic	20th Cent. White-Bodied Earthenware	Transparent Yellow Glaze	Undetermined	4
			Domestic Brown Stoneware	Buff-body "Ginger Beer" Bottle	ca. 1850-1900	1
			Pearlware	Undecorated	ca. 1780-1830	3
			Porcelain, Hard Paste	Undecorated	post ca. 1768	23
			Whiteware	Annular Decorated	ca. 1820-1890	1
				Flow Blue	ca. 1840-1870+	1
				Plain	ca. 1820-1900+	11
			Yellowware	Plain	ca. 1830-1900; ca. 1830-1930s	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	1
			Miscellaneous Architectural	Mortar	Undetermined	2
		Glass	"Depression" Glass	Opaque White/ Milk Glass	post ca. 1925; ca. 1928-1950s (UP)	4
			Machine-Made Bottle Glass	Amber	post ca. 1898 (Manu.); post 1916 (U.P.)	17
				Colorless	post ca. 1898 (Manu.); post 1916 (U.P.)	3
			Tooled Lip	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
			Turn Paste Mold	Dark Green	ca. 1870s-1920s	1
			Unidentified Blown-in-Mold Bottle Glass	Amber	Undetermined	3
				Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
				Colorless	Undetermined	4
			Unidentified Bottle Glass (Kitchen)	Colorless	Undetermined	3
				Green	Undetermined	2
		Synthetic	Clothing Items	Miscellaneous	Undetermined	1
III		Ceramic	Furniture	Soap Dish	Undetermined	4
			Whiteware	Plain	ca. 1820-1900+	4
				Transfer-printed	post ca. 1820; ca. 1820-1860	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	3
		Glass	Machine-Made Bottle Glass	Amber	post ca. 1898 (Manu.); post 1916 (U.P.)	5
				Colorless	post ca. 1898 (Manu.); post 1916 (U.P.)	8
			Unidentified Blown-in-Mold Bottle Glass	Colorless	Undetermined	1
			Unidentified Bottle Glass (Kitchen)	Colorless	Undetermined	3
				Light Green	Undetermined	1
IV		Ceramic	20th Cent. White-Bodied Earthenware	Opaque Aqua-colored Glaze	Undetermined	1
			Creamware	Mocha	ca. 1785-ca. 1835	1
				Undecorated	ca. 1762-1820	5
				Underglaze Hand-painted	Undetermined	1
			Domestic Brown Stoneware	Albany Slip-glazed Buff	ca. 1810-1900	2
			Pearlware	"Negative" Blue Transfer-Printed	ca. 1818-1830	1
				Annular	ca. 1790-1820	1
				Finger-painted (Common-cable)	ca. 1790-1840	2
				Flow Blue	ca. 1840-1870+	1
				Transfer-printed	ca. 1795-1840	1
				Undecorated	ca. 1780-1830	8
				Unidentified Decorated	Undetermined	1
				Unidentified Edge Type	ca. 1780-1830	1
			Porcelain, Hard Paste	Undecorated	post ca. 1768	2
			Unidentified Ceramics	Unidentified Burned Earthenware	Undetermined	1
			Whiteware	Annular Decorated	ca. 1820-1890	5

Table 24, continued

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
IV, cont.		Ceramic, cont.	Whiteware, cont.	Overglaze Hand-painted	ca. 1820-1890	1
				Plain	ca. 1820-1900+	11
				Scalloped Rim, impressed curved lines	ca. 1820-1845	2
				Scalloped Rim, Mold-Decorated	Undetermined	1
				Transfer-printed	post ca. 1820; ca. 1820-1860	23
			Yellowware	Plain	ca. 1830-1900; ca. 1830-1930s	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	2
			Miscellaneous Architectural	Mortar	Undetermined	3
		Glass	"Depression" Glass	Opaque White/ Milk Glass	post ca. 1925; ca. 1928-1950s (UP)	2
			Art Glass	Layered	Undetermined	1
			Flat Glass Shard(s)	No color assigned	Undetermined	2
			Ink Bottle	Colorless	Undetermined	6
			Lamp Glass	Colorless	Undetermined	11
			Tooled Lip	Aqua	ca. 1820s-1920s	13
			Turn Paste Mold	Dark Green	ca. 1870s-1920s	1
			Unidentified Bottle Glass (Kitchen)	Aqua	Undetermined	1
				Dark Green	Undetermined	1
			Vent Molded	Amber	ca. 1870 - 1920+	1
		Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	ca. 1868-1890s (Generic); post ca. 1874 (modern type)	3
			Nail(s)	Wire, Common	post ca. 1890	1
				Wire, Unidentified	post ca. 1890	1
V		Glass	Pressed Glass	Opaque White/ Milk Glass	post ca. 1825 (Rare); ca. 1875-1890 (UP)	1
		Metal	Nail(s)	Machine-Cut, Stamped Head	ca. late 1830s-1890s+	1
VI		Ceramic	Domestic Brown Stoneware	Opaque Glaze on Buff	Undetermined	1
	1	Ceramic	Whiteware	Unidentified Decoration	Undetermined	1
		Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	1
		Glass	"Depression" Glass	Opaque White/ Milk Glass	post ca. 1925; ca. 1928-1950s (UP)	25
				Pink	post ca. 1925; ca. 1928-1950s (UP)	14
			Machine-Made Bottle Glass	Amber	post ca. 1898 (Manu.); post 1916 (U.P.)	4
				Colorless	post ca. 1898 (Manu.); post 1916 (U.P.)	4
				Decal (Applied Color Label)	post ca. 1934 (ACL)	1
			Unidentified Blown-in-Mold Bottle Glass	Colorless	Undetermined	9
			Unidentified Bottle Glass (Kitchen)	Colorless	Undetermined	2
				Dark Green	Undetermined	1
			Vent Molded	Colorless	ca. 1870 - 1920+	2
	2	Ceramic	Activities	Bisque-fired Porcelain- Figural	Undetermined	1
			Clothing Items	Porcelain Button(s)	post ca. 1840-1930 (UP)	2
			Domestic Brown Stoneware	Brown Lead Glaze on Buff	Undetermined	1
				Colored Glaze on Buff	Undetermined	2
				Opaque Glaze w/Int. Albany Slip-glaze on Buff	Undetermined	2
				Salt-Glazed w/Int. Albany Slip-glazed on Buff-body	Undetermined	1
			Furniture	Flower Pot(s)	Undetermined	1
			Ironstone	Undecorated White	ca. 1813-1900+; U.P. post ca. 1845	5
			Pearlware	Undecorated	ca. 1780-1830	7
			Porcelain, Hard Paste	Overglaze Hand-painted	Undetermined	1
				Undecorated	post ca. 1768	2
			Whiteware	Finger-painted (Common-cable)	ca. 1820-1890	1

Table 24, continued

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
VI, cont.	2, cont.	Ceramic, cont.	Whiteware, cont.	Molded/ Embossed Decoration	Undetermined	5
				Plain	ca. 1820-1900+	16
				Scalloped Rim, Mold-Decorated	Undetermined	1
				Transfer-printed	post ca. 1820; ca. 1820-1860	1
			Yellowware	Plain	ca. 1830-1900; ca. 1830-1930s	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	4
		Glass	Contact Molded	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
				Colorless	Undetermined	1
			Flat Glass Shard(s)	No color assigned	Undetermined	1
			Machine-Made Bottle Glass	Amber	post ca. 1898 (Manu.); post 1916 (U.P.)	7
				Amethyst-colored (Manganese Solarization)	ca. 1898-1920	1
				Colorless	Post ca. 1898 (Manu.); post 1916 (U.P.)	16
				Decal (Applied Color Label)	Post ca. 1934 (ACL)	2
				Light Aqua	Post ca. 1898 (Manu.); post 1916 (U.P.)	1
			Pressed Glass	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	3
				Colorless	Post ca. 1825	1
			Tooled Lip	Aqua	ca. 1820s-1920s	1
			Unidentified Blown-in-Mold Bottle Glass	Amber	Undetermined	1
				Amethyst-colored (Manganese Solarization)	ca. 1875-1920	3
				Aqua	Undetermined	1
				Colorless	Undetermined	9
				Light Green	Undetermined	1
			Unidentified Bottle Glass (Kitchen)	Amber	Undetermined	6
				Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
				Aqua	Undetermined	2
				Colorless	Undetermined	15
				Light Aqua	Undetermined	4
			Unidentified Glass (Miscellaneous)	Colorless	Undetermined	1
				Opaque White / Milk Glass	Undetermined	2
			Vent Molded	Aqua	ca. 1870 - 1920+	1
		Metal	Construction Hardware	Spike(s)	Undetermined	1
			Miscellaneous Hardware	Unidentified	Undetermined	1
			Miscellaneous Kitchen	Continuous Thread Screw Cap(s)	Undetermined	1
			Nail(s)	Machine-Cut, Unidentified Head Style	ca. 1790s-1890s+	1
				Unidentified	Undetermined	1
				Wire, Common	post ca. 1890	6
				Wire, Unidentified	post ca. 1890	8
			Personal Items	Metal Toothpaste/Ointment Tube(s)	Undetermined	1
			Unidentified Metal Objects	Indeterminate	Undetermined	1
	Backdirt	Stone	Architectural	Marble fragment(s)	Undetermined	1
		Ceramic	20th Cent. White-Bodied Earthenware	Colorless Glaze	Undetermined	2
			Activities	Doll Part(s)	Undetermined	2
				Toy Dish(s)	Undetermined	1
			Creamware	Annular	ca. 1780-1815	2
				Undecorated	ca. 1762-1820	3
			Domestic Brown Stoneware	Brown Mineral Glaze on Buff	Undetermined	1
				Colored Glaze on Buff	Undetermined	1
				Opaque Glaze on Buff	Undetermined	3

Table 24, continued

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
VI, cont.	Backdirt, cont.	Ceramic, cont.	Domestic Brown Stoneware, cont.	Opaque Glaze w/Int. Albany Slip-glaze on Buff	Undetermined	12
			Ironstone	Undecorated White	ca. 1813-1900+; U.P. post ca. 1845	3
			Pearlware	Annular	ca. 1790-1820	7
				Finger-painted (Common-cable)	ca. 1790-1840	2
				Mold Decorated	Undetermined	2
				Transfer-printed	ca. 1795-1840	3
				Undecorated	ca. 1780-1830	13
				Underglaze Hand-painted	ca. 1780-1870+	2
				Unscalloped, impressed rim	ca. 1825-1891	1
			Porcelain, Hard Paste	Overglaze Decal	Undetermined	1
				Undecorated	post ca. 1768	1
			Tin-Enamelled Earthenware	Rouge/Ointment Pot	ca. 1730-1830	2
			Tobacco Pipes	Molded Ball Clay (Kaolin) Stem(s)	Undetermined	1
			Whiteware	Annular Decorated	ca. 1820-1890	6
				Flow Blue	ca. 1840-1870+	2
				Molded/ Embossed Decoration	Undetermined	3
				Plain	ca. 1820-1900+	28
				Scalloped Rim, Mold-Decorated	Undetermined	1
				Transfer-printed	post ca. 1820; ca. 1820-1860	23
				Underglaze Hand-painted	ca. 1820-1890	1
				Unidentified	Undetermined	1
				Unidentified Underglaze Decorated	Undetermined	1
			Yellowware	Colorless Exterior Glaze with Interior Slip	Undetermined	1
				Plain	ca. 1830-1900; ca. 1830-1930s	1
		Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	6
				Brick, Extruded, Fragment	Undetermined	1
				Brick, Handmade, Partial	Undetermined	1
			Miscellaneous Architectural	Stucco	Undetermined	1
		Glass	"Depression" Glass	Light Blue	post ca. 1925; ca. 1928-1950s (UP)	1
				Opaque White/ Milk Glass	post ca. 1925; ca. 1928-1950s (UP)	1
			Art Glass	Opaque Blue	Undetermined	2
			Button(s) with Metal Shank	Dark Purple (Black)	post ca. 1840 (UP)	1
			Contact Molded	Opaque White / Milk Glass	Undetermined	1
			Cup Bottom Mold	Colorless	post ca. 1850	1
			Flat Glass Shard(s)	No color assigned	Undetermined	1
			Machine-Made Bottle Glass	Amber	post ca. 1898 (Manu.); post 1916 (U.P.)	13
				Cobalt Blue	post ca. 1898 (Manu.); post 1916 (U.P.)	1
				Colorless	post ca. 1898 (Manu.); post 1916 (U.P.)	10
				Dark Green	post ca. 1898 (Manu.); post 1916 (U.P.)	4
				Decal (Applied Color Label)	post ca. 1934 (ACL)	3
				Light Green	post ca. 1898 (Manu.); post 1916 (U.P.)	1
			Turn Paste Mold	Light Aqua	ca. 1870s-1920s	1
			Unidentified Blown-in-Mold Bottle Glass	Amber	Undetermined	2
				Colorless	Undetermined	8
				Light Aqua	Undetermined	1
				Light Green	Undetermined	3
			Unidentified Bottle Glass (Kitchen)	Amber	Undetermined	1
				Colorless	Undetermined	4
				Green	Undetermined	4

Table 24, continued

STRATUM	FEATURE	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
VI, cont.	Backdirt, cont.	Glass, cont.	Unidentified Bottle Glass (Kitchen), cont.	Opaque White / Milk Glass	Undetermined	1
				Yellow Green (Olive)	Undetermined	4
			Vent Molded	Colorless	ca. 1870 - 1920+	1
		Metal	Construction Hardware	Fence Part(s)	Undetermined	1
			Miscellaneous Hardware	Rod	Undetermined	2
				Wire fragment(s)	Undetermined	1
			Miscellaneous Kitchen	Continuous Thread Screw Cap(s)	Undetermined	1
			Nail(s)	Machine-Cut, Stamped Head	ca. late 1830s-1890s+	2
				Wire, Unidentified	post ca. 1890	1
			Unidentified Metal Objects	Indeterminate	Undetermined	1
		Synthetic	Kitchen Items	Plastic cap(s)	Undetermined	1
			Miscellaneous Activities	Plastic	Undetermined	1
Grand Total						**691**

Table 25. Faunal Remains Recovered from Site 16AN70.

STRATA	CLASS	GENUS	SPECIES	COMMON NAME	MODIFICATION	TOTAL
II	Mammalia	Undetermined	Undetermined	Unidentified Mammal	Clean cut	1
IV	Aves	Gallus	Gallus	Chicken	Burned	5
	Invertebrata	Undetermined	Undetermined	Unidentified Invertebrate	Burned	17
	Mammalia	Bos	taurus	Cow	Burned	46
					Cut	42
		Sus	scrofa	Domestic pig	Burned	10
		Undetermined	Undetermined	Unidentified Mammal	Clean cut	34
	Vertebrata	Undetermined	Undetermined	Unidentified Vertebrate	Burned	15
Backdirt	Mammalia	Bos	taurus	Cow	Clean cut	2
					Cut	1
					Hack	1
					None	3
		Sus	scrofa	Domestic pig	Cut	1
					None	8
		Undetermined	Undetermined	Unidentified Mammal	Clean cut	3
					Cut	2
					Hack	1
					None	2
					Rodent-gnawed	2
Grand Total						**196**

ceramic sherds; 3 ceramic figurine fragments; 1 ceramic toy dish fragment; 1 flower pot sherd; 4 soap dish fragments; 2 porcelain buttons; 2 annular-decorated, 1 mocha-decorated, 1 underglazed hand-painted, and 8 undecorated creamware sherds; 17 Albany slip-glazed and 10 domestic brown stoneware sherds; 8 plain ironstone sherds; 1 negative blue transfer-printed, 8 annular-decorated, 4 finger-painted (common cable), 1 flow blue, 2 mold-decorated, 4 transfer-printed, 1 impressed-rim, 2 underglazed hand-painted, 1 unidentified-decorated, 1 unidentified edge type, and 31 plain pearlware sherds; 2 overglazed hand-painted and 28 unidentified hard paste porcelain sherds; 2 tin-enameled earthenware sherds; 1 kaolin pipestem fragment; 1 unidentified burned ceramic sherd; 12 annular-decorated, 1 finger-painted (common cable), 3 flow blue, 8 molded/embossed, 1 overglazed hand-painted, 70 plain, 5 scalloped-rim, 1 underglazed hand-painted, 3 unidentified, and 48 transfer-printed whiteware sherds; and 5 yellowware sherds (Table 24). Construction materials consisted of 19 brick fragments, 5 pieces of mortar, and 1 stucco fragment (Table 24). Glass artifacts included of 1 light blue, 32 opaque/white milk, and 14 pink "Depression" glass shards; 3 art glass shards; 1 black glass button; 1 amethyst-colored, 1 colorless, and 3 opaque white/milk glass colored contact molded

glass shards; 1 colorless cup bottom mold glass shard; 4 flat glass shards; 6 colorless ink bottle glass shards; 11 colorless lamp glass shards; 46 amber, 1 amethyst-colored, 1 cobalt blue, 4 dark, 6 decal-labeled colorless, 1 light aqua, 1 light green, and 41 colorless machine-made glass shards; 1 colorless, 1 opaque white/milk, and 3 amethyst-colored pressed glass shards; 1 amethyst-colored and 14 aqua tooled lip glass shards; 1 light aqua and 2 dark green turn paste mold glass shards; 6 amber, 4 amethyst-colored, 1 aqua, 32 colorless, 1 light aqua, and 4 light green unidentified blown-in-mold bottle glass shards; 7 amber, 1 amethyst-colored, 3 aqua, 27 colorless, 2 dark green, 6 green, 4 light aqua, 1 light, 3 opaque white/milk, 4 yellow-green, 1 colorless, and 2 opaque white/milk unidentified glass shards; and 1 amber, 1 aqua, and 3 colorless vent-molded glass shards. Metal artifacts recovered from Site 16AN70 consisted of 1 fence part; 1 iron spike; 3 barbed wire fragments; 2 iron rods; 3 unidentified metal fragments; 1 wire fragment; 2 continuous thread screws; 4 machine-cut, 1 unidentified, and 17 wire nails; and 1 metal toothpaste/ointment tube (Table 24). Synthetic artifacts recovered from the site consisted of 1 piece of bakelite, 1 plastic bottle cap, and 1 plastic high heel fragment (Table 21).

The faunal specimens recovered from Site 16AN70 included 5 burned chicken bones, 17 unidentified invertebrate fragments, 95 cow bone fragments, 20 domestic pig bone fragments, 44 unidentified mammal bone fragments, and 15 unidentified vertebrate bone fragments. The cow bone fragments consisted of 1 unmodified tooth fragment; 2 rib, 1 scapula, and 1 tibia fragment exhibiting cut marks; 1 unmodified long bone shaft fragment; and 89 miscellaneous bone fragments, 40 of which were burned and 42 of which exhibited cut marks. The pig bone fragments consisted of 1 femur fragment, 1 first phalanx fragment, 5 mandible fragments, 2 burned cranial fragments, 1 molar, 1 scapula fragment exhibiting a cut mark, and 8 burned miscellaneous fragments. The unidentified mammal bone fragments consisted of 1 mandible fragment, 1 rodent-gnawed long bone shaft fragment, and 42 miscellaneous bone fragments, 40 of which exhibited cut marks (Table 25).

Of the 887 artifacts and ecofacts recovered from Site 16AN70, three originated from Stratum I, 89 were collected from Stratum II, 30 were recovered from Stratum III, 291 originated from Stratum IV, two were collected from Stratum V, one was recovered from Stratum VI, and the remainder (n = 471) were collected from the backhoe trench backdirt piles. Temporally diagnostic artifacts recovered during survey indicate dates ranging from the late eighteenth to the early twentieth centuries. These artifacts included opaque white/milk glass; machine-made bottle glass; tooled lip bottle glass; turn past mold bottle glass; amethyst-colored bottle glass; pressed glass; contact molded glass; "Depression" glass; vent-molded glass; plain, mocha-decorated, and annular-decorated creamware; domestic brown and Albany slip-glazed stoneware; plain, "negative" blue transfer-printed, annular-decorated, finger-painted, flow blue, mold-decorated, and transfer-printed pearlware; plain, transfer-printed, annular-decorated, flow blue, overglazed hand-painted, underglazed hand-painted, finger-painted, molded/embossed, scalloped-rim, and transfer-printed whiteware; yellowware; plain ironstone; hard past porcelain; tin-enameled earthenware; and machine-cut and wire nails (Figures 107 - 108). Only four of the plain whiteware sherds recovered from the site exhibited maker's marks. While three of these marks could not be identified as to their origin, the fourth, appearing as "ENANGO CHINA/ NEW CASTLE, PA," belonged to the Shenango China Company (Figure 109). This maker's mark dates from ca. post 1901 (Kovel and Kovel 1986).

In addition, Site 16AN70 produced a wide array of domestic artifacts, faunal specimens, and construction materials (Tables 24 and 25). These domestic artifacts included a variety of historic period ceramic sherds (twentieth century white-bodied earthenware, stoneware, pearlware, yellowware, whiteware, porcelain, and ironstone), and glass shards. Domestic glass artifact types recovered from Site 16AN70 included opaque white/milk glass, unidentified blown-in-mold bottle glass, machine-made bottle glass, tooled lip bottle glass, turn paste mold bottle glass, unidentified bottle glass, art glass, flat glass, vent molded glass, pressed glass, ink bot-

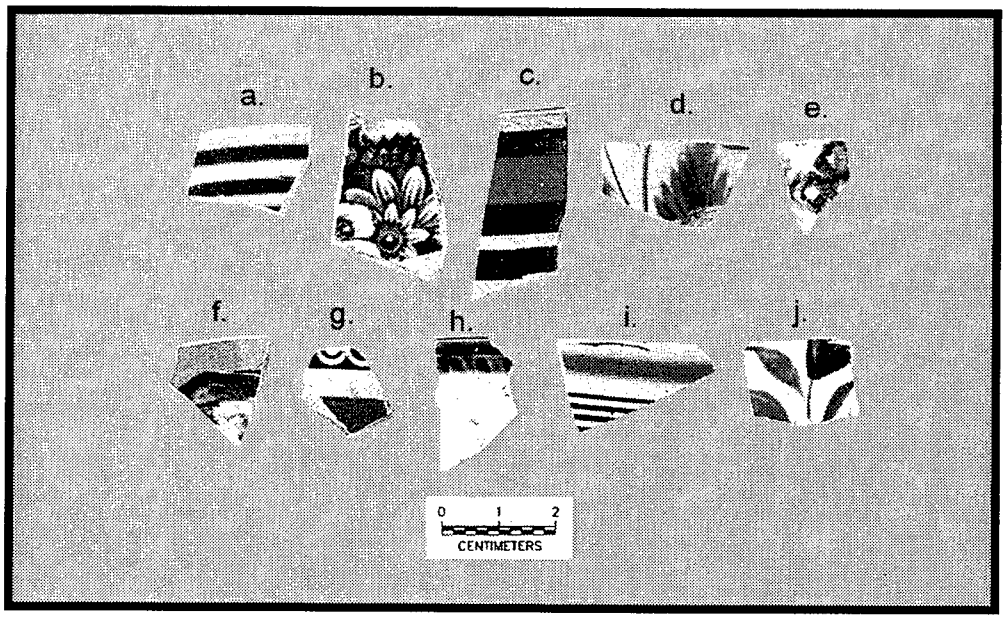


Figure 107. **Selected historic period ceramic sherds recovered from Site 16AN70: (a) annular-decorated whiteware sherd; (b) transfer-printed whiteware sherd; (c) annular-decorated whiteware sherd; (d) underglaze hand-painted whiteware sherd; (e) sponged/spatter-decorated whiteware sherd; (f) finger-painted pearlware sherd; (g) annular-decorated pearlware sherd; (h) unscalloped, impressed rim pearlware sherd; (i) engine-turned pearlware sherd; and (j) underglaze hand-painted pearlware sherd.**

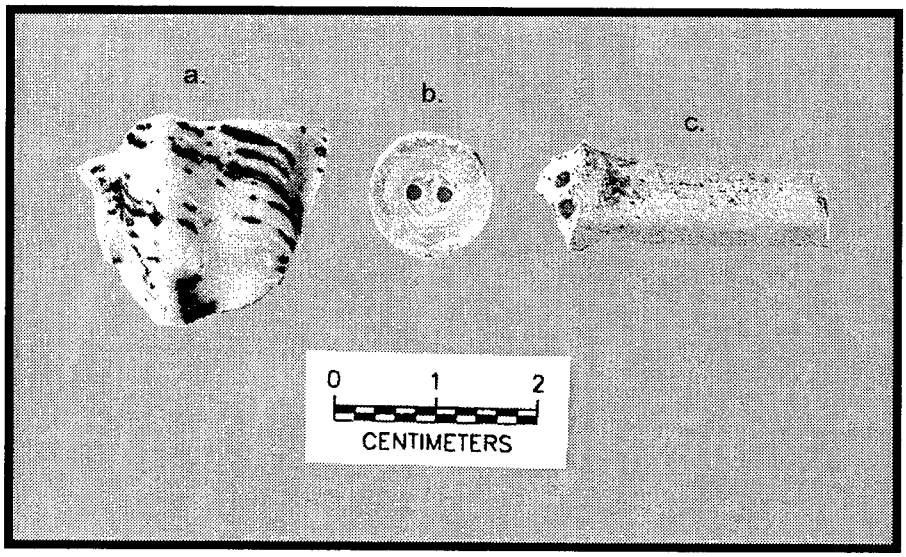


Figure 108. **Selected historic period artifacts recovered from Site 16AN70. (a) ceramic figurine fragment with overglaze black paint; (b) shell button; and (c) ball clay (Kaolin) tobacco pipe stem fragment.**

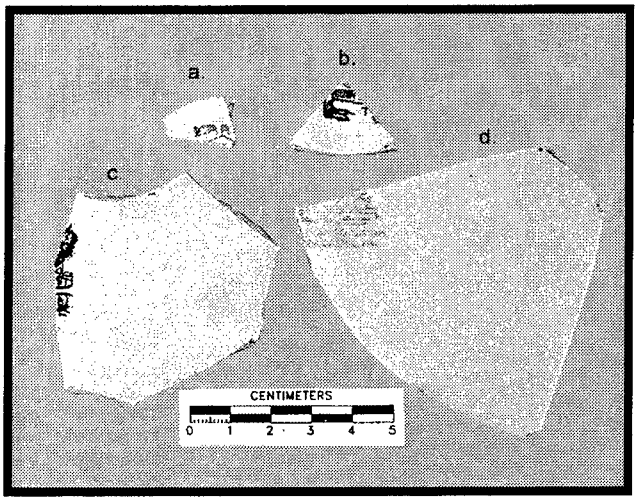


Figure 109. **Selected historic period ceramic sherds recovered from Site 16AN70: (a) plain whiteware sherd with an unidentified maker's mark reading "E.P.P(?)"; (b) plain whiteware sherd with an unidentified maker's mark reading "ESTASP(?)" in banner/"T..."; (c) plain whiteware sherd with an unidentified maker's mark of a reclining unicorn over "...T/...A"; and (d) ironstone sherd marked with "[SH]ENANGO CHINA/NEWCASTLE PA" (Shenango China Co.).**

tle glass, lamp glass, contact molded glass, and cup bottom molded glass. Construction materials recovered from the site included bricks (machine-made and hand-made) mortar, stucco, nails (wire and machine-cut), an iron spike, fence parts, wire fragments, and an iron rod.

Figures 110 – 114 depict the various frequencies of creamware, domestic brown stoneware, pearlware, whiteware, and glass artifact types recovered from Site 16AN70. It is clear in Figure 110 that undecorated creamware, which ranges in date from ca. 1760 to 1820, was the most commonly recovered creamware type at Site 16AN70. Annular creamware was the second most commonly recovered creamware type; it dates from ca. 1785 to 1815. The remaining creamware sherds, including mocha-decorated and underglaze hand-painted creamware, comprise very small percentages of the historic period ceramic sub-assemblage. Domestic brown stoneware sherds were dominated clearly by Albany slip on buff body types (Figure 111). The other stoneware types, including brown lead glaze, brown mineral glaze, colored glaze, opaque glaze, and ginger beer bottle types, make up significantly smaller portions of the artifact assemblage.

Figure 112 indicates that 11 pearlware varieties were recovered from Site 16AN70. By far the most common was undecorated pearlware, ranging in date from ca. 1780 to 1830. A total of 11 whiteware types also were recovered from 16AN70. Again, undecorated sherds dominate the sub-assemblage and they date from ca. 1820 to 1900 (Figure 113). Other important whiteware types recovered from the site area include transfer-printed and annular whiteware, ranging in date from ca. 1820 to 1860 and 1820 to 1890, respectively.

Finally, as was the case with Site 16AN69, Site 16AN70 produced a wide variety of historic period glass artifact types (Figure 114). Most common among these types was amber machine-made bottle glass, colorless machine-made bottle glass, colorless unidentified blown-in-mold bottle glass, white/opaque milk glass, and colorless unidentified bottle glass. With the exception of the unidentified blown-in-mold bottle glass, the glass artifacts listed above date from between the turn of the century and the construction date of the extant artificial flood control structure, ca. 1932.

In addition, mean ceramic dates were calculated from historic period ceramic sherds recovered from the various strata represented at Site 16AN70. The following results were derived using South's (1977) mean ceramic dating formula. The mean ceramic dates from Site 16AN70 ranged from 1850 from material recovered from Stratum II, to 1845.3 for sherds originating from Stratum III, to a date of 1821.4 for ceramic artifacts recovered from the deepest stratum in which more than a single sherd was collected, i.e., Stratum IV. During calculation of the dates, 45, 9, and 73 ceramic sherds were included in the analyses from Strata II, III, and IV, respectively. The mean ceramic dates for these strata and their superposition within the stratigraphic profile indicates that Site 16AN70 contains one or more historic occupations ranging in date from ca. 1820 to 1850.

The artifact and faunal sub-assemblages recovered from Site 16AN70 suggest that the site represents the remains of a large domestic occupation that possible contained several

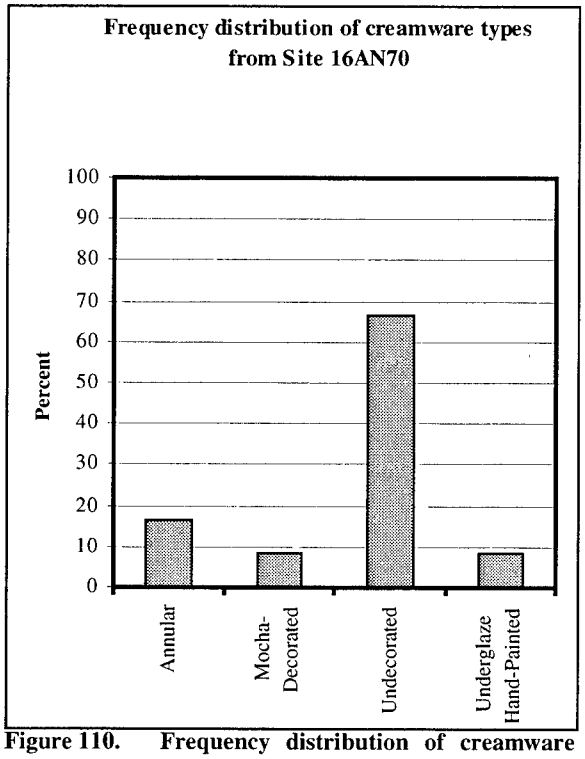


Figure 110. Frequency distribution of creamware types recovered from Site 16AN70.

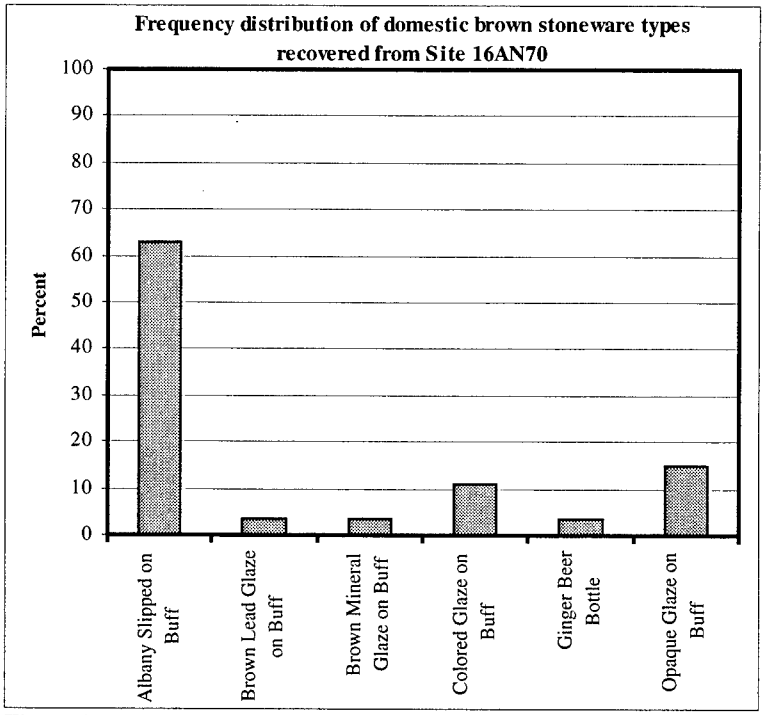


Figure 111. Frequency distribution of domestic brown stoneware types recovered from Site 16AN70.

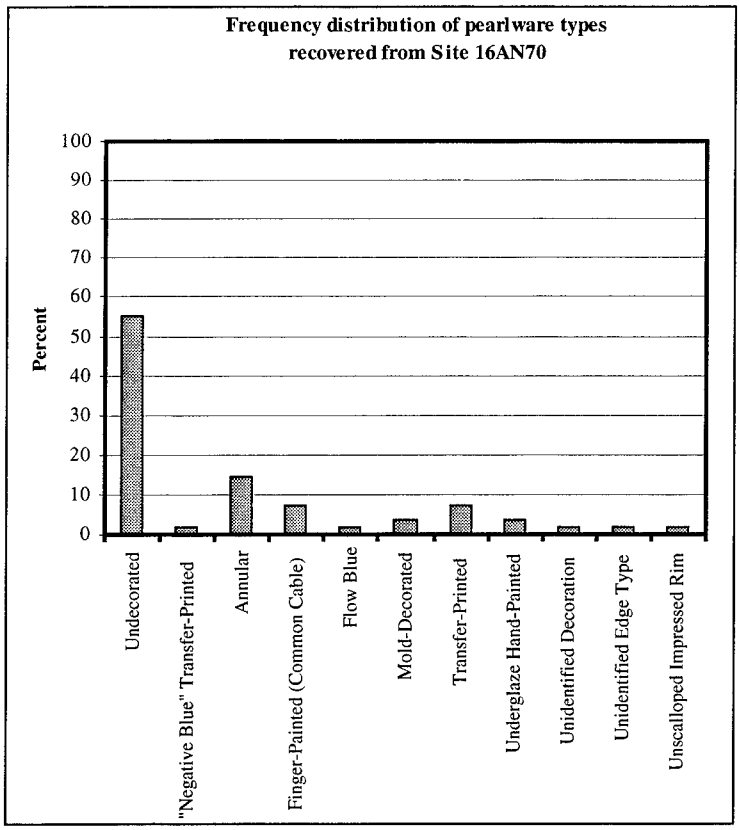


Figure 112. Frequency distribution of pearlware types recovered from Site 16AN70.

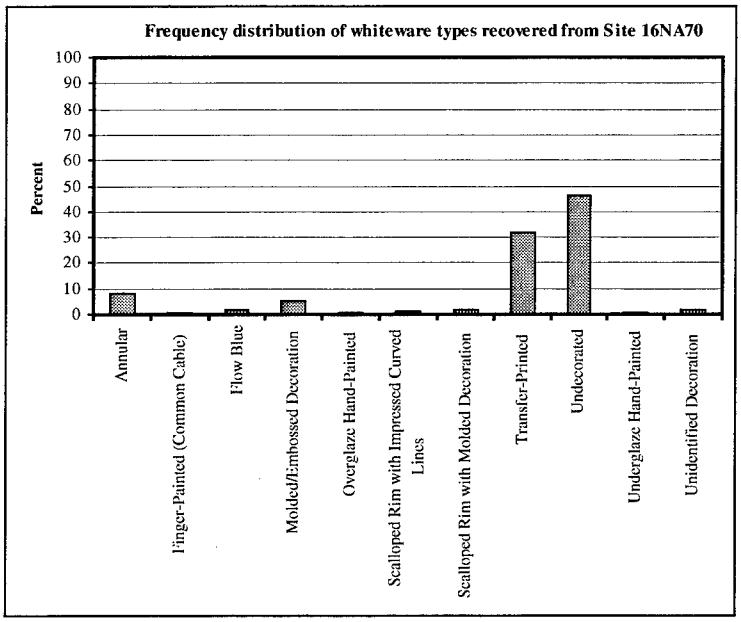


Figure 113. Frequency distribution of whiteware types recovered from Site 16AN70.

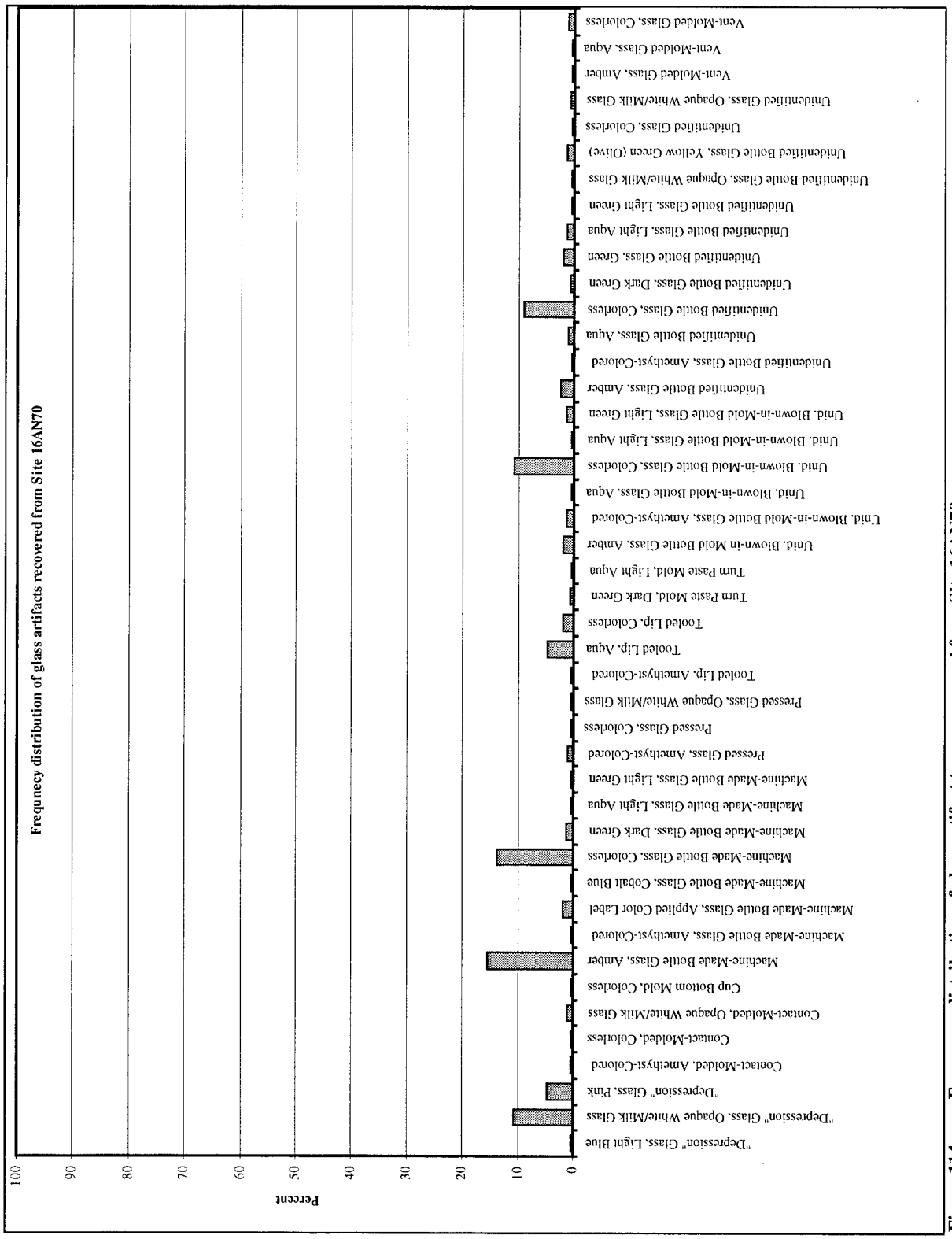


Figure 114. Frequency distribution of glass artifact types recovered from Site 16AN70.

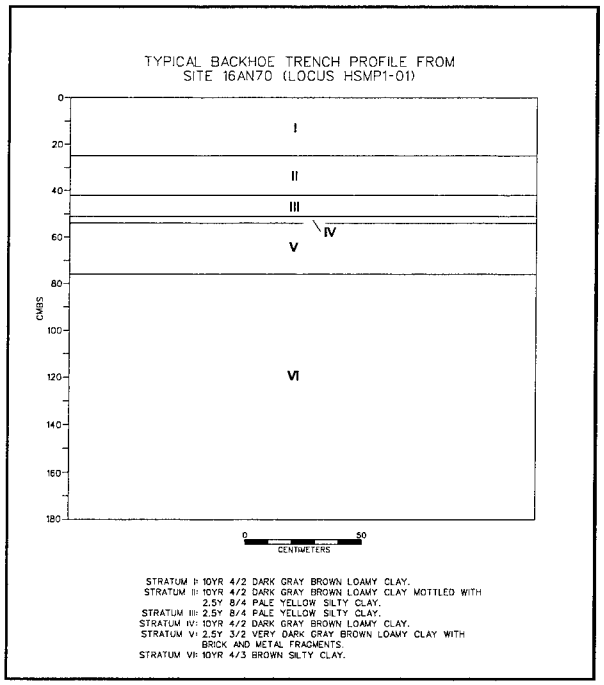


Figure 115. Profile of a typical backhoe trench at Site 16AN70.

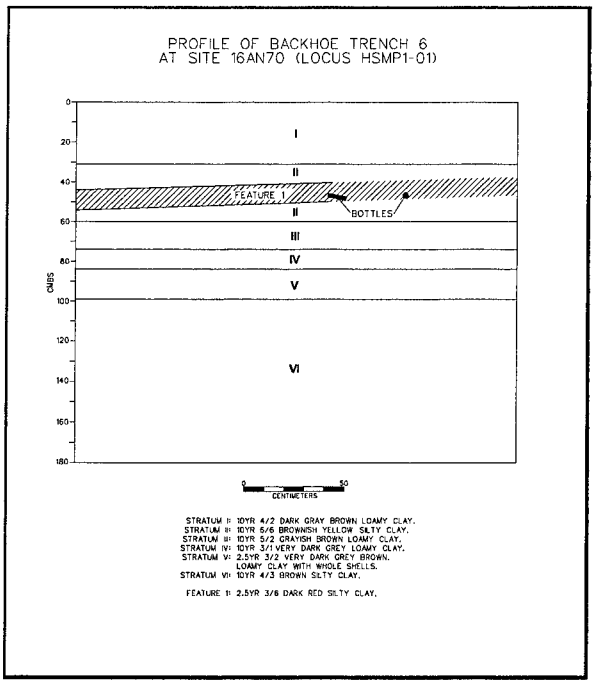


Figure 116. Profile of Feature 1 at Site 16AN70.

dwellings. In fact, the site is located approximately 200 m (656 ft) from a cluster of structures depicted on the Mississippi River Commission maps of the area. It is reasonable to assume that these structures represent worker's cabins or other facilities associated with Modeste/Babin/ Africa Plantations.

Backhoe trenching within the site area revealed that, with the exception of fill added during construction of the existing artificial flood control structure, Site 16AN70 contains intact cultural deposits that range in depth from approximately 30 to 130 cmbs (11.8 to 51.2 inbs). A typical backhoe trench extended to a depth of 180 cmbs (70.9 inbs), and exhibited seven strata in profile (Figure 115). Stratum I consisted of a layer of dark grayish brown (10YR 4/2) loamy clay that ranged in depth from 0 to 25 cmbs (0 to 9.8 inbs); it represented fill deposited during construction of the artificial flood control structure. Stratum I was underlain by Stratum II, a layer of dark grayish brown (10YR 4/2) loamy clay mottled with pale yellow (2.5Y 8/4) silty clay; it extended from 25 to 42 cmbs (9.8 to 16.5 inbs). Stratum III extended from 42 to 51 cmbs (16.5 to 20.1 inbs) and consisted of a layer of pale yellow (2.5Y 8/4) silty clay. Stratum IV, a layer of dark grayish brown (10YR 4/2) loamy clay, ranged in depth from 51 to 54 cmbs (20.1 to 21.3 inbs). Stratum IV was underlain by Stratum V, a layer of very dark gray (2.5Y 3/3/2) loamy clay that extended from 54 to 75 cmbs (21.3 to 29.5 inbs). Finally, Stratum VI was characterized as a layer of brown (10YR 4/3) silty clay that ranged in depth from 75 to 180 cmbs (29.5 to 71.0 inbs).

In addition, two cultural features were noted during backhoe trenching within Site 16AN70. Feature 1 was identified within Backhoe Trench 6 (Figures 116 and 117). This feature consisted of a shallow a 10 cm (3.9 in) thick band of dark red (2.5YR 3/6) silty clay located between 40 to 50 cmbs (15.7 to 19.6 inbs); it represented the remains of a midden. This feature produced 64 historic period artifacts. These artifacts consisted of 1 whiteware sherd with an unidentified decoration; 1 hand-made brick fragment; 25 opaque white/milk and 14 pink "Depression" glass shards; 4 amber, 4 colorless, and 1 decal-applied machine-made bottle glass shards; 9 colorless unidentified blown-in-mold bottle glass shards; 1 dark green and 2 colorless unidentified bottle glass shards; and 2 colorless vent-molded glass shards (Table 24).

Feature 2, the remains of a structure, was identified in Backhoe Trench 9; it was identified between 30 to 40 cmbs (11.8 to 15.7 inbs). A larger block measuring approximately 210 by 230 cm (82.6 by 91 in) subsequently was excavated to expose the feature and to identify its dimensions (Figures 118 and 119). However, the feature extended outside of the expanded excavation block. The exposed portion of the feature covered the entire excavated block and produced 1 ceramic figurine fragment; 2 porcelain buttons; 6 domestic brown stoneware sherds; 1 flower pot sherd; 5 plain ironstone sherds; 7 plain pearlware sherds, 1 overglazed hand-painted and 2 plain hard paste porcelain sherds; 1 finger-painted, 1 transfer-printed, 16 plain, 1 scalloped-rim, and 5 molded/embossed white-ware sherds; 1 plain yellowware sherd; 4 brick fragments, 1 amethyst-colored and 1 colorless contact-molded glass shards; 1 colorless flat glass shard; 7 amber, 1 amethyst-colored, 1 light aqua, 2 decal-applied, and 16 colorless machine-made bottle glass shards; 1 colorless and 3 amethyst-colored pressed glass shards; 1 aqua tooled lip glass shard; 1 amber, 1 light green, 1 aqua, 9 colorless, and 3 amethyst-colored unidentified blown-in-mold bottle glass shards; 6 amber, 1 amethyst-colored, 2 aqua, 15 colorless, and 4 light aqua unidentified bottle glass shards; 1 colorless and 2 opaque white/milk glass shards; 1 aqua vent-molded glass shard; 1 iron spike; 1 piece of unidentified hardware; 1 continuous thread screw; 1 machine-cut, 1 unidentified, and 14 wire nails; 1 unidentified metal fragments; and 1 metal toothpaste/ointment tube (Table 24). No faunal remains were recovered from this feature. Excavation of the feature also revealed two walls of a structure constructed of brick and mortar.

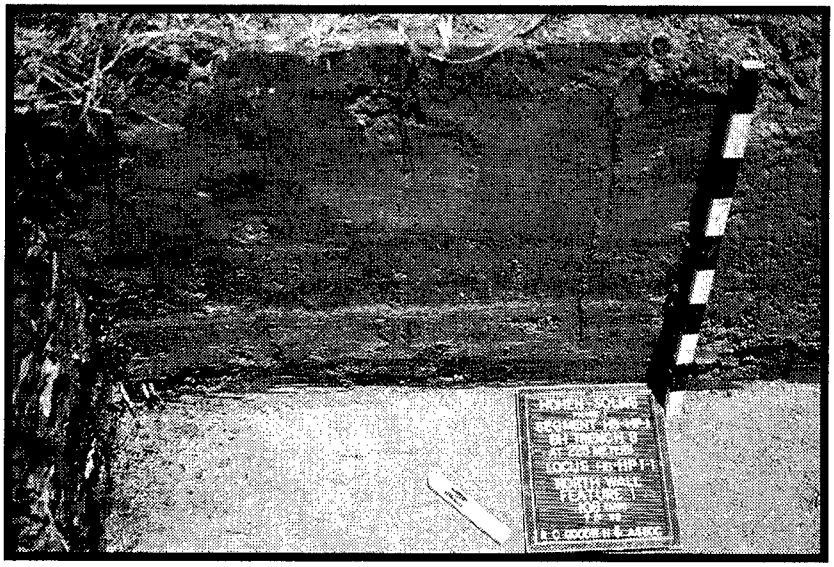


Figure 117. Photo of Feature 1 profile at Site 16AN70.

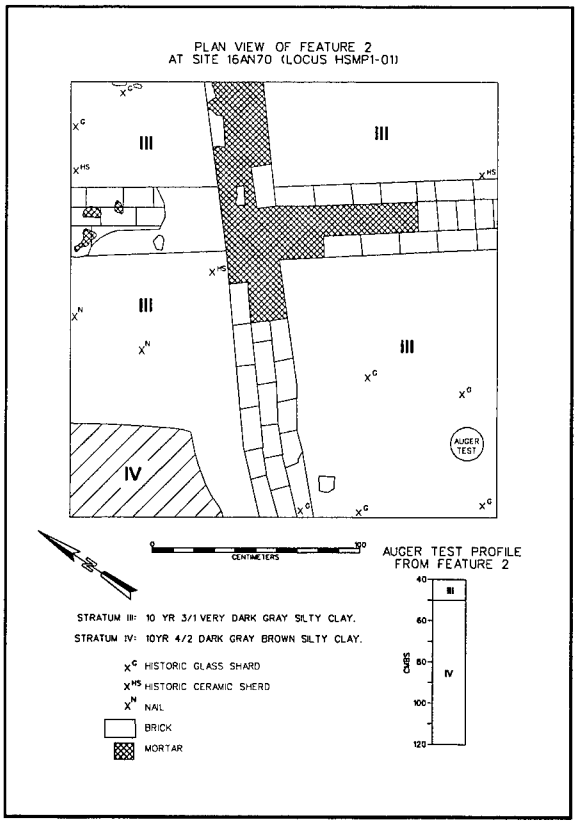


Figure 118. Plan view of Feature 2 at Site 16AN70.

A single auger test excavated in the southeast corner of the excavated block that contained Feature 2 exhibited two strata in profile (Figure 118). Stratum I consisted of a layer of dark gray (10YR 3/1) silty clay that extended from the top of the auger test (40 cmbs [15.7 inbs]) to 50 cmbs

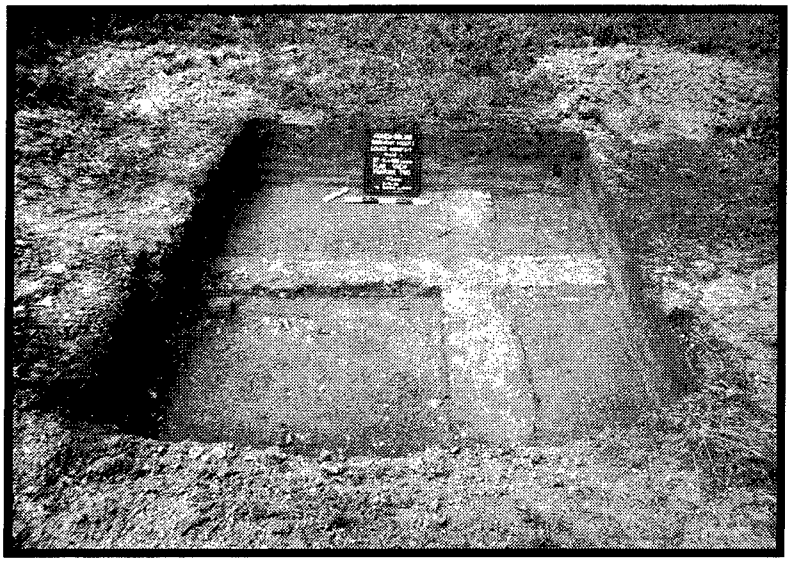


Figure 119. Photo of Feature 2 plan view at Site 16AN70.

(19.7 inbs). It was underlain by second stratum, a layer of brown (7.5YR 4/2) clay that ranged in depth from 50 cmbs to 120 cmbs (19.7 to 47.2 inbs). The auger test was terminated at 120 cmbs (47.2 inbs). No artifacts were recovered from the auger test. After the identification and recordation of the feature, the auger test was backfilled and the backhoe trench was lined with plastic and backfilled. Both features were located in the vicinity of a number of historic period structures depicted on Mississippi River Commission maps, including three historic period cabins depicted approximately 5 to 10 m (16.4 to 32.8 ft) from the location of backhoe trench 9.

Archeological data collected during survey indicate that Site 16AN70 contains a substantial intact early nineteenth to early twentieth century artifact scatter; this deposit appears to be associated with several now destroyed buildings that are depicted on historic Mississippi River Commission maps of the area. These buildings include 23 residences/cabins, the Modeste Post Office and Store, and a structure identified as the Welcome Store. It is likely that the artifacts and features identified during survey represent one or more workers cabins or other facilities associated with Modeste/Babin/Africa Plantations, as well as early twentieth century occupation of the area. The results of fieldwork indicate that Site 16AN70 contains intact cultural deposits that possess research potential and the qualities of significance under criteria (a and d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site also may produce additional information pertinent to the understanding of three of the cultural themes outlined in Louisiana's Comprehensive Archaeological Plan (Smith et al. 1983). These include Culture History, the Influence of the Mississippi River on Historic Settlement, and Culture History. If avoidance of the site during the proposed construction process is impossible, mitigation of the proposed impact to the site prior to construction of the concrete slope paving and levee recontouring project is recommended (see Appendix III).

Segment HSMP-2 (Moderate Probability Area #2)

Moderate Probability Area #2 of the Hohen-Solms to Modeste project item (Segment HSMP-2) began at the boundary between Sections 42 and 43 of Township 10S, Range 14E, and extended for approximately 600 m (1,968 ft) to its terminating point at the boundary between Sections 45 and 46 of Township 10S, Range 14E (Figure 2: oversized map). This survey segment, which extended in a southeasterly direction, consisted of an open grassy area bounded to the southwest by the extant levee and to the northeast by borrow pits excavated for fill used during construction of the existing artificial flood



Figure 120. Overview photo of Segment HSMP-2 facing southeast.

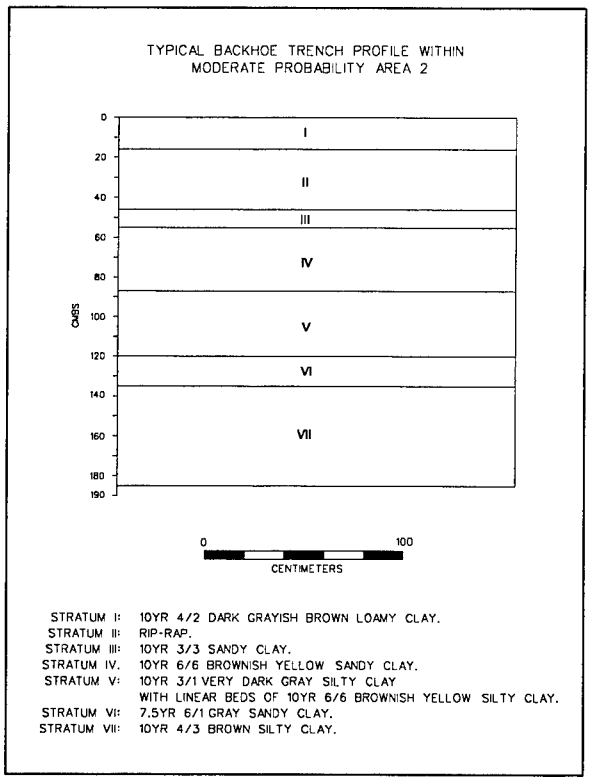


Figure 121. Profile of a typical backhoe trench within Segment HSMP-2.

control structure (Figure 120). This survey segment was situated at an approximate elevation of 6.1 m (20 ft) NGVD; it had poorly drained, slowly permeable Commerce silty loams (Spicer et al. 1976). Archival research and historic period map analysis demonstrated that this area possessed a moderate probability to contain intact cultural deposits because it was located within the vicinity of the Philadelphia/Pelico/ Arlington/Delicia Plantations, although not in the immediate area of any structures depicted on the aforementioned historic maps.

During survey, 24 of 24 (100 percent) planned backhoe trenches were excavated successfully at 50 m (164 ft) intervals throughout Segment HSMP-2 (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 180 cmbs (78.7 inbs), and it exhibited seven strata in profile (Figure 121). Stratum I ranged in depth from 0 to 16 cmbs (0 to 6.3 inbs), and it consisted of a layer of dark grayish brown (10YR 4/2) loamy clay. Stratum I was underlain by Stratum II, a layer of gravel and riprap that reached from 16 to 46 cmbs (6.3 to 18.1 inbs). Stratum III was characterized as a layer of dark brown (10YR 4/2) sandy clay that extended from 46 to 55 cmbs (18.1 to 21.7 inbs). Stratum IV consisted of a layer of brownish yellow (10YR 6/6) sandy clay; it extended from 55 to 87 cmbs (21.7 to 34.3 inbs). Stratum V was encountered from 87 to 120 cmbs (34.3 to 47.2 inbs), and it was described as a layer of dark gray (10YR 3/1) silty clay mixed with brownish yellow (10YR 6/6) silty clay. Stratum V was underlain by Stratum VI, a layer of gray (7.5YR 6/1) sandy clay that ranged in depth from 120 to134 cmbs (47.2 to 52.8 inbs). Finally Stratum VII, which extended from 134 to 180 cmbs (52.8 to 70.8 inbs), was composed of a layer of brown (10YR 4/3) silty clay. Excavation of the backhoe trenches was terminated at approximately 180 cmbs (70.8 inbs) due to the influx of groundwater into the trenches.

This Phase I cultural resources survey and archeological inventory of Moderate Probability Area #2 of the Hohen-Solms to Modeste project item (Segment HSMP-2) resulted in the identification and recordation of a single archeological site. Site 16AN68 is discussed in detail below.

Site 16AN68

Site 16AN68, a nineteenth to early twentieth century artifact scatter, was identified during survey of Moderate Probability Area #2 of the Hohen-Solms to Modeste project item (Segment HSMP-2). This site is located on the batture within Sections 43, 44, and 45 of Township 10S, Range 14E; it is situated at approximately 7.6 m (25 ft) NGVD (Table 11; Figures 122 and 123). Soils located within the site area were classified as Commerce series soils, which consist of poorly drained silts and loams.

Site 16AN68 is oblong in shape and encompasses an area that measures approximately 1.07 ac (0.43 ha) in size. This site is located approximately 75 m (246 ft) from the bankline of the Mississippi River. It is bounded to the east by a series of long narrow borrow pits excavated during construction of the existing flood control structure, and to the west by the existing levee (Figure 124). Historically, this area was part of the Philadelphia Point, Pelico, and Arlington/Delicia Plantations. A total of 67 artifacts

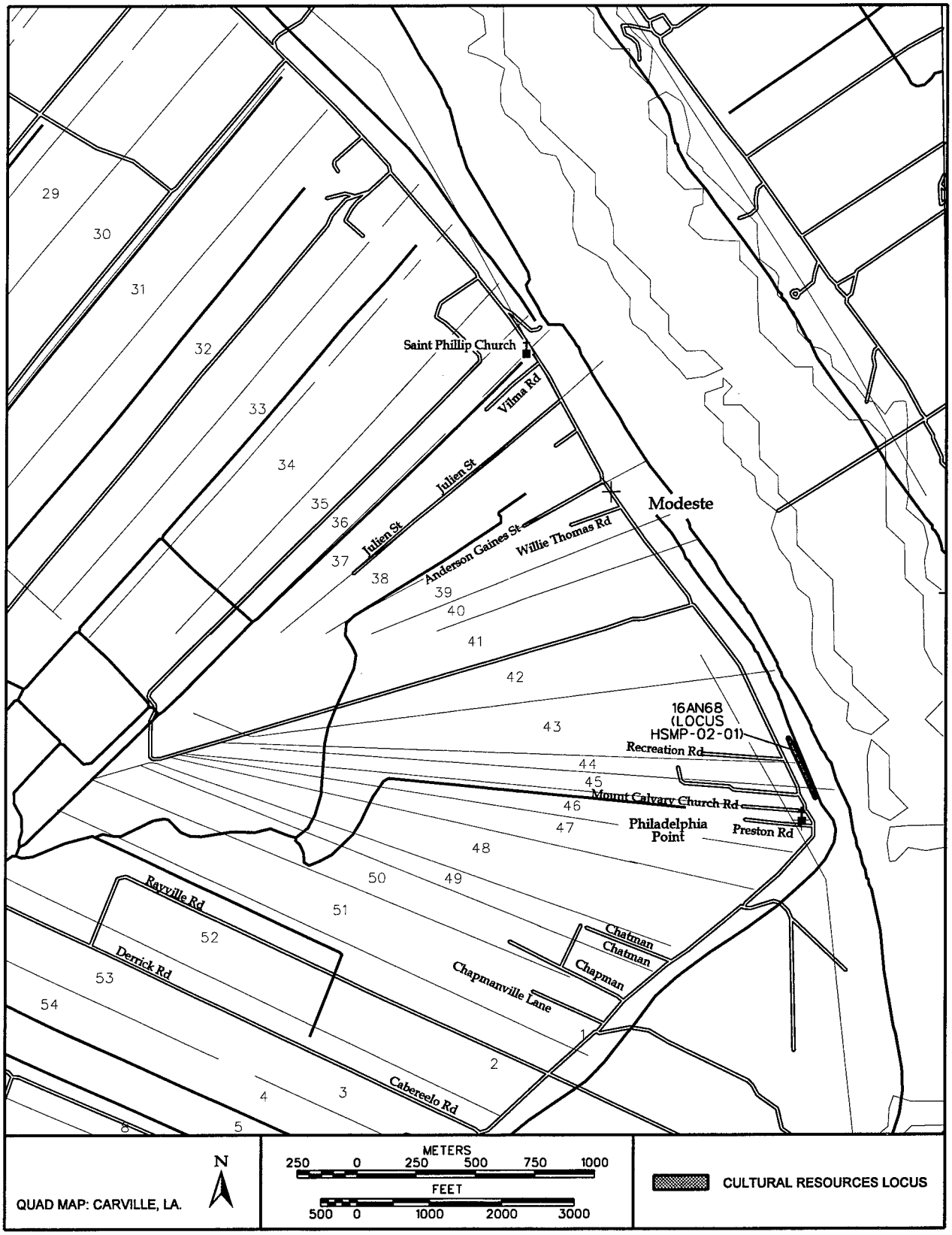


Figure 122. **Excerpt from the 1996 USGS 7.5' Series Carville, Louisiana topographic quadrangle depicting the location of Site 16AN68.**



Figure 123. **Overview photo of Site 16AN68 facing north.**

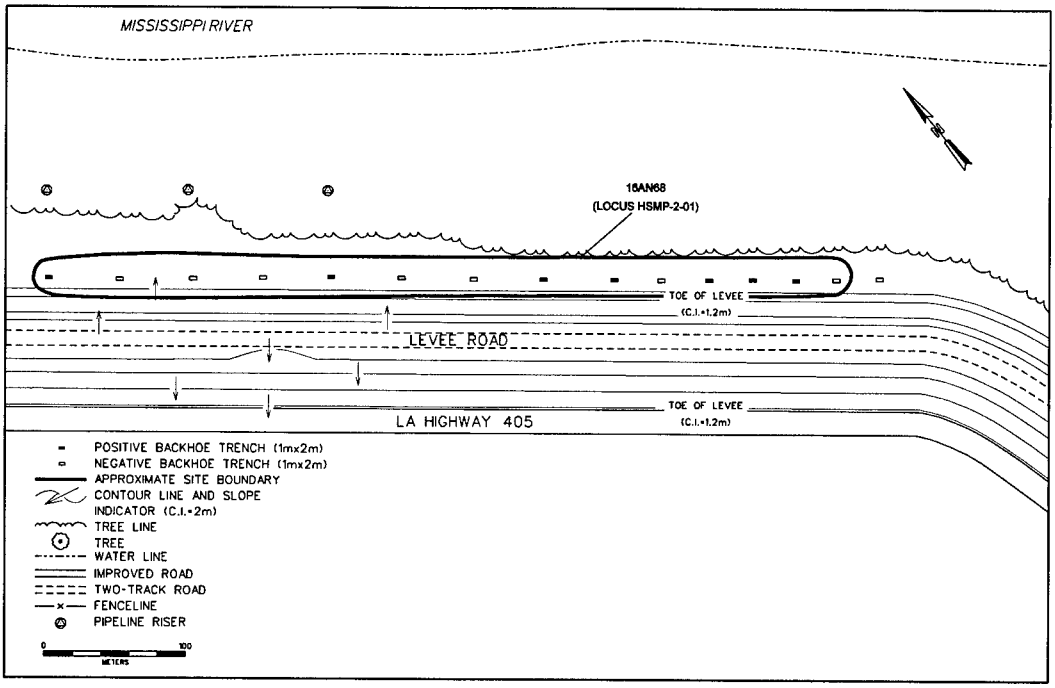


Figure 124. **Plan view of Site 16AN68.**

Table 26. Historic Period Artifacts Recovered from Site 16AN68.

STRATUM	CLASS	TYPE	SUBTYPE	GENERAL DATE RANGE	TOTAL
II	Ceramic	20th Cent. White-Bodied Earthenware	Colorless Glaze	Undetermined	3
		Porcelain, Hard Paste	Overglazed Hand-painted	Undetermined	2
			Undecorated	post ca. 1768	3
		Whiteware	Decal Decorated	post ca. 1880	4
			Molded/ Embossed Decoration	Undetermined	1
			Plain	ca. 1820-1900+	5
			Scalloped Rim, Mold-Decorated	Undetermined	1
			Transfer-printed	post ca. 1820; ca. 1820-1860	2
	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	1
	Glass	"Depression" Glass	Opaque White/ Milk Glass	post ca. 1925	4
		Cup Bottom Mold	Colorless	post ca. 1850	1
		Flat Glass Shard(s)	No color assigned	Undetermined	2
		Machine-Made Bottle Glass	Colorless	post ca. 1898	3
		Pressed Glass	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	1
		Unidentified Blown-in-Mold Bottle Glass	Colorless	Undetermined	1
		Unidentified Bottle Glass (Kitchen)	Colorless	Undetermined	1
III	Ceramic	Domestic Brown Stoneware	Opaque Glaze on Buff	Undetermined	1
		Whiteware	Plain	ca. 1820-1900+	4
V	Construction Materials	Architectural Stone	Brick, Handmade, Partial	Undetermined	1
Backdirt	Ceramic	20th Cent. White-Bodied Earthenware	Transparent Yellow Glaze	Undetermined	1
		Ironstone	Mold Decorated	ca. 1840-1900	1
			Undecorated White	ca. 1813-1900+	1
		Pearlware	Engine-turned	Undetermined	1
		Porcelain, Hard Paste	Undecorated	post ca. 1768	2
		Whiteware	Decal Decorated	post ca. 1880	4
			Plain	ca. 1820-1900+	3
			Underglaze Hand-painted	ca. 1820-1890	1
	Construction Materials	Architectural Stone	Brick Fragment(s)	Undetermined	2
	Glass	Machine-Made Bottle Glass	Colorless	post ca. 1898	2
			Green	post ca. 1898	1
		Unid. Blown-in-Mold Bottle Glass	Amethyst-colored (Manganese Solarization)	ca. 1875-1920	4
			Colorless	Undetermined	1
			Light Aqua	Undetermined	1
		Unidentified Bottle Glass (Kitchen)	Colorless	Undetermined	1
Grand Total					**67**

were recovered from the site area; no faunal specimens were recovered from this site. All of this material originated from subsurface contexts.

During survey, 15 of 15 (100 percent) planned backhoe trenches were excavated successfully within the vicinity of Site 16AN68. A total of seven of the 15 (47 percent) planned backhoe trenches produced cultural material (Table 26). This material consisted of 4 twentieth century white-bodied ceramic sherds; 1 domestic brown stoneware sherd; 1 mold-decorated and 1 plain ironstone sherd; 1 engine-turned pearlware sherd; 2 overglazed hand-painted and 5 plain hard-paste porcelain sherds; 8 decal-decorated, 1 molded/embossed, 12 plain, 1 scalloped-rim, 1 underglazed hand-painted, and 2 transfer-printed whiteware sherds; 4 brick fragments; 4 opaque white/milk glass shards; 1 colorless cup bottom mold glass shard; 2 flat glass shards; 1 green and 5 colorless machine-made bottle glass shards; 1 amethyst-colored pressed glass shard; 4 amethyst-colored, 1 light aqua, and 2 colorless unidentified blown-in-

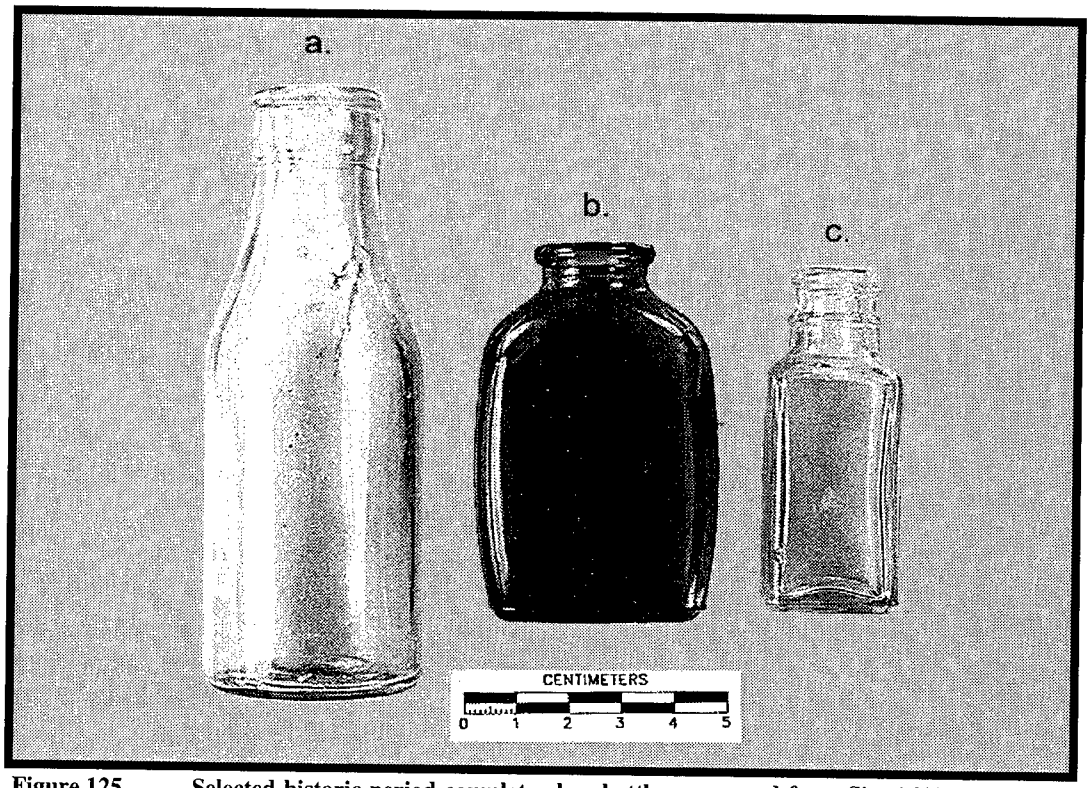


Figure 125. **Selected historic period complete glass bottles recovered from Site 16AN68: (a) machine made grape juice bottle with crown closure; (b) machine made pill bottle with a snap on closure and a textured base marked with "2 ("I" in "O" [Owens-Illinois Glass Co. maker's mark]) 9/3"; and (c) machine made square bottle with continuous thread closure and marked with "("N" in square [O'bear-Nester Glass Co. maker's mark]) 6" on base.**

mold glass shards; and 2 colorless unidentified bottle glass shards.

Of the 67 artifacts recovered from Site 16AN68, 35 originated from Stratum II, 5 were collected from Stratum III, 1 was recovered from Stratum V, and 26 were collected from the backhoe trench backfill piles. Temporally diagnostic artifacts recovered from the site, including decal-decorated, transfer-printed, plain, and underglazed hand-painted whiteware; engine-turned pearlware; mold-decorated and plain ironstone; opaque white/milk glass; cup bottom mold bottle glass; machine-made bottle glass; and blown-in-mold bottle glass, suggested that the site dates from the nineteenth to early twentieth centuries (Figures 125 and 126).

The artifact assemblage recovered from the site suggested a domestic function for the immediate area. Domestic artifacts recovered included historic period ceramics (twentieth century white-bodied earthenware porcelain, whiteware, stoneware, ironstone, and pearlware), and glass shards (opaque white/milk glass, cup bottom mold bottle glass, machine made bottle glass, pressed glass, unidentified blown-in-mold bottle glass, and unidentified bottle glass). Construction materials recovered from the site area consisted of machine-made and hand-made brick fragments. No metal artifacts were recovered from the site.

The recovered artifact assemblage represents a light to moderate density scatter of historic period artifacts. An examination of the historic period Mississippi River Commission maps indicated that the site is not located in the immediate vicinity of any structures depicted on those maps. Rather, this site appears to represent an historic period trash disposal area.

A typical backhoe trench was excavated to a depth of 170 cmbs (66.9 inbs) and exhibited four strata in profile (Figure 127). Stratum I consisted of recent fill added during construction of the existing artificial flood control structure; it consisted of a layer of dark grayish brown (10YR 4/2) loamy clay that extended from 0 to 18 cmbs

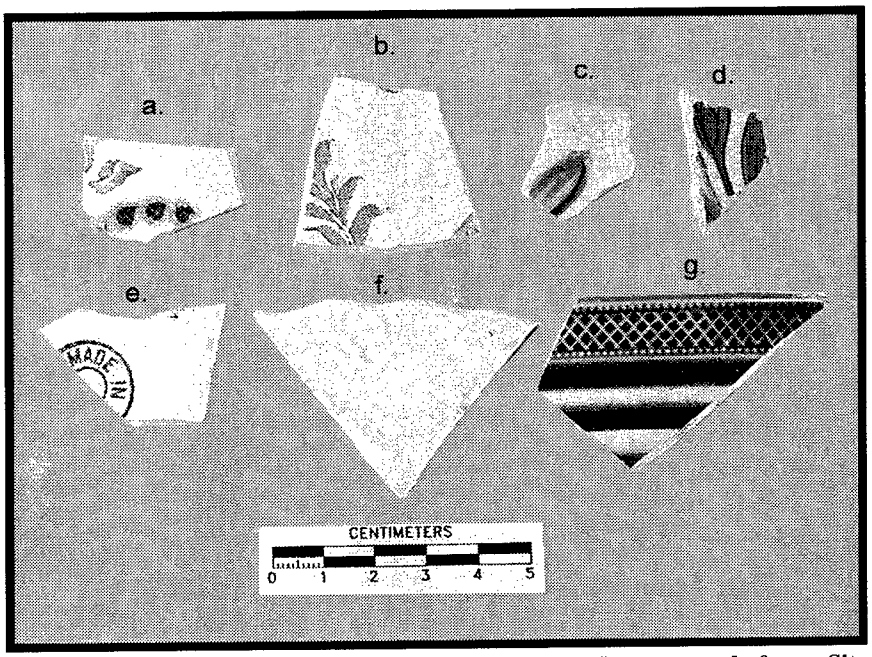


Figure 126. **Selected historic period ceramic sherds recovered from Site 16AN68: (a) stippled red floral transfer-printed whiteware sherd; (b) stippled red floral transfer-printed whiteware sherd (FS #71.2); (c) 20th century white-bodied earthenware sherd; (d) 20th century white-bodied earthenware sherd; (e) whiteware sherd printed with "MADE IN..."; (f) scalloped rim, mold-decorated whiteware sherd; and (g) pearlware sherd with cross-hatched engine-turned design.**

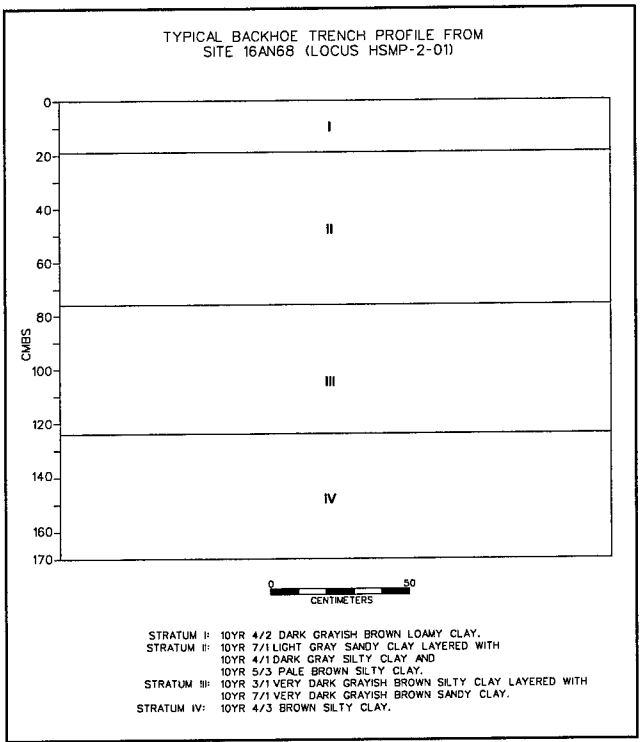


Figure 127. **Profile of a typical backhoe trench at Site 16AN68.**

(0 to 7.1 inbs). It was underlain by Stratum II, a series of layered soil horizons. These soil horizons were described as light gray (10YR 7/1) sandy clay, dark gray (10YR 4/1) silty clay, and pale brown (10YR 5/3) silty clay; they ranged in depth from 18 to 76 cmbs (7.1 to 30 inbs). Stratum III was described as a layer of interbedded very dark gray (10YR 3/1) silty clay and light gray (10YR 7/1) silty clay; it extended from 76 to 128 cmbs (30 to 50.4 inbs). Finally Stratum IV consisted of a layer of brown (10YR 4/3) silty clay that ranged in depth from 128 to 170 cmbs (50.4 to 66.9 inbs). The water table was reached at approximately 170 cmbs (66.9 inbs), hindering further excavation of the backhoe trenches.

Archeological data collected during survey indicate that Site 16AN68 may possess intact historic period cultural deposits; however, the sited does not contain intact cultural features. Thus, it was determined in consultation with the Division of Archaeology, Department of Culture, Recreation, and Tourism, that Site 16AN68 does not possess research potential or the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Site 16AN68 is recommended.



Figure 128. Overview photo of Segment HSMP-3 facing south.

Segment HSMP-3 (Moderate Probability Area #3)

Segment HSMP-3, Moderate Probability Area #3 of the Hohen-Solms to Modeste project item, originated within the east-central portion of Section 46 of Township 10S, Range 14E and extended for approximately 125 m (410 ft) to its terminating point within the northeastern part of Section 47 of Township 10S, Range 14E (Figure 2: oversized map). This survey segment extended in a southeasterly direction and it can be characterized as an open grassy area; it was bounded to the northwest by the artificial flood control structure and to the southeast by borrow pits excavated during construction of the extant levee in 1932 (Figure 128). This survey segment was situated at an approximate elevation of 7.6 m (25 ft) NGVD, and it was composed of soils belonging to the Commerce series, poorly drained, slowly permeable silty loams (Spicer et al. 1976). Historic map analysis suggested that this area possessed only a moderate probability for containing intact cultural deposits, in part because of its location within the vicinity of known plantations that operated throughout the nineteenth century and into the twentieth century, i.e., the Philadelphia Point Plantation. The segment, however, did not appear to contain any potential historic structural locations based on Mississippi River Commission maps of the area or the 1932 design plans for the Bayou Goula New Levee setback.

During survey, 3 of 3 (100 percent) planned backhoe trenches were excavated successfully at 50 m (164 ft) intervals throughout the Area of Potential Effect associated with Segment HSMP-3 of the Hohen-Solms to Modeste project item (Table 11). A typical backhoe trench excavated within this survey segment extended to a depth of 170 cmbs (66.9 inbs) and exhibited four strata in profile (Figure 129). Stratum I ranged in depth from 0 to 28 cmbs (0 to 11 inbs) and it was described as a layer of dark yellowish brown (10YR 3/4) loamy clay mixed with crushed shell. The crushed shell appeared to be modern in origin. Stratum I was underlain by Stratum II, a layer of alternating linear beds consisting of brown (10YR 5/3) silt and very dark grayish brown (10YR 3/2) loamy clay that extended from 28 to 109 cmbs (11 to 42.9 inbs). Stratum III consisted of a layer of very dark gray (10YR 3/1) silty clay that extended from 109 to 130 cmbs (42.9 to 51.2 inbs). Finally, Stratum IV consisted of a layer of brown (10YR 4/3) silty clay; it ranged in depth from 130 to 170 cmbs (51.2 to 66.9 inbs). Backhoe trenches within Segment HSMP-3 were terminated at

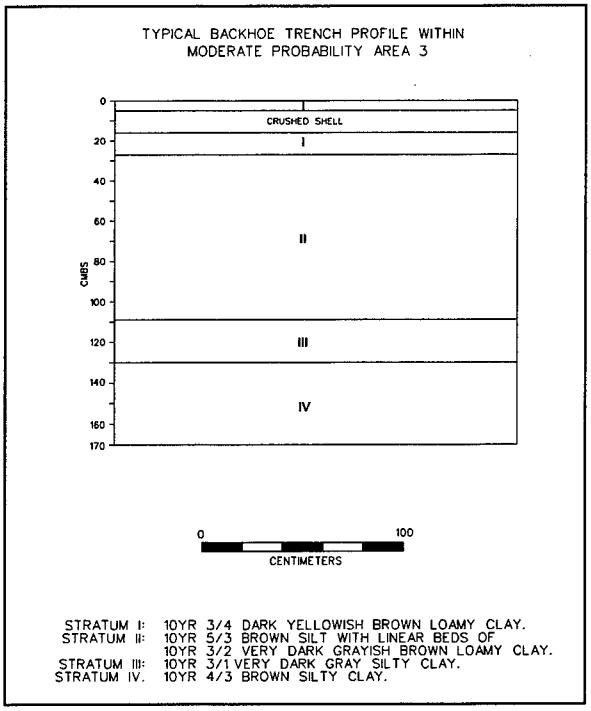


Figure 129. Profile of a typical backhoe trench within Segment HSMP-3.



Figure 130. Overview photo of Segment HSMP-4 facing south.

approximately 170 cmbs (66.9) because the intrusion of groundwater prohibited further excavation.

Despite the successful excavation of 3 of 3 (100 percent) planned backhoe trenches within the Area of Potential Effect associated with Moderate Probability Area #3 of the Hohen-Solms to Modeste project item (Segment HSMP-3), no cultural resources were identified. No additional testing of Segment HSMP-3 is recommended.

Segment HSMP-4 (Moderate Probability Area #4)

Segment HSMP-4, Moderate Probability Area #4 of the Hohen-Solms to Modeste project item, began at an unimproved dirt access road within the east-central portion of Section 48 of Township 10S, Range 14E in Ascension Parish, Louisiana and extended for approximately 620 m (2,034 ft) to its termination point within the east-central part of Section 51 of Township 11S, Range 14E (Figure 2: oversized map). This survey segment extended in a southwesterly direction and consisted of an open grassy area that was bounded to the northwest by the artificial flood control structure and to the southeast by a series of long, linear borrow pits (Figure 130). This survey segment was situated at an approximate elevation of 7.6 m (25 ft) NGVD. The poorly drained silty loams in the area belong to the Commerce soil series (Spicer et al. 1976). This portion of the proposed Area of Potential Effect was assessed as having a moderate potential for containing intact cultural deposits. While it was located within the general vicinity of the nineteenth century Philadelphia Point and Pelico Plantations, analysis of historic maps of the area indicated that no structural remains or other cultural features fell within the survey segment.

During survey, 12 of 12 (100 percent) planned backhoe trenches were excavated successfully at 50 m (164 ft) intervals throughout the Area of Potential Effect associated with Segment HSMP-4 (Table 11). A typical backhoe trench excavated within this area extended to a depth of 185 cmbs (72.8 inbs) and exhibited three strata in profile (Figure 131). Stratum I extended from 0 to 40 cmbs (0 to 15.7 inbs), and it was described as a layer of very dark grayish brown (10YR 3/2) loamy clay. Stratum I was

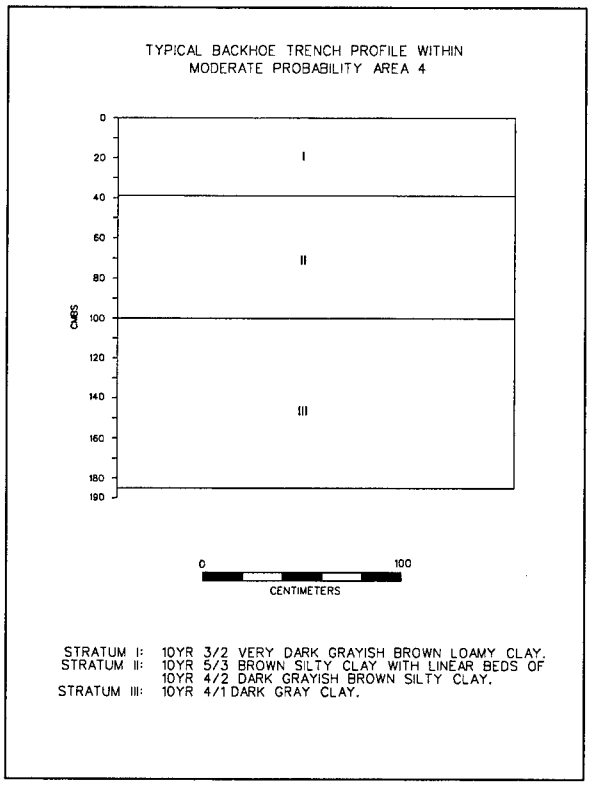


Figure 131. Profile of a typical backhoe trench within Segment HSMP-4.

underlain by Stratum II, a layer of brown (10YR 5/3) silty clay mixed with dark grayish brown (10YR 4/2) silty clay; it reached from 40 to 100 cmbs (15.7 to 39.4 inbs). Finally, Stratum III was composed of a layer of dark gray (10YR 4/1) clay that ranged in depth from 100 to 185 cmbs (39.4 to 72.8 inbs). The intrusion of groundwater prohibited the excavation of backhoe trenches along Segment HSMP-4 to depths greater than approximately 185 cmbs (72.8 inbs).

Despite the successful excavation of 12 of 12 (100 percent) planned backhoe trenches within the Area of Potential Effect associated with Moderate Probability Area #4 of the Hohen-Solms to Modeste project item, no cultural resources were identified in Segment HSMP-4. No additional testing of Segment HSMP-4 is recommended.

CHAPTER VIII

SUMMARY AND MANAGEMENT RECOMMENDATIONS

During July, August, and September of 1999 R. Christopher Goodwin & Associates, Inc., completed a Phase I cultural resources survey of the Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items in Ascension and Iberville Parishes, Louisiana on behalf of the U.S. Army Corps of Engineers, New Orleans District. As detailed in the Scope of Work for this project, the U.S. Army Corps of Engineers, New Orleans District plans to re-contour the existing artificial flood control structure and install concrete slope paving along the river side of the levee facing the Mississippi River. This project is designed to strengthen the extant levee, as well as to mitigate the effects of flooding throughout the project reach. Fieldwork for this project consisted of pedestrian survey augmented by systematic backhoe trenching throughout portions of the proposed project items. The Areas of Potential Effect associated with the proposed project items were stratified into 14 survey segments, which consisted of areas of high and moderate potential for containing intact cultural deposits. Areas characterized as having a low potential for containing intact cultural deposits were subjected to pedestrian survey only; no backhoe trenches were excavated in low probability areas. A total of 14 ha (34.8 ac) were examined as a result of this investigation.

In areas designated as having a high probability for possessing intact cultural deposits, backhoe trenches were excavated at 30 m (98.4 ft) intervals. In moderate probability areas, backhoe trenches were spaced at 50 m (164 ft) intervals. All backhoe trenches were excavated to a depth of 200 cmbs (78.7 inbs), to sterile clay or clay-like subsoil, or until excessive amounts of groundwater impeded further excavation. In addition, each identified cultural resource was delineated through the excavation of additional backhoe trenches in an attempt to determine the size, function, and cultural affiliation of each identified locus. Since the proposed Areas of Potential Effect were very narrow, delineation backhoe trenches were excavated only between the survey trenches; thus the length of each cultural resource was delineated fully. The width of each locus was assumed to extend from the extant artificial flood control structure to a series of previously excavated borrow pits located approximately 10 to 15 m (32.8 to 49.2 ft) to the north and east of the existing levee.

This investigation resulted in the identification and recordation of eight archeological sites (Sites 16AN68 – 16AN70 in Ascension Parish and Sites 16IV48 – 16IV52 in Iberville Parish (Table 27). Sites 16IV48 – 16IV52 were identified and recorded within the Area of Potential Effect associated with the Alhambra to Hohen-Solms project item, while Sites 16AN68 – 16AN70 were identified with the Area of Potential Effect associated with the Hohen-Solms to Modeste project item.

Table 27. Summary of cultural resources identified during survey of the proposed Alhambra to Hohen-Solms and Hohen-Solms to Modeste project items.

SITE NUMBER	SIZE (HA/AC)	CULTURAL AFFILIATION	DEGREE OF DISTURBANCE	NRHP ELIGIBILITY
16IV48	0.52 ha/1.29 ac	Nineteenth to early twentieth century	Moderate	Not eligible
16IV49	0.48 ha/1.22 ac	Nineteenth to early twentieth century	Low	Eligible
16IV50	0.51 ha/1.26 ac	Nineteenth to early twentieth century	Low	Eligible
16IV51	0.26 ha/0.65 ac	Late eighteenth to early twentieth century	Low	Potentially eligible
16IV52	0.19 ha/0.48 ac	Nineteenth to early twentieth century	Low	Potentially eligible
16AN68	0.43 ha/1.07 ac	Nineteenth to early twentieth century	Moderate	Not eligible
16AN69	1.2 ha/3.04 ac	Late eighteenth to early twentieth century	Low	Eligible
16AN70	0.48 ha/1.22 ac	Early nineteenth to early twentieth century	Low	Eligible

The results of this survey suggest that Sites 16IV49 and 16IV50 retain intact cultural deposits that possess good research potential. These sites are located within the Areas of Potential Effect associated with the Alhambra to Hohen-Solms project item and they contain domestic cultural deposits dating from the nineteenth to early twentieth century and the late eighteenth to early twentieth century, respectively. Site 16IV49 also is composed partially of the remains of the Braziel Baptist Church and cemetery complex. While the church was moved to its present location prior to new levee construction in 1932, it appears, based on the preliminary results of this Phase I cultural resources survey and archeological inventory, that the entire cemetery may not have been relocated at that time. It has been suggested by the current pastor of the Braziel Baptist Church that only six human interments were removed from the area and relocated within the current church cemetery prior to levee setback construction in 1932. Both sites were assessed as significant under criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4[a-d]). Avoidance of or mitigation of Sites 16IV49 and 16IV50 is recommended prior to the initiation of the proposed concrete slope paving project (see Appendix III).

The remaining three sites identified within Iberville Parish, Louisiana also were identified within the Area of Potential Effect associated with the Alhambra to Hohen-Solms project item (16IV48, 16IV51, and 16IV52). In the case of Site 16IV48, it consists of a domestic occupation dating from the nineteenth to early twentieth century. While this site may contain intact cultural deposits, it does not possess intact cultural features or substantive research potential. Thus, it was determined in consultation with the Division of Archaeology of the – Department of Culture, Recreation, and Tourism, that Site 16IV48 does not possess the qualities of significance under the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Site 16IV48 is recommended. In addition, Site 16IV51 contains domestic cultural deposits dating from the late eighteenth to early twentieth century, while Site 16IV52 retains domestic cultural deposits dating from the early nineteenth to early twentieth century. Sites 16IV51 and 16IV52 may possess the qualities of significance as defined by National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Phase II National Register testing and evaluation of Sites 16IV51 and 16IV51 is recommended.

During the Phase I cultural resources survey and archeological inventory of the Hohen-Solms to Modeste project item in Ascension Parish, Louisiana, three archeological sites (16AN68 - 16AN70) were identified and subsequently recorded. This investigation demonstrated that Site 16AN69 and 16AN70 both retain intact cultural deposits and research potential; these sites date from the late eighteenth to early twentieth century and the early nineteenth to early twentieth century, respectively. Sites 16AN69 and 16AN70 were assessed as significant under criterion (d) of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Avoidance of Sites 16AN69

and 16AN70 or mitigation of impacts associated with the planned U.S. Army Corps of Engineers, New Orleans District's concrete slope paving project is recommended.

Finally, Site 16AN68, dating from the nineteenth and early twentieth century, was identified and recorded during the Phase I cultural resources survey and archeological inventory of the Hohen-Solms to Modeste project item in Ascension Parish, Louisiana. This site may contain intact cultural deposits; however, it does not possess intact cultural features or evidence of substantive research potential. Thus, it was determined in consultation with the Division of Archaeology of the Department of Culture, Recreation, and Tourism that Site 16AN68 does not possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Site 16AN68 is recommended.

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APPENDIX I

ARTIFACTS RECOVERED DURING SURVEY

Table 1. Faunal Material Recovered during Phase I Cultural Resources Survey and Archeological Inventory of the Alhambra to Hohen-Solms Project Item.

SITE/ LOCUS	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	GENUS	SPECIES	COMMON NAME	ELEMENT	MODIFICATION
AHP2A-01	AHP2A	9				IV	1		1	Mammalia			UID Mammal	Misc.fragment	Sawed
AHP1A-01	AHP1A		1						1	Invertebrata	Crassostrea	virginica	Virginia oyster	Shell with hinge	None
AHP1A-01	AHP1A		1						1	Mammalia			Even-toed ungulates	Metatarsal	Carnivore-gnawed
AHP1A-01	AHP1A		6						1	Mammalia			UID Mammal	Shaft fragment	Hack
AHP1A-01	AHP1A		8						3	Invertebrata	Crassostrea	virginica	Virginia oyster	Invertebrate shell fragment	None
AHP1A-01	AHP1A		8						1	Mammalia			UID Mammal	Misc.fragment	None
AHP1A-01	AHP1A	8				IV	1		1	Mammalia	Bos	taurus	Cow	Tibia	Sawed
AHP1B-01	AHP1B		7						1	Invertebrata	Crassostrea	virginica	Virginia oyster	Invertebrate shell fragment	None
AHP1B-01	AHP1B		7						1	Invertebrata	Crassostrea	virginica	Virginia oyster	Whole gastropod shell	None
AHP1B-01	AHP1B		7						1	Mammalia			UID Mammal	Shaft fragment	None
AHP1B-01	AHP1B		8						1	Invertebrata	Crassostrea	virginica	Virginia oyster	Invertebrate shell fragment	None
AHP1B-01	AHP1B		8						1	Mammalia			UID Mammal	Misc.fragment	None
AHP1B-01	AHP1B		8						1	Mammalia			UID Mammal	Misc.fragment	Sawed
AHP1B-01	AHP1B		9						1	Invertebrata	Crassostrea	virginica	Virginia oyster	Invertebrate shell fragment	None
AHP1B-01	AHP1B		12						1	Invertebrata	Rangia	cuneata	Brackish water clam	Shell with hinge	None
AHP1B-01	AHP1B		12						1	Invertebrata	Crassostrea	virginica	Virginia oyster	Shell with hinge	None
AHP1B-01	AHP1B		12						1	Invertebrata	Crassostrea	virginica	Virginia oyster	Whole gastropod shell	None
AHP1B-01	AHP1B	8				V	2		1	Mammalia			UID Mammal	Misc.fragment	None
AHP1B-01	AMP1			1000	1306				1	Mammalia	Homo	sapiens	Human	Canine tooth	None
AHP1B-01	AMP1			1000	1306				1	Mammalia	Homo	sapiens	Human	Incisor	None
AHP1B-01	AMP1			1000	1306				1	Mammalia	Homo	sapiens	Human	Misc. cranial fragment	None

Table 1, continued

SITE/ LOCUS	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	GENUS	SPECIES	COMMON NAME	ELEMENT	MODIFICATION
AHP1B-01	AMP1			1000	1306				2	Mammalia	Homo	sapiens	Human	Misc. cranial fragment	None
AHP1B-01	AMP1			1000	1306				4	Mammalia	Homo	sapiens	Human	Misc. cranial fragment	None
AHP1B-01	AMP1			1000	1306				3	Mammalia	Homo	sapiens	Human	Misc. cranial fragment	None
AHP1B-01	AMP1			1000	1306				2	Mammalia	Homo	sapiens	Human	Molar	None
AHP1B-01	AMP1			1000	1306				2	Mammalia	Homo	sapiens	Human	Premolar	None
AHP1B-01	AMP1			1000	1306				1	Mammalia	Homo	sapiens	Human	Tooth-bearing fragment	None
AHP2A-01	AHP2A		13						1	Mammalia			UID Mammal	Shaft fragment	None
AHP2A-01	AHP2A		13						1	Mammalia	Bos	taurus	Cow	Tibia	Hack
AHP2A-01	AHP2A	10				III	1		1	Mammalia			UID Mammal	Shaft fragment	Carnivore-gnawed
AHP2A-01	AHP2A	10				III	1		3	Mammalia			UID Mammal	Shaft fragment	Cut
AHP2A-01	AHP2A	10				III	1		3	Mammalia			UID Mammal	Shaft fragment	Hack
AHP2A-01	AHP2A	10				III	1		1	Mammalia	Sus	scrofa	Domestic pig	Ulna	None
AHP2A-01	AHP2A	10				III	1		1	Mammalia			Even-toed ungulates	Humerus	Hack
AHP2A-01	AHP2A	10				III	1		1	Mammalia	Bos	taurus	Cow	Rib	Sawed
AHP2B-01	AHP2B		7						1	Mammalia			UID Mammal	Shaft fragment	None
AHP2B-01	AHP2B		7						1	Mammalia	Sus	scrofa	Domestic pig	Canine tooth	None
AHP2B-01	AHP2B	6				V	1		1	Mammalia	Sus	scrofa	Domestic pig	Misc. tooth fragment	None
AHP2B-01	AHP2B	6				V	2		4	Mammalia	Sus	scrofa	Domestic pig	Misc. tooth fragment	None
AHP2B-01	AHP2B	6				V	2		1	Mammalia	Sus	scrofa	Domestic pig	Molar	None
AHP2B-01	AHP2B	6				V	2		2	Mammalia	Sus	scrofa	Domestic pig	Premolar	None
AHP2B-01	AHP2B	6				V	2		5	Vertebrata			UID Vertebrate	Misc.fragment	None

Table 1, continued

SITE/ LOCUS	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	GENUS	SPECIES	COMMON NAME	ELEMENT	MODIFICATION
AHP2B-01	AHP2B	7				V	1		2	Mammalia			UID Mammal	Misc.fragment	None
AHP2B-01	AHP2B	7				V	1		1	Mammalia			UID Mammal	Shaft fragment	None
AHP2B-01	AHP2B	7				V	1		2	Mammalia	Sus	scrofa	Domestic pig	Tibia	Carnivore-gnawed
AHP2B-01	AHP2B	7				V	1		1	Mammalia	Sus	scrofa	Domestic pig	Tibia	Hack
AHP2B-01	AHP2B	7				VI	1		1	Mammalia			UID Mammal	Misc.fragment	None
AHP2B-01	AHP2B	7				VI	1		2	Mammalia			UID Mammal	Shaft fragment	None
AHP2B-01	AHP2B	7				VI	1		4	Mammalia	Bos	taurus	Cow	Shaft fragment	Carnivore-gnawed
AHP2B-01	AHP2B	7				VI	1		1	Mammalia	Bos	taurus	Cow	Shaft fragment	Rodent-gnawed
AHP2B-01	AHP2B	7				VI	1		1	Mammalia	Sus	scrofa	Domestic pig	Canine tooth	None

Table 2. Historic Material Recovered during Phase I Cultural Resources Survey and Archeological Inventory of the Alhambra to Hohen-Solms Project Item.

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BHT	2				III	I		1	Metal	Furniture	Stove Part(s)	Cast Iron	
AHP1A-01	BDP		1						4	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BDP		1						1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BDP		1						1	Glass	Machine-Made Bottle Glass	Amber	Body(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
AHP1A-01	BDP		1						2	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)
AHP1A-01	BDP		1						1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1A-01	BDP		1						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BDP		1						1	Synthetic	Miscellaneous Construction/ Architectural	Corner Molding		
AHP1A-01	BDP		2						4	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AHP1A-01	BDP		2						4	Metal	Miscellaneous Kitchen	Can(s)	Iron	
AHP1A-01	BDP		2						1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1A-01	BDP		2						1	Metal	Nail(s)	Unidentified	Iron	
AHP1A-01	BDP		2						4	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BDP		3						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1A-01	BDP		3						2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BDP		4						1	Ceramic	Whiteware	Transfer-Printed	Body(s)	post ca. 1820; ca. 1820 1860
AHP1A-01	BDP		4			I-III			6	Glass	Machine-Made Bottle Glass	Cobalt Blue	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)
AHP1A-01	BDP		6						3	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BDP		6						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BDP		7						4	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BDP		8						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP1A-01	BDP		8						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP1A-01	BDP		8						3	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP1A-01	BDP		8						6	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BDP		8						1	Construction Materials	Architectural Stone	Brick, Handmade, Glazed		
AHP1A-01	BDP		8						10	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AHP1A-01	BDP		8						1	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	
AHP1A-01	BDP		8						1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Indeterminate	
AHP1A-01	BDP		8						1	Metal	Miscellaneous Hardware	Chain	Iron	
AHP1A-01	BDP		8						1	Metal	Miscellaneous Hardware	Unidentified	Iron	

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1A-01	BDP		8						2	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1A-01	BDP		8						1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1A-01	BDP		8						1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
AHP1A-01	BDP		8						1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
AHP1A-01	BDP		8						1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
AHP1A-01	BDP		8						1	Metal	Tools	Unidentified Tool(s)	Iron	
AHP1A-01	BDP		8						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BDP		8						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BDP		8						7	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
AHP1A-01	BDP		8						2	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
AHP1A-01	BDP		3						1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1A-01	BDP		3						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BHT	1				III	1		6	Glass	"Depression" Glass	Opaque White/ Milk glass	Rim/Lip to Base	post ca. 1925; ca. 1928 1950s (UP)

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1A-01	BHT	1				V	1		7	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BHT	1				V	2		1	Glass	Turn Paste Mold	Dark Green	Base(s)	ca. 1870's-1920's
AHP1A-01	BHT	2				IV	1		3	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
AHP1A-01	BHT	2				V	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BHT	3				V	1		1	Metal	Nail(s)	Unidentified	Iron	
AHP1A-01	BHT	3				VI	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BHT	7				V	1		1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AHP1A-01	BHT	7				V	1		1	Construction Materials	Miscellaneous Architectural	Mortar		
AHP1A-01	BHT	8				III	1		2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BHT	8				III	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BHT	8				IV	1		1	Metal	Miscellaneous Hardware	Nut(s)	Iron	
AHP1A-01	BHT	8				IV	1		1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's
AHP1A-01	BHT	8				IV	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BHT	8				IV	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1A-01	BHT	9				II	1		1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1A-01	BHT	9				II	1		48	Glass	Flat Glass Shard(s)	No Color Assigned		
AHP1A-01	BHT	3				III	1		2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1A-01	BHT	3				III	1		1	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)
AHP1B-01	BDP		7						7	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BDP		7						1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1B-01	BDP		7						1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1B-01	BDP		7						2	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
AHP1B-01	BDP		8						4	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AHP1B-01	BDP		8						1	Construction Materials	Architectural Stone	Brick, Partial		
AHP1B-01	BDP		8						6	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BDP		8						3	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1B-01	BDP		8						1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1B-01	BDP		8						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1B-01	BDP		9						1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BDP		9						1	Construction Materials	Architectural Stone	Brick, Extruded, Fragment		
AHP1B-01	BDP		9						3	Metal	Miscellaneous Hardware	Unidentified	Iron	
AHP1B-01	BDP		9						6	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BDP		9						3	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1B-01	BDP		9						1	Metal	Nail(s)	Unidentified	Iron	
AHP1B-01	BDP		9						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1B-01	BDP		9						2	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
AHP1B-01	BDP		11						2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BDP		11						1	Metal	Construction Hardware	Pipe(s)	Iron	
AHP1B-01	BDP		11						1	Metal	Construction Hardware	Staple(s)	Iron	
AHP1B-01	BDP		11						2	Metal	Miscellaneous Hardware	Wire fragment(s)	Iron	post ca. 1775 (US production); post ca. 1830 (common)

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1B-01	BDP		11						3	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BDP		11						1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BDP		11						1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1B-01	BDP		12						2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BDP		12						1	Metal	Furniture	Stove Part(s)	Cast Iron	
AHP1B-01	BDP		12						1	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)
AHP1B-01	BDP		12						1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BDP		12						1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1B-01	BDP		12						1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
AHP1B-01	BDP		2						1	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
AHP1B-01	BDP		3						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP1B-01	BDP		3						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP1B-01	BDP		3						1	Glass	Machine-Made Bottle Glass	Colorless	Neck(s)	post ca. 1898 (Manu.); post 1916 (U.P.)

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1B-01	BHT	7				V	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BHT	7				V	1		1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BHT	8				V	1		2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BHT	8				V	1		1	Metal	Construction Hardware	Staple(s)	Iron	
AHP1B-01	BHT	8				V	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	
AHP1B-01	BHT	8				V	1		1	Stone	Other Miscellaneous Stone	Cinder fragment(s)		
AHP1B-01	BHT	8				V	2		10	Glass	Tooled Lip	Light Aqua	Rim/Lip to Base	ca. 1820's-1920's
AHP1B-01	BHT	9				V	1		1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
AHP1B-01	BHT	9				V	1		2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BHT	9				V	1		4	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BHT	9				V	1		3	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1B-01	BHT	9				V	1		1	Synthetic	Miscellaneous Activities	Miscellaneous		
AHP1B-01	BHT	10				III	1		1	Metal	Construction Hardware	Hinge(s)	Iron	
AHP1B-01	BHT	10				III	1		1	Metal	Miscellaneous Hardware	Bolt(s)	Iron	

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1B-01	BHT	10				III	1		1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BHT	10				III	1		1	Metal	Unidentified Metal Objects	Indeterminate	Cast Iron	
AHP1B-01	BHT	10				III	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1B-01	BHT	10				IV	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BHT	10				IV	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Base(s)	
AHP1B-01	BHT	10				IV	1		3	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BHT	11				II	1		1	Glass	Machine-Made Bottle Glass	Colorless		post ca. 1898 (Manu.); post 1916 (U.P.)
AHP1B-01	BHT	11				III	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BHT	11				III	1		1	Glass	Machine-Made Bottle Glass	Amber	Heel(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
AHP1B-01	BHT	11				III	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	
AHP1B-01	BHT	11				III	1		1	Metal	Construction Hardware	Spike(s)	Iron	
AHP1B-01	BHT	11				III	1		1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP1B-01	BHT	11				III	1		1	Metal	Nail(s)	Unidentified	Iron	

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1B-01	BHT	11				III	1		1	Metal	Tools	Plow Part(s)	Iron	
AHP1B-01	BHT	11				III	1		1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP1B-01	BHT	12				III	1		1	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)
AHP1B-01	BHT	12				IV	1		2	Glass	Unidentified Bottle Glass (Kitchen)	Light Aqua	Body(s)	
AHP1B-01	BHT	12				V	1		2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP1B-01	BHT	12				V	1		1	Metal	Unidentified Metal Objects	Unknown Function	Iron	
AHP1B-01	BHT	12				V	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP1B-01	BHT	2				III	1		2	Glass	Cup Bottom Mold	Colorless	Base(s)	post ca. 1850
AHP1B-01	DBD			1000	1165				1	Ceramic	Ironstone	Undecorated White	Rim(s)	ca. 1813-1900+; U.P. post ca. 1845
AHP1B-01	DBD			1000	1165				1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP1B-01	DBD			1000	1165				1	Construction Materials	Architectural Stone	Brick, Extruded, Fragment		
AHP1B-01	DBD			1000	1165				1	Glass	Unidentified Bottle Glass (Kitchen)	Opaque White/ Milk Glass	Body(s)	
AHP1B-01	DBD			1000	985				2	Ceramic	Imported Brown Stoneware	Brown Mineral Glaze on Buff	Body & Base	
AHP1B-01	DBD			1000	985				1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP1B-01	DBD			1000	985				1	Glass	Turn Paste Mold	Dark Green	Base(s)	ca. 1870's-1920's
AHP1B-01	DBD			1000	985				1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's
AHP1B-01	DBD			1000	1306				2	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP1B-01	DBD			1000	1306				1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
AHP1B-01	DBD			1000	1306				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
AHP1B-01	DBD			1000	1306				1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
AHP1B-01	DBD			1000	1306				1	Metal	Miscellaneous Hardware	Casket Furnishing	Pewter	
AHP1B-01	DBT			1000	1165	IV	2		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP1B-01	DBT			1000	1165	IV	2		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP1B-01	DBT			1000	1165	IV	2		1	Glass	Unidentified Glass (Miscellaneous)	Opaque White/ Milk Glass	Indeterminate	
AHP1B-01	DBT			1000	1165	IV	2		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP2A-01	BDP		9						1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BDP		9						2	Metal	Furniture	Stove Part(s)	Cast Iron	
AHP2A-01	BDP		9			II-IV			1	Metal	Miscellaneous Hardware	Strap(s)	Iron	
AHP2A-01	BDP		10						1	Ceramic	Whiteware	Overglaze Hand-Painted	Body(s)	ca. 1820-1890
AHP2A-01	BDP		10						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BDP		10						1	Glass	Pressed Glass	Aqua	Body(s)	post ca. 1825 (Common); post ca. 1870s (UP)
AHP2A-01	BDP		10						1	Glass	Unidentified Bottle Glass (Kitchen)	Amethyst-Colored (Manganese Solarization)	Body(s)	ca. 1875-1920
AHP2A-01	BDP		10			1	1-2		1	Ceramic	Clothing Items	Porcelain Button(s)	Complete	ca. 1840-1930 (UP)
AHP2A-01	BDP		10			1	1-2		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP2A-01	BDP		10			1	1-2		1	Ceramic	Whiteware	Plain	Rim/Lip & Body	ca. 1820-1900+
AHP2A-01	BDP		10			1	1-2		1	Ceramic	Yellowware	Rockingham/ Bennington	Body(s)	ca. 1830-1900
AHP2A-01	BDP		10			1	1-2		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BDP		10			1	1-2		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
AHP2A-01	BDP		10			1	1-2		2	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP2A-01	BDP		10			1	1-2		2	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP2A-01	BDP		11						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP2A-01	BDP		11						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP2A-01	BDP		11						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP2A-01	BDP		11						1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
AHP2A-01	BDP		11						1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BDP		11						1	Glass	Unidentified Bottle Glass (Kitchen)	Amethyst-Colored (Manganese Solarization)	Neck(s)	ca. 1875-1920
AHP2A-01	BDP		11						2	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP2A-01	BDP		12						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP2A-01	BDP		12						1	Glass	Light Globe	White/ Milk Glass	Body(s)	
AHP2A-01	BDP		12						1	Glass	Pressed Glass	Amethyst-Colored (Manganese Solarization)	Body(s)	ca. 1875-1920
AHP2A-01	BDP		12						1	Glass	Unid. Blown-in-Mold Bottle Glass	Light Aqua	Body(s)	
AHP2A-01	BDP		12						1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
AHP2A-01	BDP		13						1	Ceramic	Architectural	Earthenware Drainage/Sewage Pipe	Body(s)	
AHP2A-01	BDP		13						2	Glass	"Depression" Glass	Pink	Heel(s)	post ca. 1925; ca. 1928 1950s (UP)
AHP2A-01	BDP		13						1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Heel(s)	
AHP2A-01	BDP		13						2	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP2A-01	BDP		14						2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP2A-01	BDP		14						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BDP		14						1	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	
AHP2A-01	BDP		14						3	Metal	Miscellaneous Hardware	Miscellaneous Machinery/ Other Part(s)	Cast Iron	
AHP2A-01	BDP		2						1	Ceramic	Pearlware	Scalloped Rim, Embossed Design	Rim(s)	
AHP2A-01	BDP		2						1	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
AHP2A-01	BDP		2						1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BDP		2						1	Glass	Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	
AHP2A-01	BDP		2						1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP2A-01	BHT	4				IV	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BHT	5				II-III	1		1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AHP2A-01	BHT	7				I	2		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BHT	7				IV	1		1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
AHP2A-01	BHT	9				III	1		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP2A-01	BHT	9				IV	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BHT	9				IV	1		3	Construction Materials	Architectural Stone	Brick Fragment(s)		

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BHT	9				IV	1		2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BHT	9				IV	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
AHP2A-01	BHT	9				IV	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Light Aqua	Body(s)	
AHP2A-01	BHT	9				IV	1		5	Glass	Unidentified Bottle Glass (Kitchen)	Amethyst-Colored (Manganese Solarization)	Body(s)	ca. 1875-1920
AHP2A-01	BHT	9				IV	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
AHP2A-01	BHT	9				IV	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Light Green	Body(s)	
AHP2A-01	BHT	9				IV	1		1	Metal	Construction Hardware	Pipe(s)	Iron	
AHP2A-01	BHT	9				IV	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP2A-01	BHT	9				IV	1		1	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
AHP2A-01	BHT	9				IV	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP2A-01	BHT	9				IV	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
AHP2A-01	BHT	9				IV	2		3	Metal	Furniture	Stove Part(s)	Cast Iron	
AHP2A-01	BHT	9				IV	2		1	Metal	Miscellaneous Hardware	Wire fragment(s)	Iron	post ca. 1775 (US production); post ca. 1830 (common)

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BHT	9				IV	2		1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
AHP2A-01	BHT	9				VI	1		1	Glass	Post Bottom Mold	Amber	Base(s)	post ca. 1850
AHP2A-01	BHT	9				VI	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Amber	Neck(s)	
AHP2A-01	BHT	9				VI	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Indeterminate	
AHP2A-01	BHT	10				I	1		3	Glass	"Depression" Glass	Opaque White/ Milk glass	Rim/Lip & Body	post ca. 1925; ca. 1928 1950s (UP)
AHP2A-01	BHT	10				I	2		1	Ceramic	Activities	Doll Part(s)		
AHP2A-01	BHT	10				I	2		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP2A-01	BHT	10				I	2		1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP2A-01	BHT	10				I	2		1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP2A-01	BHT	10				III	1		1	Ceramic	Domestic Brown Stoneware	Albany Slip-Glazed Buff	Body(s)	ca. 1810-1900
AHP2A-01	BHT	10				III	1		1	Ceramic	Ironstone	Hand-Painted	Rim(s)	
AHP2A-01	BHT	10				III	1		1	Ceramic	Ironstone	Porcelaneous Ware	Body(s)	post ca. 1880
AHP2A-01	BHT	10				III	1		1	Ceramic	Porcelain, Hard Paste	Undecorated	Rim(s)	post ca. 1768
AHP2A-01	BHT	10				III	1		1	Ceramic	Refined Redware	Black Glazed	Body(s)	
AHP2A-01	BHT	10				III	1		8	Ceramic	Whiteware	Cut-Sponge Decoration	Rim/Lip to Base	ca. 1840's - 1870's

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BHT	10				III	1		1	Ceramic	Whiteware	Molded/ Embossed Decoration	Base(s)	
AHP2A-01	BHT	10				III	1		1	Ceramic	Whiteware	Molded/ Embossed Decoration	Body(s)	
AHP2A-01	BHT	10				III	1		2	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim/Lip & Body	
AHP2A-01	BHT	10				III	1		3	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP2A-01	BHT	10				III	1		1	Ceramic	Whiteware	Plain	Handle(s)	ca. 1820-1900+
AHP2A-01	BHT	10				III	1		2	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP2A-01	BHT	10				III	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP2A-01	BHT	10				III	1		5	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AHP2A-01	BHT	10				III	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BHT	10				III	1		1	Glass	Applied String Lip	Green	Lip(s)	
AHP2A-01	BHT	10				III	1		1	Metal	Miscellaneous Clothing Items	Grommet(s)	Brass	
AHP2A-01	BHT	10				III	1		1	Metal	Miscellaneous Hardware	Hook(s) (Generic)	Iron	
AHP2A-01	BHT	10				III	1		1	Metal	Miscellaneous Hardware	Ring(s)	Iron	
AHP2A-01	BHT	10				III	1		1	Metal	Miscellaneous Hardware	Washer(s)	Iron	
AHP2A-01	BHT	10				III	1		1	Ceramic	Whiteware	Annular-Decorated	Rim(s)	ca. 1820-1890
AHP2A-01	BHT	10				III	1		1	Glass	Tooled Lip	Amber	Lip(s)	ca. 1820's-1920's
AHP2A-01	BHT	10				III	3		2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP2A-01	BHT	10				III	3		6	Glass	Pressed Glass	Colorless	Rim/Lip & Body	post ca. 1825
AHP2A-01	BHT	10				III	3		1	Glass	Unid. Blown-in-Mold Bottle Glass	Aqua	Neck(s)	

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BHT	10				III	3	1	7	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
AHP2A-01	BHT	10				III	4	2	2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AHP2A-01	BHT	10				III	4	2	3	Ceramic	Whiteware	Plain	Rim/Lip & Body	ca. 1820-1900+
AHP2A-01	BHT	10				III	4	2	2	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AHP2A-01	BHT	10				III	4	2	3	Glass	Tooled Lip	Colorless	Rim/Lip to Base	ca. 1820's-1920's
AHP2A-01	BHT	11				I	1		6	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
AHP2A-01	BHT	11				II	1		1	Glass	Tooled Lip	Dark Green	Lip(s)	ca. 1820's-1920's
AHP2A-01	BHT	12				II	1		3	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2A-01	BHT	12				V	2		1	Ceramic	Architectural	Earthenware Drainage/Sewage Pipe	Indeterminate	
AHP2A-01	BHT	12				V	2		7	Glass	Tooled Lip	Amethyst-Colored (Manganese Solarization)	Lip(s)	ca. 1875-1920
AHP2A-01	BHT	13				III	1		6	Glass	Machine-Made Base	Amber	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)
AHP2A-01	BHT	13				III	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Shoulder(s)	
AHP2A-01	BHT	13				III	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
AHP2A-01	BHT	13				VII	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2A-01	BHT	14				VI	1		1	Metal	Miscellaneous Hardware	Miscellaneous	Iron	
AHP2B-01	BDP		5						1	Ceramic	Pearlware	Scalloped Rim, Impressed Straight Lines	Rim(s)	ca. 1795-1840
AHP2B-01	BDP		6						1	Ceramic	Creamware	Mocha-Decorated	Base(s)	ca. 1785-ca. 1835
AHP2B-01	BDP		6						1	Ceramic	Pearlware	Undecorated	Body(s)	ca. 1780-1830
AHP2B-01	BDP		6						1	Ceramic	Whiteware	Transfer-Printed	Body(s)	post ca. 1820; ca. 1820 1860
AHP2B-01	BDP		6						1	Ceramic	Whiteware	Transfer-Printed	Body(s)	post ca. 1820; ca. 1820 1860
AHP2B-01	BDP		6						1	Metal	Miscellaneous Hardware	Ring(s)	Iron	
AHP2B-01	BDP		6						1	Metal	Nail(s)	Hand-Wrought, Type 1/2nn	Iron	ca. 1769-1799
AHP2B-01	BDP		6						1	Metal	Nail(s)	Hand-Wrought, Type 2k	Iron	ca. 1769-1810
AHP2B-01	BDP		6						2	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP2B-01	BDP		6						1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP2B-01	BDP		6						1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP2B-01	BDP		6						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP2B-01	BDP		6						1	Construction Materials	Architectural Stone	Brick Fragment(s)		

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2B-01	BDP		7						4	Ceramic	Creamware	Undecorated, Light Tint	Body(s)	ca. 1775-1820
AHP2B-01	BDP		7						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP2B-01	BDP		7						1	Construction Materials	Architectural Stone	Brick, Glazed		
AHP2B-01	BDP		7						1	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Base(s)	
AHP2B-01	BDP		7						1	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Body(s)	
AHP2B-01	BDP		9						1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2B-01	BHT	6				V	1		1	Ceramic	Creamware	Finger-Painted	Body(s)	ca. 1790-1820
AHP2B-01	BHT	6				V	1		1	Ceramic	Domestic Brown Stoneware	Salt-Glazed Buff	Body(s)	
AHP2B-01	BHT	6				V	1		1	Ceramic	Pearlware	"Negative" Blue Tranfer-Printed	Base(s)	ca. 1818-1830
AHP2B-01	BHT	6				V	1		1	Ceramic	Pearlware	Undecorated	Base(s)	ca. 1780-1830
AHP2B-01	BHT	6				V	1		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AHP2B-01	BHT	6				V	1		1	Ceramic	Whiteware	Transfer-Printed	Indeterminate	post ca. 1820; ca. 1820 1860
AHP2B-01	BHT	6				V	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AHP2B-01	BHT	6				V	1		1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AHP2B-01	BHT	6				V	1		1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
AHP2B-01	BHT	6				V	1		1	Other	Unidentified Material	Unidentifiable Fired Earth		

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2B-01	BHT	6				V	1		1	Stone	Other Miscellaneous Stone	Limestone fragment(s)		
AHP2B-01	BHT	6				V	2		2	Ceramic	Pearlware	Scalloped Rim, Impressed Curved Lines	Rim(s)	ca. 1795-1845
AHP2B-01	BHT	6				V	2		1	Ceramic	Refined Redware	Black Glazed	Body(s)	
AHP2B-01	BHT	6				V	2		1	Ceramic	Tobacco Pipes	Ball Clay (Kaolin) Stem(s)		
AHP2B-01	BHT	6				V	2		2	Ceramic	Whiteware	Engine-Turned	Rim(s)	
AHP2B-01	BHT	6				V	2		1	Ceramic	Whiteware	Transfer-Printed	Body(s)	post ca. 1820; ca. 1820 1860
AHP2B-01	BHT	6				V	2		1	Ceramic	Whiteware	Unidentified Decoration	Body(s)	
AHP2B-01	BHT	6				V	2		1	Glass	Unidentified Bottle Glass (Kitchen)	Yellow Green (Olive)	Body(s)	
AHP2B-01	BHT	6				V	2		2	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
AHP2B-01	BHT	6				V	2		1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
AHP2B-01	BHT	7				V	1		1	Ceramic	Pearlware	Annular-Decorated	Body(s)	ca. 1790-1820
AHP2B-01	BHT	7				V	1		3	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Body(s)	
AHP2B-01	BHT	7				V	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Shoulder(s)	

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AHP2B-01	BHT	7				V	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	
AHP2B-01	BHT	7				VI	1		1	Ceramic	Creamware	Undecorated, Light Tint	Body(s)	ca. 1775-1820
AHP2B-01	BHT	7				VI	1		1	Ceramic	Pearlware	Mocha-Decorated	Body(s)	ca. 1795-1890
AHP2B-01	BHT	7				VI	1		1	Ceramic	Whiteware	Mocha-Decorated	Body(s)	ca. 1820-1890
AMP2-01	BDP		9						1	Ceramic	Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768
AMP2-01	BDP		10						1	Ceramic	Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768
AMP2-01	BDP		11						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AMP2-01	BHT	11							4	Ceramic	Coarse Earthenware	Albany Slip-Glazed on Buff	Body(s)	post ca. 1805 (Albany slip)
AMP2-01	BHT	11							1	Ceramic	Whiteware	Plain	Handle(s)	ca. 1820-1900+
AMP2-01	BHT	11							1	Construction Materials	Architectural Stone	Brick, Partial		
AMP2-01	BHT	11						1	1	Ceramic	Pearlware	Annular-Decorated	Rim(s)	ca. 1790-1820
AMP2-01	BHT	11						1	1	Ceramic	Yellowware	Plain	Lid(s)	ca. 1830-1900
AMP2-01	BHT	11						1	1	Construction Materials	Architectural Stone	Brick Fragment(s)		
AMP2-01	BHT	11						1	1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
AMP2-01	BHT	11						1	1	Glass	Unidentified Bottle Glass (Kitchen)	Light Aqua	Base(s)	
AMP2-01	DBD								1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AMP2-01	DBD								1	Glass	Turn Paste Mold	Yellow Green (Olive)	Body(s)	ca. 1870's-1920's

Table 2, continued

SITE/ LOCUS	PT	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
AMP2-01	DBD			1000	1116				1	Ceramic	Domestic Gray Stoneware	Salt-Glazed w/Brown Lead Glaze	Shoulder(s)	
AMP2-01	DBD			1000	1116				1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
AMP2-01	DBD			1000	1116				3	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
AMP2-01	DBD			1000	1116				1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AMP2-01	DBD			1000	1116				1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
AMP2-01	DBT			1000	1116	II	2		1	Ceramic	Whiteware	Plain		ca. 1820-1900+
AMP2-01	DBT			1000	1116	II	2		8	Ceramic	Whiteware	Plain	Rim/Lip & Body	ca. 1820-1900+
AMP2-01	DBT			1000	1116	II	2		2	Construction Materials	Architectural Stone	Brick Fragment(s)		
AMP2-01	DBT			1000	1116	II	2		3	Glass	Flat Glass Shard(s)	No Color Assigned		
AMP2-01	DBT			1000	1116	II	2		1	Glass	Lamp Glass	Colorless	Body(s)	
AMP2-01	DBT			1000	1116	II	2		24	Glass	Tooled Lip	Amethyst-Colored (Manganese Solarization)	Rim/Lip to Base	ca. 1875-1920
AMP2-01	DBT			1000	1116	II	2		1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
AMP2-01	DBT			1000	1116	II	2		2	Metal	Unidentified Metal Objects	Indeterminate	Iron	

Table 3. Faunal Material Recovered during Phase I Cultural Resources Survey and Archeological Inventory of the Hohen-Solms to Modeste Project Item.

SITE/ LOCUS	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	FAMILY	GENUS	SPECIES	COMMON NAME	MODIFICATION	ADDITIONAL DESCRIPTION
HSHP1-01		8						1	Oyster	Crassostrea	virginica	Virginia oyster	None	
HSHP1-01		10						1				UID Mammal	None	
HSHP1-01		10						1	Artiodactyla			Even-toed ungulates	Clean cut	Illium
HSHP1-01		10						1	Bovidae	Bos	taurus	Cow	Clean cut	Mid-shaft of tibia
HSHP1-01		11						1	Bovidae	Bos	taurus	Cow	Clean cut	Mid-shaft of radius.
HSHP1-01	8				VI		1	1				UID Mammal	Cut	
HSHP1-01	8				VI		1	1	Leporidae			Hares and rabbits	None	Tibia
HSHP1-01	10				VI	1		1				UID Mammal	None	
HSHP1-01	10				VI	1	2	1				UID Mammal	None	
HSHP1-01	10				VI	1	2	2	Artiodactyla			Even-toed ungulates	Clean cut	
HSHP1-01	10				VI	1	2	1	Bovidae	Bos	taurus	Cow	Clean cut	Illium
HSHP1-01	10				VI	1	2	1	Bovidae	Bos	taurus	Cow	Clean cut	Tibia
HSHP1-01	10				VI	1	2	1				UID Mammal	None	
HSMP1-01		6						1				UID Mammal	Clean cut	Sawed; cow or large pig
HSMP1-01		14			II	1-3		1				UID Mammal	Clean cut	Sawed
HSMP1-01			1000	1125				1				UID Mammal	Clean cut	
HSMP1-01			1000	1125				1				UID Mammal	Clean cut	Sawed; cut marks; and carnivore gnawed; possibly
HSMP1-01			1000	1125				1				UID Mammal	Cut	Cow or pig mandible fragment
HSMP1-01			1000	1125				1				UID Mammal	Cut	Large mammal
HSMP1-01			1000	1125				1				UID Mammal	Hack	Rodent gnawed
HSMP1-01			1000	1125				1	Bovidae	Bos	taurus	Cow	Clean cut	Sawed; cut marks; scapula
HSMP1-01			1000	1125				1	Bovidae	Bos	taurus	Cow	Clean cut	Sawed; rib

Table 3, continued

SITE/ LOCUS	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	FAMILY	GENUS	SPECIES	COMMON NAME	MODIFICATION	ADDITIONAL DESCRIPTION
HSMP1-01			1000	1125				1	Bovidae	Bos	taurus	Cow	Cut	Tibia; recent fragmentation
HSMP1-01			1000	1125				1	Bovidae	Bos	taurus	Cow	Hack	Also cut; rib
HSMP1-01			1000	1125				1	Bovidae	Bos	taurus	Cow	None	Comparitively similar to hyoid bone
HSMP1-01			1000	1125				1	Bovidae	Bos	taurus	Cow	None	Shaft fragment
HSMP1-01			1000	1125				1	Bovidae	Bos	taurus	Cow	None	Tooth fragment
HSMP1-01			1000	1125				1	Tayassuidae	Sus	scrofa	Domestic pig	Cut	Scapula fragment
HSMP1-01			1000	1125				1	Tayassuidae	Sus	scrofa	Domestic pig	None	Femur fragment
HSMP1-01			1000	1125				1	Tayassuidae	Sus	scrofa	Domestic pig	None	First phalanges
HSMP1-01			1000	1125				1	Tayassuidae	Sus	scrofa	Domestic pig	None	Molar
HSMP1-01			1000	1125				2				UID Mammal	None	
HSMP1-01			1000	1125				2				UID Mammal	Rodent-gnawed	Mend; shaft fragment; possibly pig
HSMP1-01			1000	1125				5	Tayassuidae	Sus	scrofa	Domestic pig	None	Cow or pig mandible fragments
HSMP1-01			1000	1175	IV	1		2	Tayassuidae	Sus	scrofa	Domestic pig	Burned	With 3 premolars
HSMP1-01			1000	1175	IV	1		5	Phasianidae	Gallus	gallus	Chicken	Burned	
HSMP1-01			1000	1175	IV	1		5	Bovidae	Bos	taurus	Cow	Burned	
HSMP1-01			1000	1175	IV	1		5	Bovidae	Bos	taurus	Cow	Burned	Sawed
HSMP1-01			1000	1175	IV	1		5	Bovidae	Bos	taurus	Cow	Cut	
HSMP1-01			1000	1175	IV	1		5	Bovidae	Bos	taurus	Cow	Cut	Mend
HSMP1-01			1000	1175	IV	1		5				UID Vertebrate	Burned	Also cut mark; extremely dense, robust vertebrate;
HSMP1-01			1000	1175	IV	1		7	Bovidae	Bos	taurus	Cow	Cut	
HSMP1-01			1000	1175	IV	1		8	Bovidae	Bos	taurus	Cow	Cut	
HSMP1-01			1000	1175	IV	1		8	Tayassuidae	Sus	scrofa	Domestic pig	Burned	

Table 3, continued

SITE/ LOCUS	TRENCH	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	FAMILY	GENUS	SPECIES	COMMON NAME	MODIFICATION	ADDITIONAL DESCRIPTION
HSMP1-01			1000	1175	IV	1		9	Bovidae	Bos	taurus	Cow	Burned	Sawed
HSMP1-01			1000	1175	IV	1		10	Bovidae	Bos	taurus	Cow	Burned	
HSMP1-01			1000	1175	IV	1		10				UID Vertebrate	Burned	
HSMP1-01			1000	1175	IV	1		17				UID Invertebrate	Burned	
HSMP1-01			1000	1175	IV	1		17				UID Mammal	Clean cut	Large mammal
HSMP1-01			1000	1175	IV	1		17				UID Mammal	Clean cut	Sawed
HSMP1-01			1000	1175	IV	1		17	Bovidae	Bos	taurus	Cow	Burned	Scapula or illium fragment
HSMP1-01			1000	1175	IV	1		17	Bovidae	Bos	taurus	Cow	Cut	Sawed

Table 4. Historic Material Recovered during Phase I Cultural Resources Survey and Archeological Inventory of the Hohen-Solms to Modeste Project Item.

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BDP	HSHP1		3						1	Ceramic	Ironstone	Porcelaneous Ware	Body(s)	post ca. 1880
HSHP1-01	BDP	HSHP1		3						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		3						1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BDP	HSHP1		3						1	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	
HSHP1-01	BDP	HSHP1		3						1	Glass	Unidentified Bottle Glass (Kitchen)	Opaque White / Milk Glass	Body(s)	
HSHP1-01	BDP	HSHP1		3						2	Metal	Construction Hardware	Spike(s)	Iron	
HSHP1-01	BDP	HSHP1		3						1	Metal	Unidentified Metal Objects	Unknown Function	Iron	
HSHP1-01	BDP	HSHP1		5						1	Glass	Pressed Glass	Opaque White/ Milk Glass	Indeterminate	post ca. 1825 (Rare); ca. 1875-1890 (UP)
HSHP1-01	BDP	HSHP1		5						1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSHP1-01	BDP	HSHP1		6			VI	2		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		6			VI	2		1	Glass	Unidentified Bottle Glass (Kitchen)	Yellow Green (Olive)	Body(s)	
HSHP1-01	BDP	HSHP1		8						2	Ceramic	Ironstone	Undecorated White	Body(s)	ca. 1813-1900+; U.P. post ca. 1845
HSHP1-01	BDP	HSHP1		8						1	Ceramic	Whiteware	Annular Decorated	Rim(s)	ca. 1820-1890
HSHP1-01	BDP	HSHP1		8						5	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		8						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		8						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BDP	HSHP1		8						1	Construction Materials	Architectural Stone	Brick, Glazed		
HSHP1-01	BDP	HSHP1		8						1	Fauna	Clothing Items	Shoe Leather fragment(s)		
HSHP1-01	BDP	HSHP1		8						2	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BDP	HSHP1		8			VI	1		1	Ceramic	Domestic Gray Stoneware	Salt-glazed, undecorated	Body(s)	ca. 1790-1910
HSHP1-01	BDP	HSHP1		8			VI	1		1	Ceramic	Porcelain, Hard Paste	Undecorated	Handle(s)	post ca. 1768
HSHP1-01	BDP	HSHP1		8			VI	1		3	Ceramic	Whiteware	Decal Decorated	Rim(s)	post ca. 1880
HSHP1-01	BDP	HSHP1		8			VI	1		2	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
HSHP1-01	BDP	HSHP1		8			VI	1		3	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		8			VI	1		4	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		8			VI	1		2	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BDP	HSHP1		9						1	Ceramic	Pearlware	Flow Blue	Body(s)	ca. 1840-1870+
HSHP1-01	BDP	HSHP1		9						1	Ceramic	Whiteware	Annular Decorated	Rim(s)	ca. 1820-1890
HSHP1-01	BDP	HSHP1		9						2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		9						3	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		9						1	Ceramic	Whiteware	Underglaze Hand-painted	Body(s)	ca. 1820-1890
HSHP1-01	BDP	HSHP1		9						1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BDP	HSHP1		9						1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BDP	HSHP1		9						4	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
HSHP1-01	BDP	HSHP1		9						3	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BDP	HSHP1		9						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		9						1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		9			VII	1		1	Glass	Machine-Made Bottle Glass	Amber	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Activities	Figurine(s)		
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Creamware	Annular	Rim(s)	ca. 1780-1815
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Creamware	Undecorated	Rim(s)	ca. 1762-1820
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Creamware	Unidentified Decorated	Body(s)	
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Domestic Brown Stoneware	Salt-glazed Buff	Body(s)	
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Ironstone	Undecorated White	Body(s)	ca. 1813-1900+; U.P. post ca. 1845
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	"Negative" Blue Tranfer-Printed	Body(s)	ca. 1818-1830
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	"Negative" Blue Tranfer-Printed	Rim(s)	ca. 1818-1830
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Annular	Base(s)	ca. 1790-1820
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Annular	Body(s)	ca. 1790-1820
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Embossed Patterns	Body(s)	ca. 1800-1820
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Embossed Patterns	Rim(s)	ca. 1800-1820

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Embossed w/Overglaze Hand-painted	Body(s)	ca. 1800-1820
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Scalloped Rim, impressed straight lines	Rim(s)	ca. 1795-1840
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Scalloped Rim, impressed straight lines	Rim(s)	ca. 1795-1840
HSHP1-01	BDP	HSHP1		10						4	Ceramic	Pearlware	Undecorated	Base(s)	ca. 1780-1830
HSHP1-01	BDP	HSHP1		10						9	Ceramic	Pearlware	Undecorated	Body(s)	ca. 1780-1830
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Underglaze Hand-painted	Base(s)	ca. 1780-1870+
HSHP1-01	BDP	HSHP1		10						2	Ceramic	Pearlware	Underglaze Hand-painted	Base(s)	ca. 1780-1870+
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Underglaze Hand-painted	Body(s)	ca. 1780-1870+
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Underglaze Hand-painted	Body(s)	ca. 1780-1870+
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Pearlware	Unscalloped, impressed rim	Rim(s)	ca. 1825-1891
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Porcelain, Hard Paste	Undecorated	Rim(s)	post ca. 1768
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Porcelain, Hard Paste	Underglaze Hand-painted	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Tobacco Pipes	Ball Clay (Kaolin) Stem(s)		
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Unidentified Ceramics	Unidentified Kitchen Ceramic	Body(s)	
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSHP1-01	BDP	HSHP1		10						4	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		10						7	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		10						1	Ceramic	Whiteware	Plain	Handle(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		10						5	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		10						2	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSHP1-01	BDP	HSHP1		10						1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BDP	HSHP1		10						1	Glass	Crown Finish	Colorless	Lip(s)	post ca. 1892
HSHP1-01	BDP	HSHP1		10						1	Glass	Unid. Molded Technique	Colorless	Rim(s)	
HSHP1-01	BDP	HSHP1		10						1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSHP1-01	BDP	HSHP1		10						1	Glass	Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	
HSHP1-01	BDP	HSHP1		10						1	Glass	Unidentified Bottle Glass (Kitchen)	Yellow Green (Olive)	Body(s)	
HSHP1-01	BDP	HSHP1		10						1	Metal	Miscellaneous Kitchen	Can(s)	Iron	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BDP	HSHP1		10						2	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
HSHP1-01	BDP	HSHP1		11						1	Ceramic	Domestic Gray Stoneware	Salt-glazed, undecorated	Rim(s)	ca. 1790-1910
HSHP1-01	BDP	HSHP1		11						1	Ceramic	Ironstone	Porcelaneous Ware	Rim(s)	post ca. 1880
HSHP1-01	BDP	HSHP1		11						2	Ceramic	Ironstone	Undecorated White	Body(s)	ca. 1813-1900+; U.P. post ca. 1845
HSHP1-01	BDP	HSHP1		11						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		11						4	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		11						2	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BDP	HSHP1		11						1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BDP	HSHP1		11						4	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
HSHP1-01	BDP	HSHP1		11						1	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BDP	HSHP1		11			III	1		1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSHP1-01	BDP	HSHP1		11			III	1		4	Glass	Unidentified Bottle Glass (Kitchen)	Light Green	Body(s)	
HSHP1-01	BDP	HSHP1		11			III	1		3	Glass	Unidentified Bottle Glass (Kitchen)	Light Green	Eroded/ Spalled	
HSHP1-01	BHT	HSHP1	1				III	1		1	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BHT	HSHP1	1				III	1		1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
HSHP1-01	BHT	HSHP1	2				III			1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	2				III			1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	2				III			1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BHT	HSHP1	2				III			1	Glass	Pressed Glass	Opaque White/ Milk Glass	Rim(s)	post ca 1825 (Rare); ca. 1875-1890 (UP)
HSHP1-01	BHT	HSHP1	2				III			1	Metal	Construction Hardware	Spike(s)	Iron	
HSHP1-01	BHT	HSHP1	2				III			1	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	3				VI	1		1	Ceramic	Ironstone	Undecorated White	Base(s)	ca. 1813-1900+; U.P. post ca. 1845
HSHP1-01	BHT	HSHP1	3				VI	1		1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BHT	HSHP1	3				VI	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Light Aqua	Body(s)	
HSHP1-01	BHT	HSHP1	3				VI	1		1	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	4				V	1		1	Metal	Construction Hardware	Spike(s)	Iron	
HSHP1-01	BHT	HSHP1	5				V	1		2	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BHT	HSHP1	5				V	1		2	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSHP1-01	BHT	HSHP1	5				V	1		16	Glass	Machine-Made Bottle Glass	Colorless	Body(s)	post ca. 1898 (Manu.); post 1916 (U.P.)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BHT	HSHP1	5				V	1		1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSHP1-01	BHT	HSHP1	6				IV	1		2	Metal	Construction Hardware	Spike(s)	Iron	
HSHP1-01	BHT	HSHP1	6				IV	1		1	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	6				IV	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	6				IV	1		3	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
HSHP1-01	BHT	HSHP1	6				IV	1		1	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	6				IV	1		1	Metal	Unidentified Metal Objects	Sheet Metal	Iron	
HSHP1-01	BHT	HSHP1	7				III	1		1	Glass	Pressed Glass	Opaque White/ Milk Glass	Body(s)	post ca. 1825 (Rare); ca. 1875-1890 (UP)
HSHP1-01	BHT	HSHP1	7				VI	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VI		1	1	Ceramic	Activities	Figurine(s)	Other	
HSHP1-01	BHT	HSHP1	8				VI		1	1	Ceramic	Ironstone	Undecorated White	Rim(s)	ca. 1813-1900+; U.P. post ca. 1845
HSHP1-01	BHT	HSHP1	8				VI		1	4	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VI		1	1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VI		1	3	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VI		1	3	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BHT	HSHP1	8				VI		1	1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSHP1-01	BHT	HSHP1	8				VI		1	1	Glass	Machine-Made Bottle Glass	Light Green	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BHT	HSHP1	8				VI		1	1	Glass	Pressed Glass	Amethyst-colored (Manganese Solarization)	Stem(s)/ Pedestal(s)	ca. 1875-1920
HSHP1-01	BHT	HSHP1	8				VI		1	1	Glass	Unid. Molded Technique	Amethyst-colored (Manganese Solarization)	Base(s)	ca. 1875-1920
HSHP1-01	BHT	HSHP1	8				VI		1	1	Glass	Unidentified Bottle Glass (Kitchen)	Amethyst-colored (Manganese Solarization)	Body(s)	ca. 1875-1920
HSHP1-01	BHT	HSHP1	8				VI		1	13	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Body(s)	
HSHP1-01	BHT	HSHP1	8				VI		1	1	Glass	Unidentified Bottle Glass (Kitchen)	Yellow Green (Olive)	Body(s)	
HSHP1-01	BHT	HSHP1	8				VI		1	1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
HSHP1-01	BHT	HSHP1	8				VI		1	8	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	8				VI		1	1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
HSHP1-01	BHT	HSHP1	8				VI		1	1	Shell	Shell (Clothing)	Shell Button(s)		
HSHP1-01	BHT	HSHP1	8				VI	1	1	1	Ceramic	Porcelain, Hard Paste	Undecorated	Body(s)	post ca. 1768
HSHP1-01	BHT	HSHP1	8				VI	1	1	1	Synthetic	Unidentified Material	Unidentifiable Synthetic Material		
HSHP1-01	BHT	HSHP1	8				VII	1		1	Ceramic	Ironstone	Mold Decorated	Body(s)	ca. 1840-1900
HSHP1-01	BHT	HSHP1	8				VII	1		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BHT	HSHP1	8				VII	1		1	Glass	Continuous Thread Lip	Aqua	Lip(s)	post ca. mid-1850s
HSHP1-01	BHT	HSHP1	8				VII	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Ceramic	Ironstone	Undecorated White	Rim(s)	ca. 1813-1900+; U.P. post ca. 1845
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Ceramic	Porcelain, Hard Paste	Underglaze Hand-painted	Body(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Ceramic	Whiteware	Decal Decorated	Body(s)	post ca. 1880
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Ceramic	Whiteware	Molded/ Embossed Decoration	Handle(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	3	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VII	1	1	3	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Ceramic	Whiteware	Sponged/Spatter Decorated	Rim(s)	ca. 1850-1920+; ca. 1880-1920
HSHP1-01	BHT	HSHP1	8				VII	1	1	4	Glass	Lamp Glass	Colorless		
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Glass	Unid. Blown-in-Mold Bottle Glass	Aqua	Body(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Glass	Unidentified Bottle Glass (Kitchen)	Amethyst-colored (Manganese Solarization)	Body(s)	ca. 1875-1920

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Glass	Unidentified Bottle Glass (Kitchen)	Light Green	Body(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Glass	Unidentified Fire-damaged or Melted Glass	Aqua	Body(s)	
HSHP1-01	BHT	HSHP1	8				VII	1	1	2	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	8				VII	1	1	1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
HSHP1-01	BHT	HSHP1	9				IV	1		1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
HSHP1-01	BHT	HSHP1	9				VI	1		1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSHP1-01	BHT	HSHP1	9				VI	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Opaque White / Milk Glass	Body(s)	
HSHP1-01	BHT	HSHP1	9				VI	1		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	9				VI	2		1	Metal	Tools	Hoe(s)	Iron	
HSHP1-01	BHT	HSHP1	10				IV	1		2	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
HSHP1-01	BHT	HSHP1	10				IV	1		5	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
HSHP1-01	BHT	HSHP1	10				IV	1		4	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	10				IV	1		6	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	10				V	1		2	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	10				V	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BHT	HSHP1	10				VI	1		1	Ceramic	Pearlware	Engine-turned	Body(s)	
HSHP1-01	BHT	HSHP1	10				VI	1		2	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	10				VI	1		1	Ceramic	Whiteware	Stenciled Pattern	Body(s)	
HSHP1-01	BHT	HSHP1	10				VI	1		2	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSHP1-01	BHT	HSHP1	10				VI	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Light Green	Neck(s)	
HSHP1-01	BHT	HSHP1	10				VI	1		1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
HSHP1-01	BHT	HSHP1	10				VI	1		1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Ceramic	Pearlware	Annular	Body(s)	ca. 1790-1820
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Ceramic	Pearlware	Finger-painted (Common-cable)	Body(s)	ca. 1790-1840
HSHP1-01	BHT	HSHP1	10				VI	1	2	2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	10				VI	1	2	3	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Ceramic	Whiteware	Underglaze Hand-painted	Rim(s)	ca. 1820-1890
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Glass	Machine-Made Bottle Glass	Light Green	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Ceramic	Pearlware	Underglaze Hand-painted	Body(s)	ca. 1780-1870+
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Glass	Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	
HSHP1-01	BHT	HSHP1	10				VI	1	2	1	Metal	Nail(s)	Unidentified	Iron	
HSHP1-01	BHT	HSHP1	11				III	1		13	Glass	Turn Paste Mold	Light Green	Body & Base	ca. 1870's-1920's
HSHP1-01	BHT	HSHP1	11				III	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSHP1-01	BHT	HSHP1	11				III	1		1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSHP1-01	BHT	HSHP1	11				IV	1		2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSHP1-01	BHT	HSHP1	11				IV	1		4	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1			1010	1385				1	Ceramic	Porcelain, Hard Paste	Overglaze Decal	Rim/Lip to Base	
HSMP1-01	BDP	HSMP1			1010	1385				1	Glass	Machine-Made Bottle Glass	Amber	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1			1010	1385				1	Glass	Machine-Made Bottle Glass	Cobalt Blue	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1			1010	1385				1	Glass	Machine-Made Bottle Glass	Colorless	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1			1010	1385				1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1			1010	1385				1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1			1010	1385				4	Glass	Machine-Made Bottle Glass	Dark Green	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1			1010	1385				1	Glass	Machine-Made Bottle Glass	Light Green	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1			1010	1385				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1			1010	1385				1	Metal	Miscellaneous Kitchen	Continuous Thread Screw Cap(s)	Iron	
HSMP1-01	BDP	HSMP1			1010	1385				1	Synthetic	Kitchen Items	Plastic cap(s)		
HSMP1-01	BDP	HSMP1		2						12	Ceramic	Domestic Brown Stoneware	Opaque Glaze w/Int. Albany Slip-glaze on Buff	Rim/Lip & Body	
HSMP1-01	BDP	HSMP1		3						1	Ceramic	Domestic Brown Stoneware	Opaque Glaze on Buff	Rim(s)	
HSMP1-01	BDP	HSMP1		3						1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	BDP	HSMP1		3						1	Construction Materials	Architectural Stone	Brick, Extruded, Fragment		
HSMP1-01	BDP	HSMP1		3						1	Metal	Miscellaneous Hardware	Wire fragment(s)	Iron	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		4						3	Ceramic	Ironstone	Undecorated White	Body(s)	ca. 1813-1900+; U.P. post ca. 1845
HSMP1-01	BDP	HSMP1		4						1	Ceramic	Pearlware	Underglaze Hand-painted	Body(s)	ca. 1780-1870+
HSMP1-01	BDP	HSMP1		4						2	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
HSMP1-01	BDP	HSMP1		4						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		4						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		4						1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
HSMP1-01	BDP	HSMP1		4						1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
HSMP1-01	BDP	HSMP1		5						1	Glass	Unid. Blown-in-Mold Bottle Glass	Amber	Body(s)	
HSMP1-01	BDP	HSMP1		6						1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	BDP	HSMP1		6						1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSMP1-01	BDP	HSMP1		6						1	Glass	Machine-Made Bottle Glass	Amber	Rim/Lip & Body	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		6						1	Metal	Miscellaneous Hardware	Rod	Iron	
HSMP1-01	BDP	HSMP1		6						1	Metal	Unidentified Metal Objects	Indeterminate	Cast Iron	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		6						1	Synthetic	Miscellaneous Activities	Plastic		
HSMP1-01	BDP	HSMP1		6					1	1	Ceramic	Whiteware	Unidentified Decoration	Body(s)	
HSMP1-01	BDP	HSMP1		6					1	1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSMP1-01	BDP	HSMP1		6					1	13	Glass	"Depression" Glass	Opaque white/ Milk glass	Rim/Lip & Body	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BDP	HSMP1		6					1	5	Glass	"Depression" Glass	Opaque white/ Milk glass	Rim/Lip & Body	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BDP	HSMP1		6					1	7	Glass	"Depression" Glass	Opaque white/ Milk glass	Rim/Lip to Base	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BDP	HSMP1		6					1	14	Glass	"Depression" Glass	Pink	Rim/Lip to Base	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Machine-Made Bottle Glass	Amber	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		6					1	3	Glass	Machine-Made Bottle Glass	Amber	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Machine-Made Bottle Glass	Decal (Applied Color Label)	Body(s)	post ca. 1934 (ACL)
HSMP1-01	BDP	HSMP1		6					1	3	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1		6					1	2	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1		6					1	3	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Shoulder(s)	
HSMP1-01	BDP	HSMP1		6					1	2	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Vent Molded	Colorless	Body(s)	ca. 1870 - 1920+
HSMP1-01	BDP	HSMP1		6					1	1	Glass	Vent Molded	Colorless	Shoulder(s)	ca. 1870 - 1920+
HSMP1-01	BDP	HSMP1		7						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		7						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		9					2	1	Ceramic	Furniture	Flower Pot(s)	Rim(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		9					2	2	Ceramic	Ironstone	Undecorated White	Body(s)	ca. 1813-1900+; U.P. post ca. 1845
HSMP1-01	BDP	HSMP1		9					2	1	Ceramic	Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768
HSMP1-01	BDP	HSMP1		9					2	1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		9					2	1	Ceramic	Yellowware	Plain	Body(s)	ca. 1830-1900; ca. 1830-1930's
HSMP1-01	BDP	HSMP1		9					2	3	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	BDP	HSMP1		9					2	1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Machine-Made Bottle Glass	Amber	Heel(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		9					2	4	Glass	Machine-Made Bottle Glass	Colorless	Rim/Lip to Base	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Machine-Made Bottle Glass	Decal (Applied Color Label)	Body & Base	post ca. 1934 (ACL)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		9					2	4	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Shoulder(s)	
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Shoulder(s)	
HSMP1-01	BDP	HSMP1		9					2	9	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1		9					2	1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Shoulder(s)	
HSMP1-01	BDP	HSMP1		9					2	1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
HSMP1-01	BDP	HSMP1		9					2	1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
HSMP1-01	BDP	HSMP1		10						1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		10						1	Glass	Unid. Blown-in-Mold Bottle Glass	Light Green	Body(s)	
HSMP1-01	BDP	HSMP1		11			II	4		1	Ceramic	20th Cent. White-Bodied Earthenware	Transparent Yellow Glaze	Base(s)	
HSMP1-01	BDP	HSMP1		11			II	4		3	Ceramic	Porcelain, Hard Paste	Undecorated	Body(s)	post ca. 1768
HSMP1-01	BDP	HSMP1		11			II	4		1	Ceramic	Porcelain, Hard Paste	Undecorated	Lid(s)	post ca. 1768
HSMP1-01	BDP	HSMP1		11			II	4		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		11			II	4		2	Ceramic	Whiteware	Plain	Rim/Lip & Body	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		11			II	4		1	Synthetic	Clothing Items	Miscellaneous		
HSMP1-01	BDP	HSMP1		12						2	Ceramic	20th Cent. White-Bodied Earthenware	Colorless Glaze	Body(s)	
HSMP1-01	BDP	HSMP1		12						1	Glass	"Depression" Glass	Light Blue	Body(s)	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BDP	HSMP1		12						2	Glass	Unid. Blown-in-Mold Bottle Glass	Light Green	Body(s)	
HSMP1-01	BDP	HSMP1		12						1	Metal	Miscellaneous Hardware	Rod	Iron	
HSMP1-01	BDP	HSMP1		12						1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Body(s)	
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Ceramic	Domestic Brown Stoneware	Buff-body "Ginger Beer" Bottle	Shoulder(s)	ca. 1850-1900
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Ceramic	Pearlware	Undecorated	Base(s)	ca. 1780-1830
HSMP1-01	BDP	HSMP1		14			II	1-3		2	Ceramic	Pearlware	Undecorated	Body(s)	ca. 1780-1830
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Ceramic	Whiteware	Flow Blue	Body(s)	ca. 1840-1870+
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Ceramic	Yellowware	Plain	Body(s)	ca. 1830-1900; ca. 1830-1930's

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		14			II	1-3		2	Construction Materials	Miscellaneous Architectural	Mortar		
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Glass	Tooled Lip	Amethyst-colored (Manganese Solarization)	Lip(s)	ca. 1875-1920
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Glass	Turn Paste Mold	Dark Green	Body(s)	ca. 1870's-1920's
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Shoulder(s)	
HSMP1-01	BDP	HSMP1		14			II	1-3		1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Neck(s)	
HSMP1-01	BDP	HSMP1		15						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		15						1	Ceramic	Whiteware	Underglaze Hand-painted	Rim(s)	ca. 1820-1890
HSMP1-01	BDP	HSMP1		15						1	Glass	Machine-Made Bottle Glass	Colorless	Heel(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		16						1	Ceramic	Activities	Toy Dish(s)	Body & Base	
HSMP1-01	BDP	HSMP1		16						3	Ceramic	Pearlware	Undecorated	Base(s)	ca. 1780-1830
HSMP1-01	BDP	HSMP1		16						3	Ceramic	Pearlware	Undecorated	Body(s)	ca. 1780-1830
HSMP1-01	BDP	HSMP1		16						1	Ceramic	Pearlware	Unscalloped, impressed rim	Rim(s)	ca. 1825-1891
HSMP1-01	BDP	HSMP1		16						1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BDP	HSMP1		16						1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		17						1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		17						1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	BDP	HSMP1		17						1	Glass	Button(s) with Metal Shank	Dark Purple (Black)	Complete	post ca. 1840 (UP)
HSMP1-01	BDP	HSMP1		17						1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BDP	HSMP1		17						1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BDP	HSMP1		17						1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Shoulder(s)	
HSMP1-01	BDP	HSMP1		17						1	Glass	Vent Molded	Colorless	Body(s)	ca. 1870 - 1920+
HSMP1-01	BHT	HSMP1	6				II	1		3	Glass	"Depression" Glass	Opaque white/ Milk glass	Body(s)	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BHT	HSMP1	6				II	1		1	Glass	Machine-Made Bottle Glass	Amber	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	6				II	1		1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	6				II	1		3	Glass	Unid. Blown-in-Mold Bottle Glass	Amber	Neck(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Activities	Bisque-fired Porcelain-Figural	Other	
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Clothing Items	Porcelain Button(s)	Complete	post ca. 1840-1930 (UP)
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Domestic Brown Stoneware	Salt-Glazed w/Int. Albany Slip-glazed on Buff-body	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	3	Ceramic	Ironstone	Undecorated White	Body(s)	ca. 1813-1900+; U.P. post ca. 1845
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Porcelain, Hard Paste	Overglaze Hand-painted	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Whiteware	Finger-painted (Common-cable)	Body(s)	ca. 1820-1890
HSMP1-01	BHT	HSMP1	9						2	2	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
HSMP1-01	BHT	HSMP1	9						2	6	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	9						2	5	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Contact Molded	Amethyst-colored (Manganese Solarization)	Rim(s)	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Contact Molded	Colorless	Rim(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Amber	Shoulder(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Amethyst-colored (Manganese Solarization)	Heel(s)	ca. 1898-1920
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Body(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Light Aqua	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Pressed Glass	Amethyst-colored (Manganese Solarization)	Body(s)	ca. 1875-1920

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Pressed Glass	Amethyst-colored (Manganese Solarization)	Indeterminate	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Pressed Glass	Amethyst-colored (Manganese Solarization)	Stem(s)/ Pedestal(s)	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Pressed Glass	Colorless	Indeterminate	post ca. 1825
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Tooled Lip	Aqua	Lip(s)	ca. 1820's-1920's
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Amber	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Amethyst-colored (Manganese Solarization)	Body(s)	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Amethyst-colored (Manganese Solarization)	Heel(s)	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Aqua	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Light Green	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Amethyst-colored (Manganese Solarization)	Body(s)	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9						2	2	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Light Aqua	Base(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Light Aqua	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	2	Glass	Unidentified Bottle Glass (Kitchen)	Light Aqua	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Glass (Miscellaneous)	Colorless	Indeterminate	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Glass (Miscellaneous)	Opaque White / Milk Glass	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Glass (Miscellaneous)	Opaque White / Milk Glass	Rim(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Metal	Construction Hardware	Spike(s)	Iron	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9						2	1	Metal	Miscellaneous Hardware	Unidentified	Iron	
HSMP1-01	BHT	HSMP1	9						2	1	Metal	Nail(s)	Unidentified	Iron	
HSMP1-01	BHT	HSMP1	9						2	3	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
HSMP1-01	BHT	HSMP1	9						2	5	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
HSMP1-01	BHT	HSMP1	9						2	1	Metal	Personal Items	Metal Toothpaste/Ointment Tube(s)	Lead	
HSMP1-01	BHT	HSMP1	9						2	1	Metal	Unidentified Metal Objects	Indeterminate	Iron	
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Clothing Items	Porcelain Button(s)	Complete	post ca. 1840-1930 (UP)
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Domestic Brown Stoneware	Brown Lead Glaze on Buff	Shoulder(s)	
HSMP1-01	BHT	HSMP1	9						2	2	Ceramic	Domestic Brown Stoneware	Colored Glaze on Buff	Rim(s)	
HSMP1-01	BHT	HSMP1	9						2	2	Ceramic	Domestic Brown Stoneware	Opaque Glaze w/Int. Albany Slip-glaze on Buff	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	7	Ceramic	Pearlware	Undecorated	Rim/Lip to Base	ca. 1780-1830
HSMP1-01	BHT	HSMP1	9						2	3	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim/Lip & Body	
HSMP1-01	BHT	HSMP1	9						2	2	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9						2	1	Ceramic	Whiteware	Scalloped Rim, Mold-Decorated	Rim(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Flat Glass Shard(s)	No color assigned		
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Amber	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	2	Glass	Machine-Made Bottle Glass	Amber	Body(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	2	Glass	Machine-Made Bottle Glass	Amber	Shoulder(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Machine-Made Bottle Glass	Decal (Applied Color Label)	Heel(s)	post ca. 1934 (ACL)
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Amethyst-colored (Manganese Solarization)	Heel(s)	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9						2	5	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Shoulder(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9						2	1	Glass	Vent Molded	Aqua	Shoulder(s)	ca. 1870 - 1920+
HSMP1-01	BHT	HSMP1	9						2	1	Metal	Miscellaneous Kitchen	Continuous Thread Screw Cap(s)	Aluminum	
HSMP1-01	BHT	HSMP1	9						2	1	Metal	Nail(s)	Machine-Cut, Unidentified Head Style	Iron	ca. 1790's-1890's+
HSMP1-01	BHT	HSMP1	9						2	2	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
HSMP1-01	BHT	HSMP1	9						2	2	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
HSMP1-01	BHT	HSMP1	9						2	1	Stone	Architectural	Marble fragment(s)		
HSMP1-01	BHT	HSMP1	9				II	1		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	"Depression" Glass	Opaque white/ Milk glass	Base(s)	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BHT	HSMP1	9				II	1		14	Glass	Machine-Made Bottle Glass	Amber	Body & Base	post ca. 1898 (Manu.); post 1916 (U.P.)

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	Machine-Made Bottle Glass	Amber	Shoulder(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	Machine-Made Bottle Glass	Amber	Shoulder(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	Machine-Made Bottle Glass	Colorless	Lip(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Amethyst-colored (Manganese Solarization)	Body(s)	ca. 1875-1920
HSMP1-01	BHT	HSMP1	9				II	1		3	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Shoulder(s)	
HSMP1-01	BHT	HSMP1	9				II	1		2	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	9				II	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Body(s)	
HSMP1-01	BHT	HSMP1	10				I	1		2	Glass	Contact Molded	Opaque White / Milk Glass	Body(s)	
HSMP1-01	BHT	HSMP1	10				I	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	11				II	1		2	Ceramic	20th Cent. White-Bodied Earthenware	Transparent Yellow Glaze	Base(s)	
HSMP1-01	BHT	HSMP1	11				II	1		1	Ceramic	20th Cent. White-Bodied Earthenware	Transparent Yellow Glaze	Rim(s)	
HSMP1-01	BHT	HSMP1	11				II	1		6	Ceramic	Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768
HSMP1-01	BHT	HSMP1	11				II	1		8	Ceramic	Porcelain, Hard Paste	Undecorated	Lid(s)	post ca. 1768
HSMP1-01	BHT	HSMP1	11				II	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	11				II	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	11				III	1		1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	20th Cent. White-Bodied Earthenware	Opaque Aqua-colored Glaze	Rim(s)	
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Pearlware	Flow Blue	Base(s)	ca. 1840-1870+
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Pearlware	Undecorated	Base(s)	ca. 1780-1830
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Pearlware	Unidentified Edge Type	Body(s)	ca. 1780-1830
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Porcelain, Hard Paste	Undecorated	Body(s)	post ca. 1768
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Porcelain, Hard Paste	Undecorated	Lid(s)	post ca. 1768
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	11				IV	1-3		2	Ceramic	Whiteware	Scalloped Rim, impressed curved lines	Lid(s)	ca. 1820-1845
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Ceramic	Whiteware	Scalloped Rim, Mold-Decorated	Rim(s)	
HSMP1-01	BHT	HSMP1	11				IV	1-3		2	Glass	"Depression" Glass	Opaque white/ Milk glass	Rim/Lip to Base	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	BHT	HSMP1	11				IV	1-3		1	Glass	Flat Glass Shard(s)	No color assigned		
HSMP1-01	BHT	HSMP1	12				III	1		3	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	BHT	HSMP1	13				II	2		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	BHT	HSMP1	13				II	2		4	Ceramic	Whiteware	Plain	Rim/Lip & Body	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	13				IV	1		1	Ceramic	Domestic Brown Stoneware	Albany Slip-glazed Buff	Heel(s)	ca. 1810-1900
HSMP1-01	BHT	HSMP1	13				IV	1		1	Ceramic	Domestic Brown Stoneware	Albany Slip-glazed Buff	Rim(s)	ca. 1810-1900
HSMP1-01	BHT	HSMP1	13				IV	1		1	Ceramic	Pearlware	Undecorated	Body(s)	ca. 1780-1830
HSMP1-01	BHT	HSMP1	13				IV	1		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	13				IV	1		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	13				IV	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	BHT	HSMP1	13				IV	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	BHT	HSMP1	13				IV	1		6	Glass	Ink Bottle	Colorless	Rim/Lip to Base	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	BHT	HSMP1	13				IV	1		8	Glass	Lamp Glass	Colorless	Body(s)	
HSMP1-01	BHT	HSMP1	13				IV	1		3	Glass	Lamp Glass	Colorless	Rim(s)	
HSMP1-01	BHT	HSMP1	13				IV	1		13	Glass	Tooled Lip	Aqua	Rim/Lip & Body	ca. 1820's-1920's
HSMP1-01	BHT	HSMP1	13				IV	1		1	Glass	Turn Paste Mold	Dark Green	Body(s)	ca. 1870's-1920's
HSMP1-01	BHT	HSMP1	13				IV	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Aqua	Neck(s)	
HSMP1-01	BHT	HSMP1	13				IV	1		1	Glass	Vent Molded	Amber	Body(s)	ca. 1870 - 1920+
HSMP1-01	BHT	HSMP1	13				IV	1		3	Metal	Miscellaneous Hardware	Barbed Wire fragment(s)	Iron	ca. 1868-1890s (Generic); post ca. 1874 (modern type)
HSMP1-01	BHT	HSMP1	13				IV	1		1	Metal	Nail(s)	Wire, Common	Iron	post ca. 1890
HSMP1-01	BHT	HSMP1	13				IV	1		1	Metal	Nail(s)	Wire, Unidentified	Iron	post ca. 1890
HSMP1-01	BHT	HSMP1	16				VI	4		1	Ceramic	Domestic Brown Stoneware	Opaque Glaze on Buff	Body(s)	
HSMP1-01	DBD	HSMP1			1000	1125				1	Ceramic	Pearlware	Annular	Shoulder(s)	ca. 1790-1820
HSMP1-01	DBD	HSMP1			1000	1125				1	Ceramic	Pearlware	Transfer-printed	Base(s)	ca. 1795-1840
HSMP1-01	DBD	HSMP1			1000	1225				1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	DBD	HSMP1			1000	1225				1	Ceramic	Yellowware	Colorless Exterior Glaze with Interior Slip	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBD	HSMP1			1000	1225				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	DBD	HSMP1			1000	1225				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Shoulder(s)	
HSMP1-01	DBD	HSMP1			1000	1275				1	Ceramic	Domestic Brown Stoneware	Opaque Glaze on Buff	Base(s)	
HSMP1-01	DBD	HSMP1			1000	1275				1	Ceramic	Domestic Brown Stoneware	Opaque Glaze on Buff	Rim(s)	
HSMP1-01	DBD	HSMP1			1000	1275				1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSMP1-01	DBD	HSMP1			1000	1275				1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	DBD	HSMP1			1000	1275				1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	DBD	HSMP1			1000	1275				1	Glass	Cup Bottom Mold	Colorless	Base(s)	post ca. 1850
HSMP1-01	DBD	HSMP1			1000	1275				10	Glass	Machine-Made Bottle Glass	Amber	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	DBD	HSMP1			1000	1275				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	DBD	HSMP1			1000	1275				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	DBD	HSMP1			1000	1275				1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBD	HSMP1			1000	1375				1	Ceramic	Activities	Doll Part(s)		
HSMP1-01	DBD	HSMP1			1000	1375				1	Ceramic	Domestic Brown Stoneware	Colored Glaze on Buff	Rim/Lip & Body	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBD	HSMP1			1000	1375				1	Ceramic	Whiteware	Molded/ Embossed Decoration	Indeterminate	
HSMP1-01	DBD	HSMP1			1000	1375				1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	DBD	HSMP1			1000	1375				3	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	DBD	HSMP1			1000	1375				1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	DBD	HSMP1			1000	1375				1	Ceramic	Whiteware	Scalloped Rim, Mold-Decorated	Rim(s)	
HSMP1-01	DBD	HSMP1			1000	1375				1	Ceramic	Yellowware	Plain	Lid(s)	ca. 1830-1900; ca. 1830-1930's
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	"Depression" Glass	Opaque white/ Milk glass	Rim(s)	post ca. 1925; ca. 1928-1950s (UP)
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	Contact Molded	Opaque White / Milk Glass	Complete	
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	Machine-Made Bottle Glass	Colorless	Neck(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	Machine-Made Bottle Glass	Colorless	Shoulder(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	Unid. Blown-in-Mold Bottle Glass	Light Aqua	Shoulder(s)	
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBD	HSMP1			1000	1375				1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Shoulder(s)	
HSMP1-01	DBD	HSMP1			1000	1425				1	Ceramic	Activities	Doll Part(s)		
HSMP1-01	DBD	HSMP1			1000	1425				3	Ceramic	Pearlware	Annular	Rim/Lip & Body	ca. 1790-1820
HSMP1-01	DBD	HSMP1			1000	1425				1	Ceramic	Pearlware	Undecorated	Rim(s)	ca. 1780-1830
HSMP1-01	DBD	HSMP1			1000	1425				1	Ceramic	Porcelain, Hard Paste	Undecorated	Rim(s)	post ca. 1768
HSMP1-01	DBD	HSMP1			1000	1425				1	Glass	Machine-Made Bottle Glass	Amber	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	DBD	HSMP1			1000	1425				3	Glass	Machine-Made Bottle Glass	Decal (Applied Color Label)	Body(s)	post ca. 1934 (ACL)
HSMP1-01	DBD	HSMP1			1000	1425				1	Glass	Turn Paste Mold	Light Aqua	Base(s)	ca. 1870's-1920's
HSMP1-01	DBD	HSMP1			1000	1425				1	Glass	Unid. Blown-in-Mold Bottle Glass	Amber	Neck(s)	
HSMP1-01	DBD	HSMP1			1000	1425				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Indeterminate	
HSMP1-01	DBD	HSMP1			1000	1425				1	Glass	Unidentified Bottle Glass (Kitchen)	Amber	Shoulder(s)	
HSMP1-01	DBD	HSMP1			1000	1425				1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Body(s)	
HSMP1-01	DBD	HSMP1			1000	1425				1	Metal	Construction Hardware	Fence Part(s)	Brass and Iron	
HSMP1-01	DBD	HSMP1			1000	1475				1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBD	HSMP1			1000	1475				1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	DBD	HSMP1			1000	1475				1	Ceramic	Whiteware	Unidentified Underglaze Decorated	Rim(s)	
HSMP1-01	DBD	HSMP1			1000	1475				1	Glass	Flat Glass Shard(s)	No color assigned		
HSMP1-01	DBD	HSMP1			1000	1475				1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	DBD	HSMP1			1000	1475				4	Glass	Unidentified Bottle Glass (Kitchen)	Yellow Green (Olive)	Base(s)	
HSMP1-01	DBT	HSMP1			1000	1025	II	1		5	Ceramic	Porcelain, Hard Paste	Undecorated	Rim/Lip to Base	post ca. 1768
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Creamware	Annular	Body(s)	ca. 1780-1815
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Creamware	Annular	Rim(s)	ca. 1780-1815
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Creamware	Undecorated	Body(s)	ca. 1762-1820
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Creamware	Undecorated	Handle(s)	ca. 1762-1820
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Creamware	Undecorated	Rim(s)	ca. 1762-1820
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Domestic Brown Stoneware	Brown Mineral Glaze on Buff	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Annular	Base(s)	ca. 1790-1820
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Annular	Body(s)	ca. 1790-1820
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Annular	Body(s)	ca. 1790-1820

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBT	HSMP1			1000	1125				2	Ceramic	Pearlware	Finger-painted (Common-cable)	Body(s)	ca. 1790-1840
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Mold Decorated	Base(s)	
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Mold Decorated	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Transfer-printed	Body(s)	ca. 1795-1840
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Transfer-printed	Rim(s)	ca. 1795-1840
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Undecorated	Base(s)	ca. 1780-1830
HSMP1-01	DBT	HSMP1			1000	1125				2	Ceramic	Pearlware	Undecorated	Body(s)	ca. 1780-1830
HSMP1-01	DBT	HSMP1			1000	1125				2	Ceramic	Pearlware	Undecorated	Handle(s)	ca. 1780-1830
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Undecorated	Rim(s)	ca. 1780-1830
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Pearlware	Underglaze Hand-painted	Rim(s)	ca. 1780-1870
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Tin-Enamelled Earthenware	Rouge/Ointment Pot	Body(s)	ca. 1730-1830
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Tin-Enamelled Earthenware	Rouge/Ointment Pot	Rim(s)	ca. 1730-1830
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Tobacco Pipes	Molded Ball Clay (Kaolin) Stem(s)		
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Annular Decorated	Base(s)	ca. 1820-1890

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSMP1-01	DBT	HSMP1			1000	1125				2	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Flow Blue	Body(s)	ca. 1840-1870+
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Flow Blue	Rim(s)	ca. 1840-1870+
HSMP1-01	DBT	HSMP1			1000	1125				2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1125				9	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1125				2	Ceramic	Whiteware	Transfer-printed	Base(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Base(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Base(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Base(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				4	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				4	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBT	HSMP1			1000	1125				2	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1125				1	Ceramic	Whiteware	Unidentified	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1125				1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	DBT	HSMP1			1000	1125				3	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	DBT	HSMP1			1000	1125				1	Construction Materials	Miscellaneous Architectural	Stucco		
HSMP1-01	DBT	HSMP1			1000	1125				2	Glass	Art Glass	Opaque Blue	Indeterminate	
HSMP1-01	DBT	HSMP1			1000	1125				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Shoulder(s)	
HSMP1-01	DBT	HSMP1			1000	1125				1	Glass	Unidentified Bottle Glass (Kitchen)	Green	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1125				1	Glass	Unidentified Bottle Glass (Kitchen)	Opaque White / Milk Glass	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1125				1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
HSMP1-01	DBT	HSMP1			1000	1125	III	1		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1125	III	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Creamware	Mocha	Body(s)	ca. 1785-ca. 1835
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Creamware	Undecorated	Base(s)	ca. 1762-1820
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		2	Ceramic	Creamware	Undecorated	Body(s)	ca. 1762-1820
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Creamware	Undecorated	Body(s)	ca. 1762-1820
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Creamware	Undecorated	Rim(s)	ca. 1762-1820
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Creamware	Underglaze Hand-Painted	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Pearlware	"Negative" Blue Tranfer-Printed	Body(s)	ca. 1818-1830
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Pearlware	Annular	Base(s)	ca. 1790-1820
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Pearlware	Finger-painted (Common-cable)	Body(s)	ca. 1790-1840
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Pearlware	Finger-painted (Common-cable)	Rim(s)	ca. 1790-1840
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Pearlware	Transfer-printed	Body(s)	ca. 1795-1840
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		6	Ceramic	Pearlware	Undecorated	Body(s)	ca. 1780-1830
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Pearlware	Unidentified Decorated	Rim(s)	
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Unidentified Ceramics	Unidentified Burned Earthenware	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Annular Decorated	Body(s)	ca. 1820-1890
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		2	Ceramic	Whiteware	Annular Decorated	Rim(s)	ca. 1820-1890
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Overglaze Hand-painted	Rim(s)	ca. 1820-1890
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		2	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		4	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Transfer-printed	Base(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		2	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		3	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		3	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Whiteware	Transfer-printed	Rim(s)	post ca. 1820; ca. 1820-1860
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		9	Ceramic	Whiteware	Transfer-printed	Rim/Lip to Base	post ca. 1820; ca. 1820-1860

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Ceramic	Yellowware	Plain	Rim(s)	ca. 1830-1900; ca. 1830-1930's
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		3	Construction Materials	Miscellaneous Architectural	Mortar		
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Glass	Art Glass	Layered	Rim(s)	
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Glass	Flat Glass Shard(s)	No color assigned		
HSMP1-01	DBT	HSMP1			1000	1175	IV	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Dark Green	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1475	III	1		4	Ceramic	Furniture	Soap Dish	Rim/Lip to Base	
HSMP1-01	DBT	HSMP1			1000	1475	III	1		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1475	III	1		3	Glass	Machine-Made Bottle Glass	Amber	Body(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	DBT	HSMP1			1000	1475	III	1		2	Glass	Machine-Made Bottle Glass	Amber	Shoulder(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP1-01	DBT	HSMP1			1000	1475	III	1		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1475	III	1		2	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1475	III	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Shoulder(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP1-01	DBT	HSMP1			1000	1475	III	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Light Green	Body(s)	
HSMP1-01	DBT	HSMP1			1000	1675	V	1		1	Glass	Pressed Glass	Opaque White/ Milk Glass	Handle(s)	post ca. 1825 (Rare); ca. 1875-1890 (UP)
HSMP1-01	DBT	HSMP1			1000	1675	V	1		1	Metal	Nail(s)	Machine-Cut, Stamped Head	Iron	ca. late 1830's-1890's+
HSMP1-01	DBT	HSMP1			1000	1741.6	III	1		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP1-01	DBT	HSMP1			1000	1741.6	III	1		8	Glass	Machine-Made Bottle Glass	Colorless	Rim/Lip to Base	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP2-01	BDP	HSMP2		8			II	1-2		1	Ceramic	Porcelain, Hard Paste	Overglaze Hand-painted	Base(s)	
HSMP2-01	BDP	HSMP2		8			II	1-2		1	Ceramic	Porcelain, Hard Paste	Overglaze Hand-painted	Rim(s)	
HSMP2-01	BDP	HSMP2		8			II	1-2		2	Ceramic	Porcelain, Hard Paste	Undecorated	Rim(s)	post ca. 1768
HSMP2-01	BDP	HSMP2		8			II	1-2		2	Ceramic	Whiteware	Decal Decorated	Base(s)	post ca. 1880
HSMP2-01	BDP	HSMP2		8			II	1-2		2	Ceramic	Whiteware	Decal Decorated	Rim/Lip & Body	post ca. 1880
HSMP2-01	BDP	HSMP2		8			II	1-2		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP2-01	BDP	HSMP2		8			II	1-2		1	Ceramic	Whiteware	Scalloped Rim, Mold-Decorated	Rim(s)	
HSMP2-01	BDP	HSMP2		8			II	1-2		2	Ceramic	Whiteware	Transfer-printed	Body(s)	post ca. 1820; ca. 1820-1860
HSMP2-01	BDP	HSMP2		8			II	1-2		1	Glass	Flat Glass Shard(s)	No color assigned		

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP2-01	BDP	HSMP2		8			II	1-2		1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Body(s)	
HSMP2-01	BDP	HSMP2		10			II	1-4		3	Ceramic	20th Cent. White-Bodied Earthenware	Colorless Glaze	Rim/Lip & Body	
HSMP2-01	BDP	HSMP2		10			II	1-4		1	Ceramic	Porcelain, Hard Paste	Undecorated	Rim(s)	post ca. 1768
HSMP2-01	BDP	HSMP2		10			II	1-4		3	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP2-01	BDP	HSMP2		10			II	1-4		3	Glass	"Depression" Glass	Opaque white/ Milk glass	Base(s)	post ca. 1925; ca. 1928-1950s (UP)
HSMP2-01	BDP	HSMP2		10			II	1-4		1	Glass	"Depression" Glass	Opaque white/ Milk glass	Rim(s)	post ca. 1925; ca. 1928-1950s (UP)
HSMP2-01	BDP	HSMP2		10			II	1-4		1	Glass	Flat Glass Shard(s)	No color assigned		
HSMP2-01	BDP	HSMP2		12						1	Ceramic	Ironstone	Mold Decorated	Body(s)	ca. 1840-1900
HSMP2-01	BDP	HSMP2		12						1	Ceramic	Ironstone	Undecorated White	Body(s)	ca. 1813-1900+; U.P. post ca. 1845
HSMP2-01	BDP	HSMP2		12						1	Ceramic	Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768
HSMP2-01	BDP	HSMP2		12						1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP2-01	BDP	HSMP2		12						1	Glass	Machine-Made Bottle Glass	Green	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP2-01	BDP	HSMP2		12						4	Glass	Unid. Blown-in-Mold Bottle Glass	Amethyst-colored (Manganese Solarization)	Body & Base	ca. 1875-1920

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP2-01	BHT	HSMP2	8				II	2		1	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP2-01	BHT	HSMP2	12				II	1		1	Glass	Cup Bottom Mold	Colorless	Base(s)	post ca. 1850
HSMP2-01	DBD	HSMP2			1000	1175				1	Ceramic	Pearlware	Engine-turned	Rim(s)	
HSMP2-01	DBD	HSMP2			1000	1175				1	Ceramic	Porcelain, Hard Paste	Undecorated	Base(s)	post ca. 1768
HSMP2-01	DBD	HSMP2			1000	1175				1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP2-01	DBD	HSMP2			1000	1175				1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP2-01	DBD	HSMP2			1000	1175				1	Ceramic	Whiteware	Underglaze Hand-painted	Body(s)	ca. 1820-1890
HSMP2-01	DBD	HSMP2			1000	1175				1	Glass	Unid. Blown-in-Mold Bottle Glass	Light Aqua	Body(s)	
HSMP2-01	DBD	HSMP2			1000	1232				1	Ceramic	20th Cent. White-Bodied Earthenware	Transparent Yellow Glaze	Base(s)	
HSMP2-01	DBD	HSMP2			1000	1232				4	Ceramic	Whiteware	Decal Decorated	Rim(s)	post ca. 1880
HSMP2-01	DBD	HSMP2			1000	1232				1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP2-01	DBD	HSMP2			1000	1248				1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP2-01	DBD	HSMP2			1000	1248				1	Glass	Unid. Blown-in-Mold Bottle Glass	Colorless	Shoulder(s)	
HSMP2-01	DBD	HSMP2			1000	1248				1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP2-01	DBD	HSMP2			1000	1266				2	Construction Materials	Architectural Stone	Brick Fragment(s)		
HSMP2-01	DBT	HSMP2			1000	1175	II	1		1	Glass	Machine-Made Bottle Glass	Colorless	Base(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP2-01	DBT	HSMP2			1000	1175	III	1		1	Ceramic	Whiteware	Plain	Rim(s)	ca. 1820-1900+
HSMP2-01	DBT	HSMP2			1000	1248	V	2		1	Construction Materials	Architectural Stone	Brick, Handmade, Partial		
HSMP2-01	DBT	HSMP2			1000	1266	II	1		1	Ceramic	Whiteware	Molded/ Embossed Decoration	Rim(s)	
HSMP2-01	DBT	HSMP2			1000	1266	II	1		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+
HSMP2-01	DBT	HSMP2			1000	1266	II	1		1	Glass	Machine-Made Bottle Glass	Colorless	Body(s)	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP2-01	DBT	HSMP2			1000	1266	II	1		1	Glass	Machine-Made Bottle Glass	Colorless	Complete	post ca. 1898 (Manu.); post 1916 (U.P.)
HSMP2-01	DBT	HSMP2			1000	1266	II	1		1	Glass	Pressed Glass	Amethyst-colored (Manganese Solarization)	Handle(s)	ca. 1875-1920
HSMP2-01	DBT	HSMP2			1000	1266	II	1		1	Glass	Unidentified Bottle Glass (Kitchen)	Colorless	Body(s)	
HSMP2-01	DBT	HSMP2			1000	1266	III	1		1	Ceramic	Domestic Brown Stoneware	Opaque Glaze on Buff	Lid(s)	
HSMP2-01	DBT	HSMP2			1000	1266	III	1		1	Ceramic	Whiteware	Plain	Base(s)	ca. 1820-1900+
HSMP2-01	DBT	HSMP2			1000	1266	III	1		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+

Table 4, continued

SITE/ LOCUS	PT	SEG	TR	SPOIL PILE	NORTH	EAST	STR	LEV	FEA	CT	CLASS	TYPE	SUBTYPE	DESCRIPTION	GENERAL DATE RANGE
HSMP2-01	DBT	HSMP2			1000	1266	III	1		1	Ceramic	Whiteware	Plain	Body(s)	ca. 1820-1900+

APPENDIX II

STATE OF LOUISIANA SITE RECORD FORMS

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16AN68

OTHER SITE DESIGNATIONS: HSMP-02-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Ascension

__ **of Section** 44, 45, 46 **Township** 10S **Range** 14E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 692000E, 3337990N

GEOGRAPHICAL COORDINATES: Long. 91° 0' 23" west, Lat. 30° 9' 35" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 7.6 m (25 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.14 km (0.09 mi) east of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Commerce silty clay loam.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV150

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River. These artifacts include 23 glass shards, 4 brick fragments, and 40 historic period ceramic sherds.

SITE SIZE: The site measures approximately 1.15 ac. (0.46 ha.) in extent.

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 20 to 170 cmbs (7.9 to 66.9 inbs). A typical backhoe trench included Stratum I, (0 to 25 cmbs/0 to 9.8 inbs), 10YR4/2 dark grey brown loamy clay; Stratum II, (25 to 35 cmbs/9.8 to 13.8 inbs) 10YR4/3 brown silty clay; Stratum III, (35 to 45 cmbs/13.8 to 17.7 inbs) 10YR3/2 very dark grey brown silty clay; Stratum IV, (45 to 80 cmbs/17.7 to 31.5 inbs) 10YR4/1 dark grey silty clay; Stratum V, (80 to 135 cmbs/31.5 to 53.1 inbs) 10YR4/3 brown silty clay; Stratum VI, (135 to 170 cmbs/53.1 to 66.9 inbs) 10YR5/2 greyish brown silty clay.

FEATURES: No intact features were identified at this site.

DATING/CULTURAL AFFILIATION: 19th to early 20th century.

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture and horse pasture.

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of 24 backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 67 item artifact assemblage consists of 23 glass shards, 40 historic ceramic sherds, and 4 items of construction material (brick fragments). These artifacts are indicative of a 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Potentially significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

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DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16AN68 Site Survey Number

Site No. 16AN68

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (1 Entry)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (4 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	au	Auger Testing	rs	Remote Sensing
sy	Systematic Col.	tu	Test Units	dv	Diver Investigation
sht	Shovel Testing	exc	Excavation	obs	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	ti	Timber Industry	cw	Construction, Water
pd	Potted	nat	Natural	cto	Construction, Other
nn	None	di	Urban Develop.	uw	Underwater
ag	Agricltr (Plowing)	ot	Other, see site form		

Disturbance Degree (1 Entry)

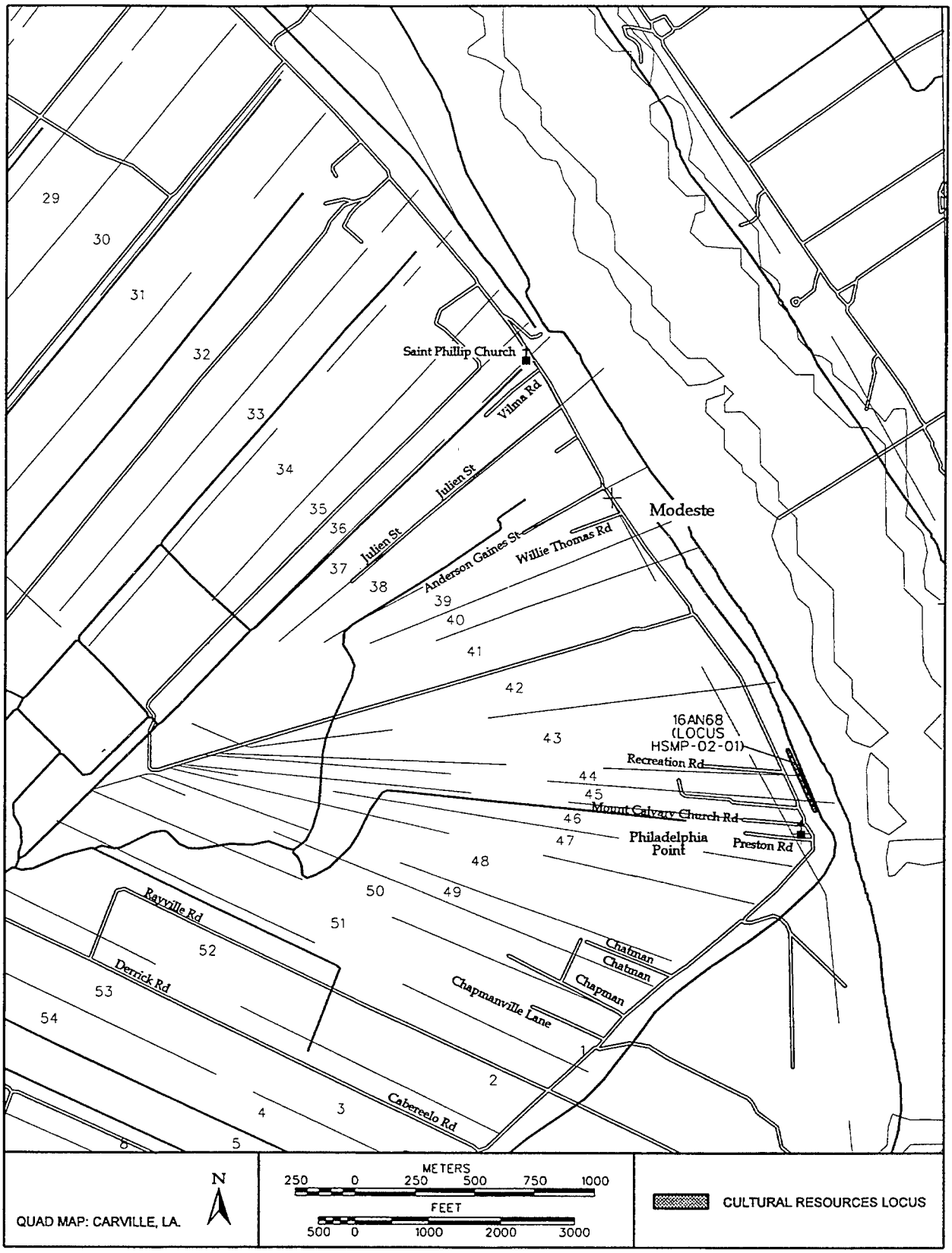
unk	Unknown	mp	Minor Impact	dt	Destroyed
nn	None	mj	Major Impact	iu	Inundated

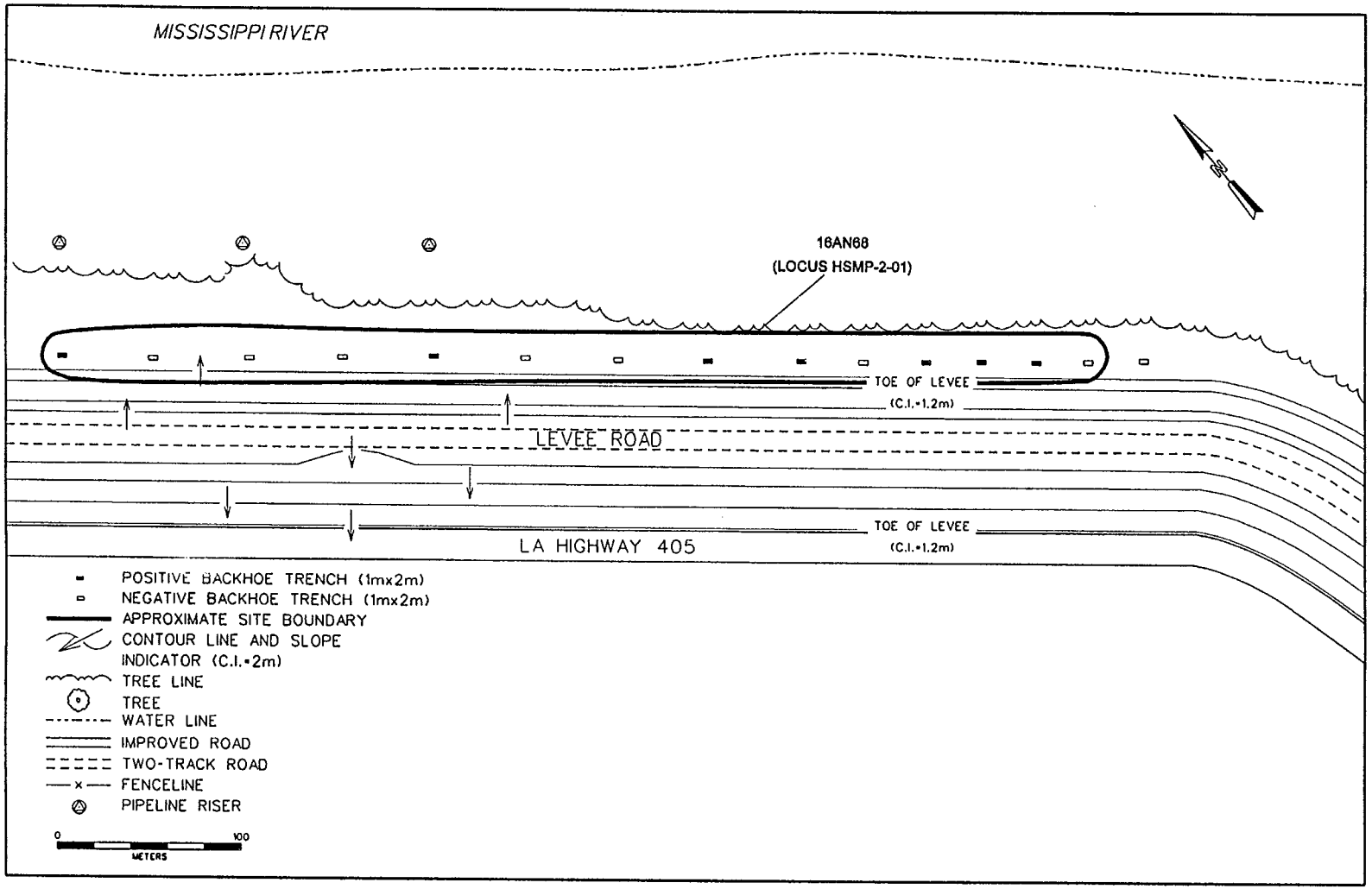
National Register Status (1 Entry)

unk	Unknown	ld	Listed	ps	Potent. Signif.
ne	Not Eligible	de	Declared Elig.	nd	National Landmark

References (4 Entries)

1) _____ 2) _____ 3) _____ 4) _____


Saint Phillip Church
Vilma Rd
Julien St
Julien St
Anderson Gaines St
Willie Thomas Rd
Modeste
16AN68
(LOCUS
HSMP-02-01)
Recreation Rd
Mount Calvary Church Rd
Philadelphia
Point
Preston Rd
Rayville Rd
Derrick Rd
Chapmanville Lane
Chatman
Chatman
Chapman
Cabereelo Rd
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
1
2
3
4
5
6
N
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
QUAD MAP: CARVILLE, LA.
CULTURAL RESOURCES LOCUS


MISSISSIPPI RIVER
16AN68
(LOCUS HSMP-2-01)
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
TOE OF LEVEE
(C.I.=1.2m)
LA HIGHWAY 405
POSITIVE BACKHOE TRENCH (1mx2m)
NEGATIVE BACKHOE TRENCH (1mx2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE INDICATOR (C.I.=2m)
TREE LINE
TREE
WATER LINE
IMPROVED ROAD
TWO-TRACK ROAD
FENCELINE
PIPELINE RISER
0
100
METERS

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16AN69

OTHER SITE DESIGNATIONS: HSHP-01-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Ascension

__ **of Section** 40,41 **Township** 10S **Range** 14E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 691480E, 3338860N

GEOGRAPHICAL COORDINATES: Long. 91° 0' 42" west, Lat. 30° 10' 4" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 7.6-9.1 m (25-30 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.1 km (0.06 mi) east of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Convent silty loam and silty clay loam soils found on natural levees.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV150

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River. These artifacts include 93 glass shards, 13 brick fragments, 180 historic period ceramic sherds, 57 metal artifacts, 1 shell button, 1 leather shoe fragment, 1 unidentified material, 14 faunal artifacts including cow, oyster, and unidentified bone fragments.

SITE SIZE: The site measures approximately 1.2 ac. (0.5 ha.) in extent.

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 38 to 200 cmbs (15 to 78.7 inbs). A typical backhoe trench included Stratum I, (0 to 15 cmbs/0 to 5.9 inbs), 10YR3/1 very dark grey clay; Stratum II, (15 to 38 cmbs/5.9 to 15 inbs) 7.5YR4/3 brown silt loam, Stratum III, (38 to 58 cmbs/15 to 22.8 inbs) 10YR3/1 very dark grey clay; Stratum IV, (58 to 85 cmbs/22.8 to 33.5 inbs) 10YR5/3 brown silty clay mottled with 7.5YR4/1 grey silt loam; Stratum V, (85 to 108 cmbs/33.5 to 42.5 inbs) 5YR4/1 dark grey silty clay; Stratum VI, (108 to 200 cmbs/42.5 to 78.7) 10YR5/1 grey silty clay mottled with 7.5YR4/6 strong brown silty clay.

FEATURES: Backhoe trenchs 8A and 8B contained a burned surface with dense artifact concentrations. Backhoe trench number 10 contained a possible builders trench which contained bricks, glass, bone, charcoal, and ceramics.

DATING/CULTURAL AFFILIATION: Early 19th to early 20th century.

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture and horse pasture.

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of fifteen backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 360 item artifact assemblage consists of 57 pieces of metal, including nails, barbed wire, and tools; 93 glass shards, 180 historic ceramic sherds, 13 items of construction material (brick fragments); 14 faunal specimens including cow, pig, rabbits, and unknown bone fragments. These artifacts are indicative of a early 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

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DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16AN69 Site Survey Number

Site No. 16AN69

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (1 Entry)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (5 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	au	Auger Testing	rs	Remote Sensing
sy	Systematic Col.	tu	Test Units	dv	Diver Investigation
sht	Shovel Testing	exc	Excavation	obs	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	ti	Timber Industry	cw	Construction, Water
pd	Potted	nat	Natural	cto	Construction, Other
nn	None	di	Urban Develop.	uw	Underwater
ag	Agricltr (Plowing)	ot	Other, see site form		

Disturbance Degree (1 Entry)

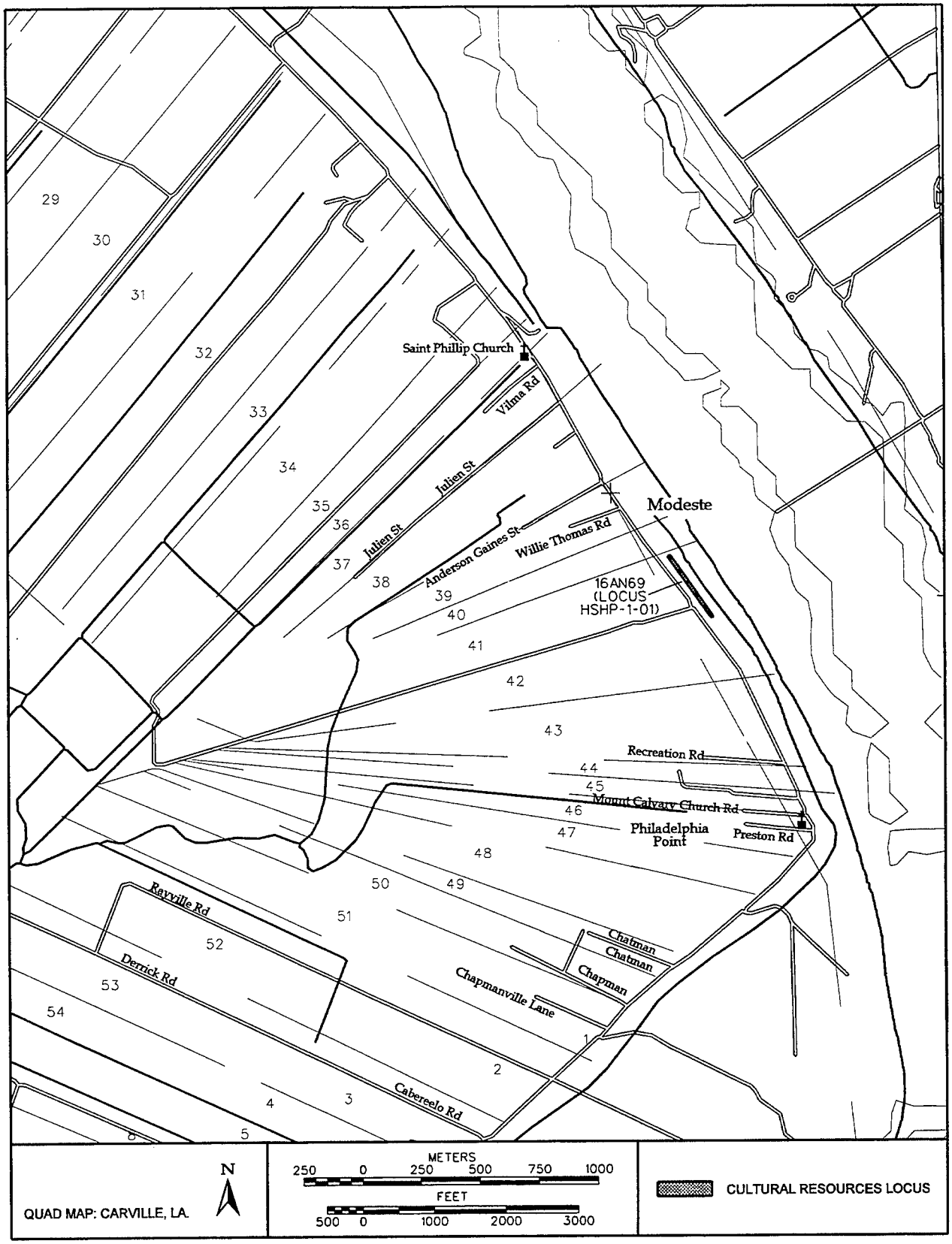
unk	Unknown	mp	Minor Impact	dt	Destroyed
nn	None	mj	Major Impact	iu	Inundated

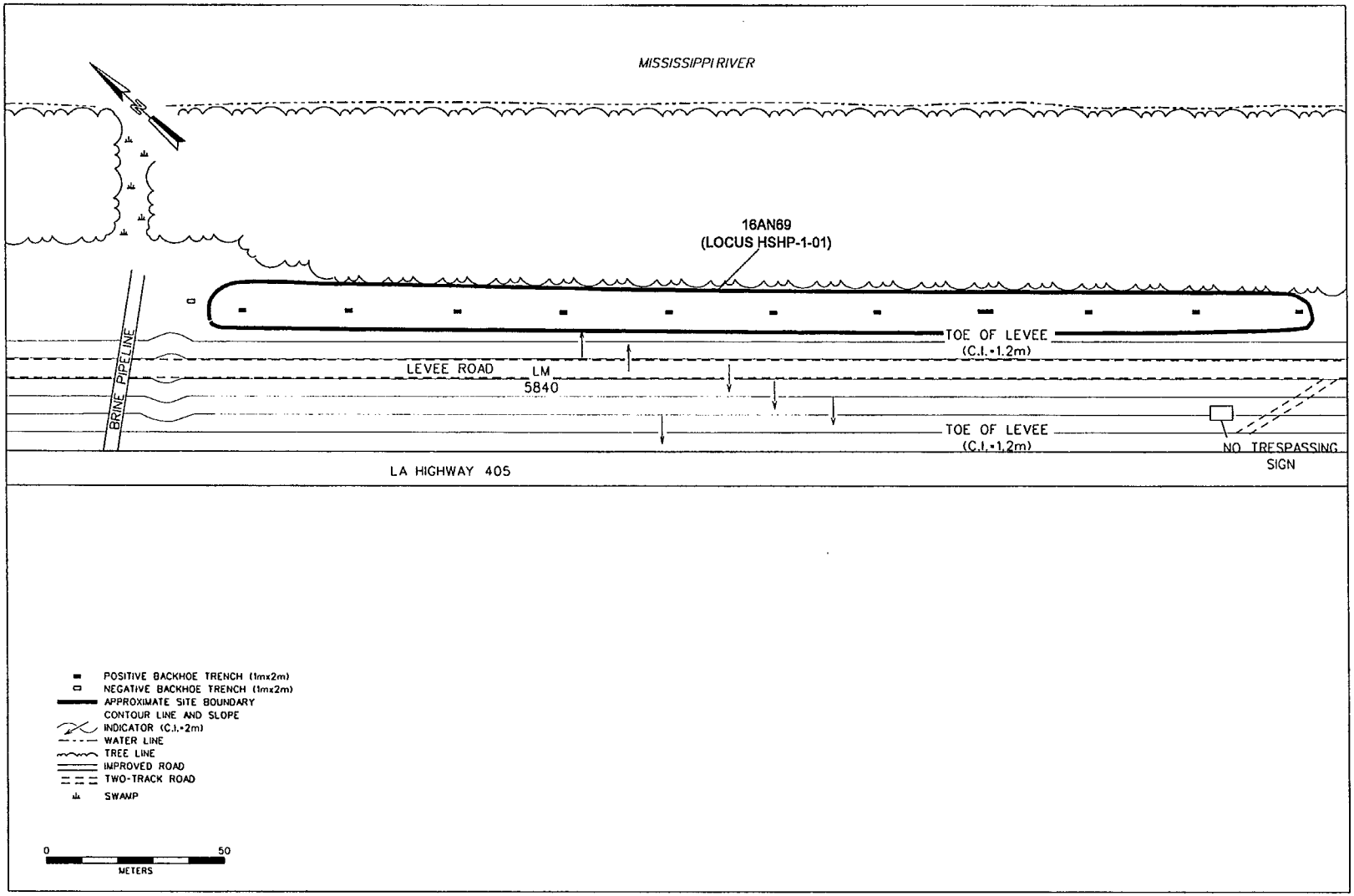
National Register Status (1 Entry)

unk	Unknown	ld	Listed	ps	Potent. Signif.
ne	Not Eligible	de	Declared Elig.	nd	National Landmark

References (4 Entries)

1) _____ 2) _____ 3) _____ 4) _____


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Saint Phillip Church
Vilma Rd
Julien St
Julien St
Anderson Gaines St
Willie Thomas Rd
Modeste
16AN69
(LOCUS
HSHP-1-01)
Recreation Rd
Mount Calvary Church Rd
Philadelphia
Point
Preston Rd
Reyville Rd
Derrick Rd
Chatman
Chatman
Chapman
Chapmanville Lane
Cabereelo Rd
N
QUAD MAP: CARVILLE, LA.
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
CULTURAL RESOURCES LOCUS


MISSISSIPPI RIVER
16AN69
(LOCUS HSHP-1-01)
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
LM
5840
BRINE PIPELINE
TOE OF LEVEE
(C.I.=1.2m)
NO TRESPASSING
SIGN
LA HIGHWAY 405
POSITIVE BACKHOE TRENCH (1mx2m)
NEGATIVE BACKHOE TRENCH (1mx2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE
INDICATOR (C.I.=2m)
WATER LINE
TREE LINE
IMPROVED ROAD
TWO-TRACK ROAD
SWAMP
0
50
METERS

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16AN70

OTHER SITE DESIGNATIONS: HSMP-01-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Ascension

__ **of Section** 40,41 **Township** 10S **Range** 14E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 691200E, 3339330N

GEOGRAPHICAL COORDINATES: Long. 91° 0' 52" west, Lat. 30° 10' 19" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 6.1-7.6 m (20-25 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.18 km (0.11 mi) north of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Commerce silty loam found on natural levees.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV150

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River. These artifacts include 314 glass shards, 25 brick fragments, 312 historic period ceramic sherds, 36 metal artifacts, 1 piece of marble,2 pieces of plastic, 1 artifact of unidentified material, 196 faunal artifacts including cow, chicken, pig and unidentified bone fragments.

SITE SIZE: The site measures approximately 3.04 ac. (1.2 ha.) in extent.

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 0 to 200 cmbs (0 to 78.7 inbs). A typical backhoe trench included Stratum I, (0 to 30 cmbs/0 to 11.8 inbs), 10YR4/2 dark grey brown loamy clay; Stratum II, (30 to 44 cmbs/11.8 to 17.3 inbs) 10YR6/6 brownish yellow silty clay mottled with 10YR4/2 dark grey brown; Stratum III, (44 to 80 cmbs/17.3 to 31.5 inbs) 10YR3/2 very dark grey brown silty clay; Stratum IV, (80 to 190 cmbs/17.3 to 74.8 inbs) 10YR4/3 brown silty clay.

FEATURES: Backhoe trench number 9 at 425 meters contained a brick foundation and glass and ceramic artifacts.

DATING/CULTURAL AFFILIATION: Late 19th to early 20th.

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture and horse pasture.

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of 36 backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 887 item artifact assemblage consists of 36 pieces of metal, including nails, barbed wire, and screw caps; 314 glass shards, 312 historic ceramic sherds, 25 items of construction material (brick fragments); 196 faunal specimens including cow, pig, chicken, and unknown bone fragments. These artifacts are indicative of a late 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

RECORDED BY: Kari Krause, M.S.
Assistant Project Manager
R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123
Tel. (504) 736-9323

DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16AN70 Site Survey Number

Site No. 16AN70

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (2 Entries)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (4 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	au	Auger Testing	rs	Remote Sensing
sy	Systematic Col.	tu	Test Units	dv	Diver Investigation
sht	Shovel Testing	exc	Excavation	obs	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	ti	Timber Industry	cw	Construction, Water
pd	Potted	nat	Natural	cto	Construction, Other
nn	None	di	Urban Develop.	uw	Underwater
ag	Agricltr (Plowing)	ot	Other, see site form		

Disturbance Degree (1 Entry)

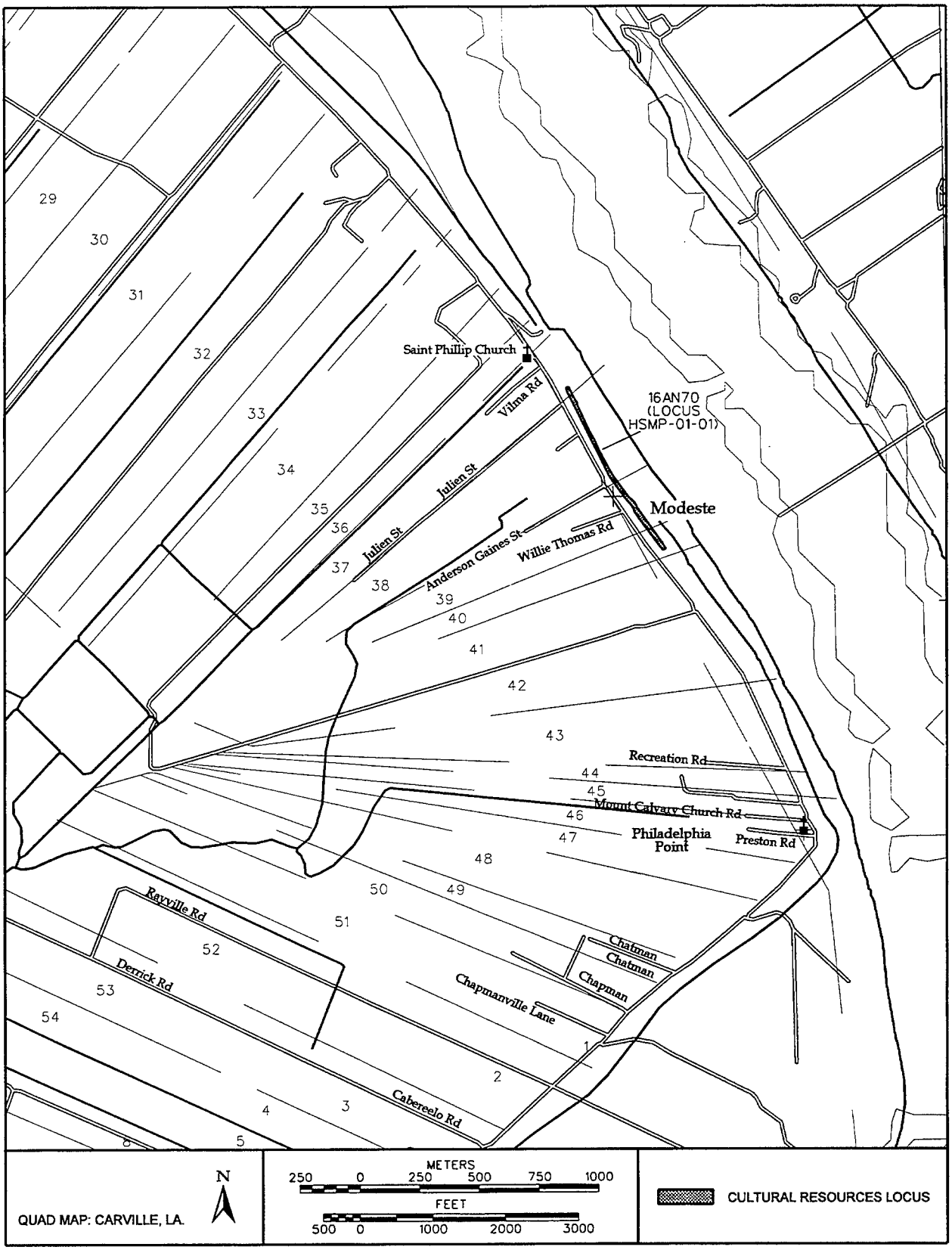
unk	Unknown	mp	Minor Impact	dt	Destroyed
nn	None	mj	Major Impact	iu	Inundated

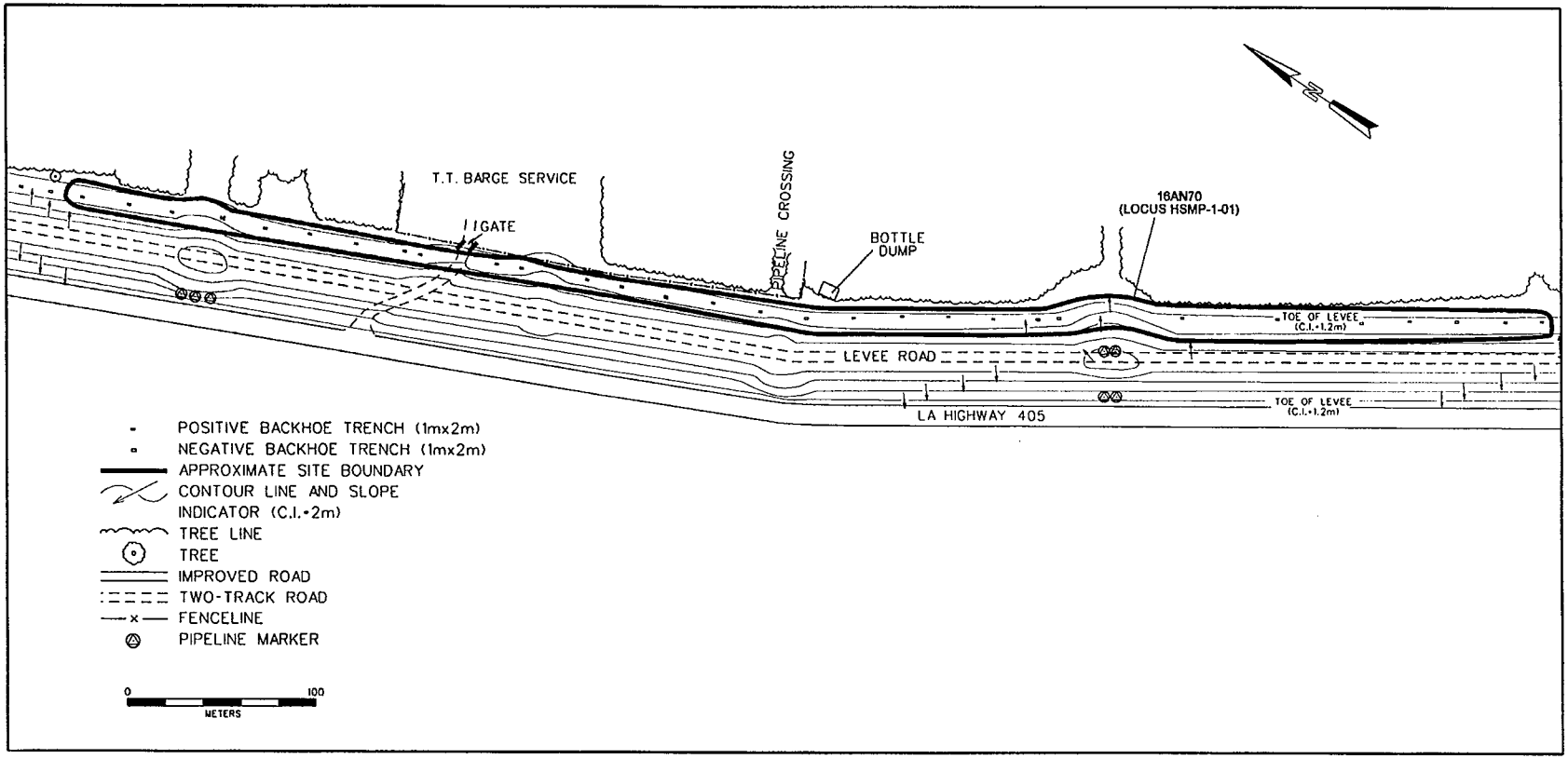
National Register Status (1 Entry)

unk	Unknown	ld	Listed	ps	Potent. Signif.
ne	Not Eligible	de	Declared Elig.	nd	National Landmark

References (4 Entries)

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Saint Phillip Church
Vilma Rd
16AN70
(LOCUS
HSMP-01-01)
Julien St
Julien St
Modeste
Anderson Gaines St
Willie Thomas Rd
Recreation Rd
Mount Calvary Church Rd
Philadelphia
Point
Preston Rd
Rayville Rd
Derrick Rd
Chatman
Chatman
Chapman
Chapmanville Lane
Cabereelo Rd
N
QUAD MAP: CARVILLE, LA.
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
CULTURAL RESOURCES LOCUS


T.T. BARGE SERVICE
GATE
PIPELINE CROSSING
BOTTLE DUMP
16AN70
(LOCUS HSMP-1-01)
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
LA HIGHWAY 405
TOE OF LEVEE
(C.I.=1.2m)
POSITIVE BACKHOE TRENCH (1mx2m)
NEGATIVE BACKHOE TRENCH (1mx2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE INDICATOR (C.I.=2m)
TREE LINE
TREE
IMPROVED ROAD
TWO-TRACK ROAD
FENCELINE
PIPELINE MARKER
0
100
METERS

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16IV48

OTHER SITE DESIGNATIONS: AHP-1A-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Iberville

__ **of Section** 8,9 **Township** 10S **Range** 13E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 682060E, 3341540N

GEOGRAPHICAL COORDINATES: Long. 91° 6' 32" west, Lat. 30° 11' 36" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 7.5m (25 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.3 km (0.19 mi) north of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Convent silty loam and silty clay loam soils found on natural levees.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV147 - 16IV151.

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River. These artifacts include 64 glass shards, 50 brick fragments, 1 piece of mortar, 7 historic period ceramic sherds, 47 metal artifacts, 1 piece of wood molding, and 8 faunal specimens.

SITE SIZE: The site measures approximately 1.29 ac. (.52 ha.) in extent.

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 0 to 100 cmbs (0 to 39.4 inbs). A typical backhoe trench included Stratum I, (0 to 29 cmbs/0 to 11.4 inbs), 10YR 3/3 dark brown clay; Stratum II, (29 to 31 cmbs/11.4 to 12.2 inbs) 10YR 7/2 grey sandy loam; Stratum III, (31 to 46 cmbs/12.2 to 18.1 inbs) 10YR3/3 dark brown clay; Stratum IV, (46 to 59 cmbs/18.1 to 23.2 inbs) lenses of 7.5YR3/2 dark brown clay with 7.5YR4/1 dark grey silty loam; Stratum V, (59 to 89 cmbs/23.2 to 35 inbs) 7.5YR5/1 grey clay with brick fragments; Stratum VI, (89 to 125+ cmbs/35 to 49.2 inbs) 7.5YR5/2 brown clay. (Encountered water at 125+ cmbs/49.2+ inbs).

FEATURES: No intact features were identified.

DATING/CULTURAL AFFILIATION: 19th to 20th century.

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of 16 backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 178 item artifact assemblage consists of 47 pieces of metal, including nails and barbed wire; 64 glass shards, 7 ceramic sherds, 51 items of construction material (50 brick fragments and 1 piece of mortar); 8 faunal specimens including cow, oyster, and unknown; 1 wood corner molding. These artifacts are indicative of a 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Potentially significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

RECORDED BY: Kari Krause, M.S.
Assistant Project Manager
R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123
Tel. (504) 736-9323

DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16IV48 Site Survey Number

Site No. 16IV48

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (1 Entry)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (4 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	au	Auger Testing	rs	Remote Sensing
sy	Systematic Col.	tu	Test Units	dv	Diver Investigation
sht	Shovel Testing	exc	Excavation	obs	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	ti	Timber Industry	cw	Construction, Water
pd	Potted	nat	Natural	cto	Construction, Other
nn	None	di	Urban Develop.	uw	Underwater
ag	Agricltr (Plowing)	ot	Other, see site form		

Disturbance Degree (1 Entry)

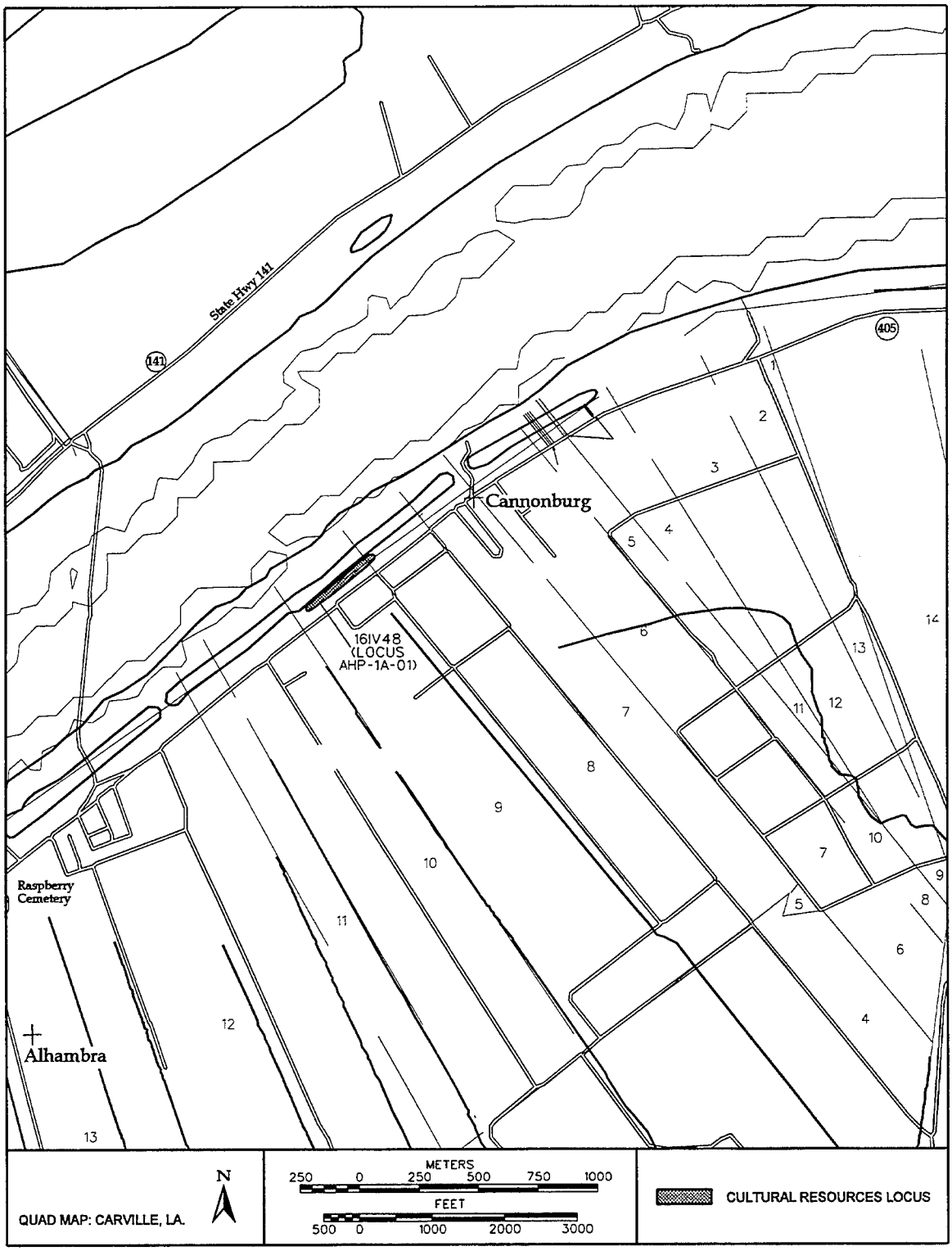
unk	Unknown	mp	Minor Impact	dt	Destroyed
nn	None	mj	Major Impact	iu	Inundated

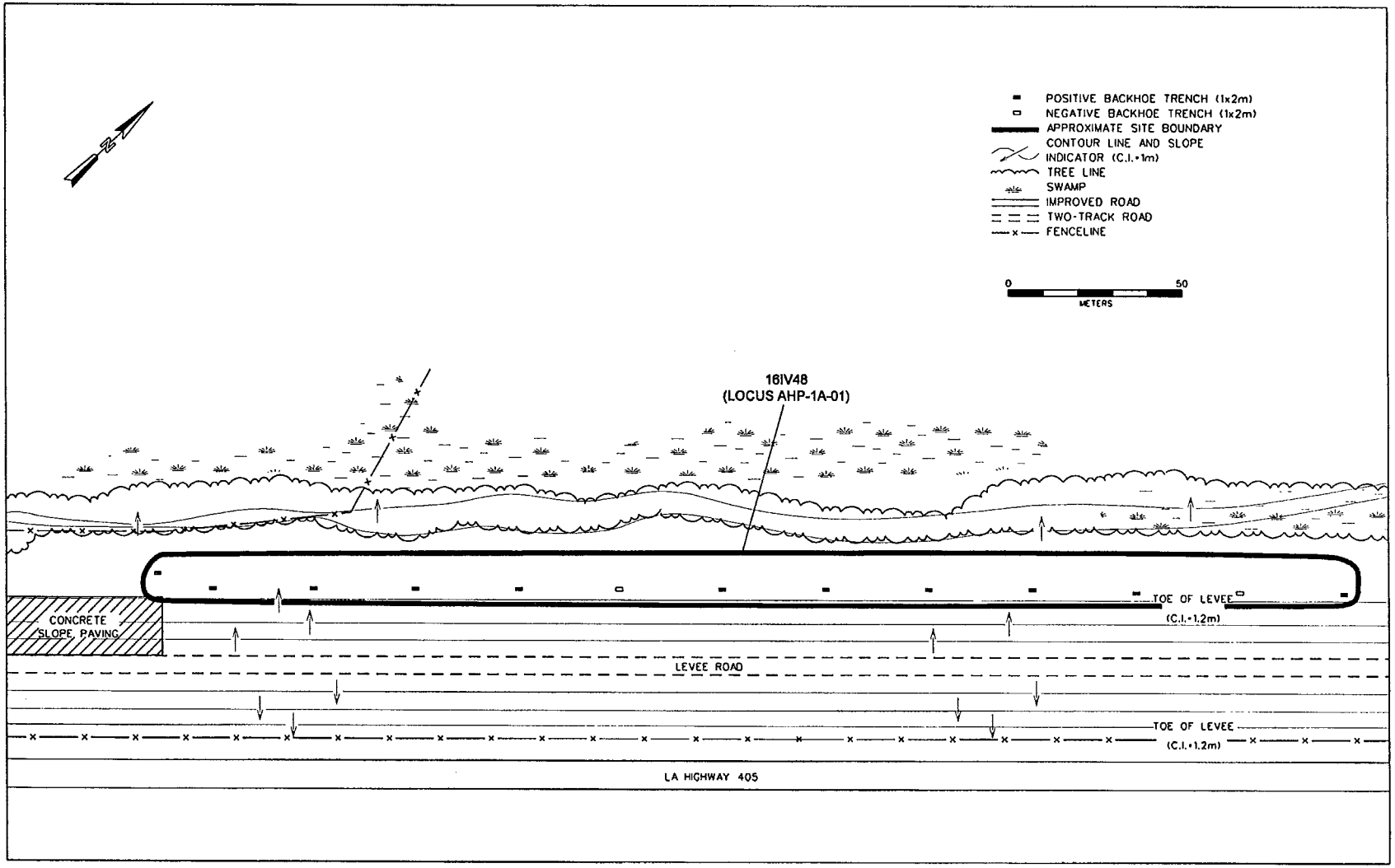
National Register Status (1 Entry)

unk	Unknown	ld	Listed	ps	Potent. Signif.
ne	Not Eligible	de	Declared Elig.	nd	National Landmark

References (4 Entries)

1) _____ 2) _____ 3) _____ 4) _____


State Hwy 141
141
405
Cannonburg
16IV48
(LOCUS
AHP-1A-01)
Raspberry
Cemetery
Alhambra
1
2
3
4
5
6
7
8
9
10
11
12
13
14
N
QUAD MAP: CARVILLE, LA.
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
CULTURAL RESOURCES LOCUS


POSITIVE BACKHOE TRENCH (1x2m)
NEGATIVE BACKHOE TRENCH (1x2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE INDICATOR (C.I.=1m)
TREE LINE
SWAMP
IMPROVED ROAD
TWO-TRACK ROAD
FENCELINE
0
50
METERS
16IV48
(LOCUS AHP-1A-01)
CONCRETE SLOPE PAVING
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
TOE OF LEVEE
(C.I.=1.2m)
LA HIGHWAY 405

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16IV49

OTHER SITE DESIGNATIONS: AHP-1B-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Iberville

__ **of Section** 7, 8 **Township** 10S **Range** 13E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 682400E, 3341840N

GEOGRAPHICAL COORDINATES: Long. 91°6' 23" west, Lat. 30°11' 43" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 7.6 m (25 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.3 km (0.19 mi) north of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Convent silty loam and silty clay loam soils found on natural levees.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV150

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River. These artifacts include 25 glass shards, 28 brick fragments, 12 historic period ceramic sherds, 75 metal artifacts, 11 faunal artifacts, including clam and oyster shell and unidentified bone fragments. This site is in the vicinity of the now destroyed Braziel Baptist Church and cemetery complex. Backhoe trenching in the vicinity of this complex produced 17 human bone fragments and 1 decorative element from a coffin.

SITE SIZE: The site measures approximately 1.3 ac. (0.5 ha.).

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 0 to 91 cmbs (0 to 35.8 inbs). A typical backhoe trench included Stratum I (0 to 14 cmbs/0 to 5.5 inbs), 7.5YR3/1 dark grey clay; Stratum II, (14 to 26 cmbs/5.5 to 10.2 inbs) 10YR3/2 very dark grey brown clay; Stratum III (26 to 29 cmbs/10.2 to 11.4 inbs) 10YR4/2 dark grey brown silty clay; Stratum IV (29-51 cmbs/11.4 to 20.1 inbs) 10YR4/1 dark grey clay; Stratum V (51-91 cmbs/20.1 to 35.8) 7.5YR5/1 grey clay; Stratum VI (91-200+ cmbs35.8 to 78.7) 2.5Y4/2 dark grey brown clay.

FEATURES: No intact features were identified.

DATING/CULTURAL AFFILIATION: 19th to early 20th century.

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture and horse pasture.

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of 14 backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 153 item artifact assemblage consists of 75 pieces of metal, including nails, bolts and tools; 25 glass shards, 12 historic ceramic sherds, 28 items of construction material (brick fragments); 1 decorative element from a coffin; 17 human bone fragments; 11 faunal specimens including clam, oyster, and unknown bone fragments. These artifacts are indicative of a 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

RECORDED BY: Kari Krause, M.S.
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DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16IV49 Site Survey Number

Site No. 16IV49

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (1 Entry)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (4 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	au	Auger Testing	rs	Remote Sensing
sy	Systematic Col.	tu	Test Units	dv	Diver Investigation
sht	Shovel Testing	exc	Excavation	obs	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	ti	Timber Industry	cw	Construction, Water
pd	Potted	nat	Natural	cto	Construction, Other
nn	None	di	Urban Develop.	uw	Underwater
ag	Agricltr (Plowing)	ot	Other, see site form		

Disturbance Degree (1 Entry)

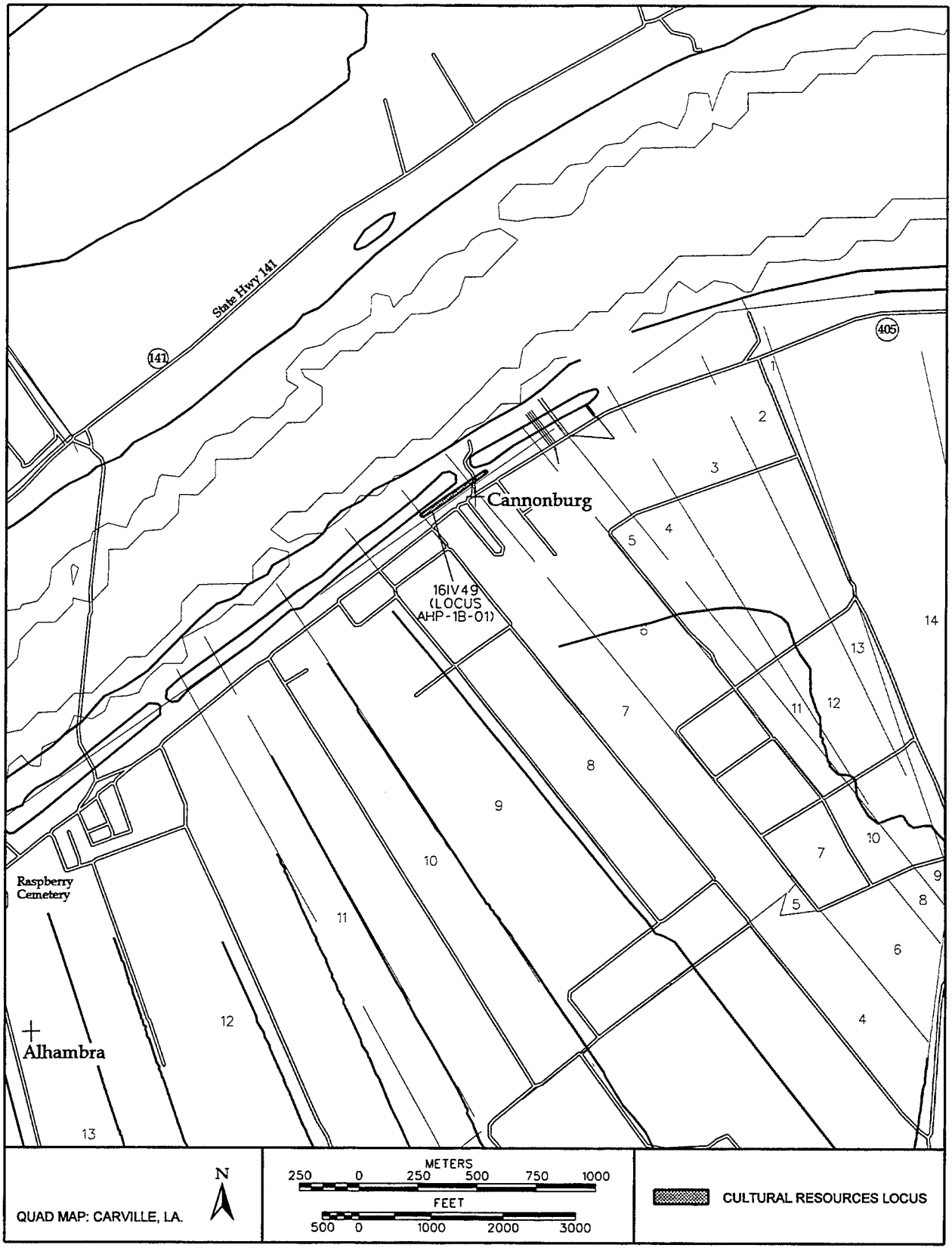
unk	Unknown	mp	Minor Impact	dt	Destroyed
nn	None	mj	Major Impact	iu	Inundated

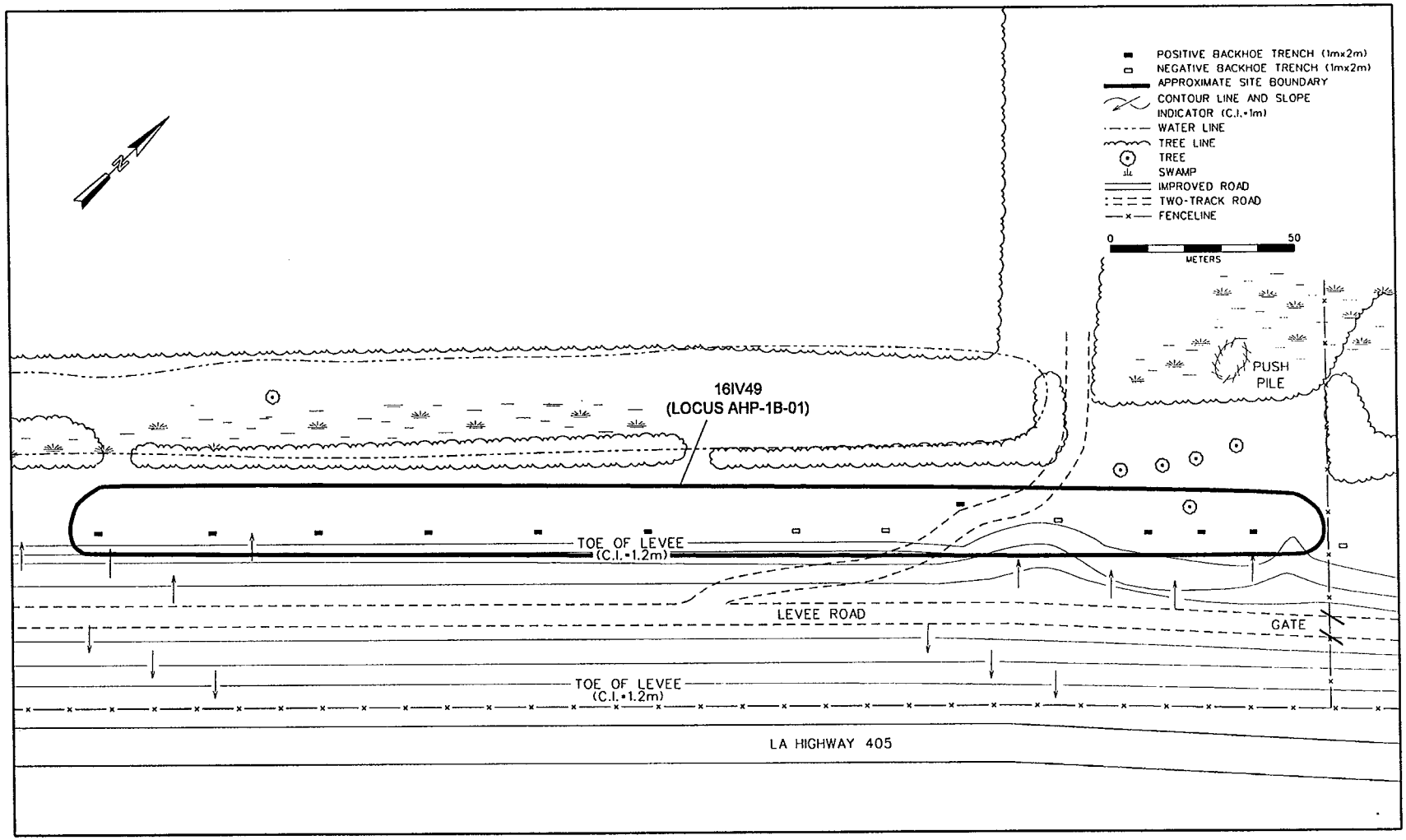
National Register Status (1 Entry)

unk	Unknown	ld	Listed	ps	Potent. Signif.
ne	Not Eligible	de	Declared Elig.	nd	National Landmark

References (4 Entries)

1) _____ 2) _____ 3) _____ 4) _____


State Hwy 141
141
405
Cannonburg
16IV49
(LOCUS
AHP-1B-01)
Raspberry
Cemetery
Alhambra
1
2
3
4
5
6
7
8
9
10
11
12
13
14
N
QUAD MAP: CARVILLE, LA.
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
CULTURAL RESOURCES LOCUS


POSITIVE BACKHOE TRENCH (1mx2m)
NEGATIVE BACKHOE TRENCH (1mx2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE INDICATOR (C.I.=1m)
WATER LINE
TREE LINE
TREE
SWAMP
IMPROVED ROAD
TWO-TRACK ROAD
FENCELINE
0
50
METERS
PUSH PILE
16IV49
(LOCUS AHP-1B-01)
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
GATE
TOE OF LEVEE
(C.I.=1.2m)
LA HIGHWAY 405

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16IV50

OTHER SITE DESIGNATIONS: AHP-2A-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Iberville

__ **of Section** 2,3 **Township** 10S **Range** 13E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 683620E, 3342500N

GEOGRAPHICAL COORDINATES: Long. 91° 5' 33" west, Lat. 30° 12' 6" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 7.5-9.1 m (25-30 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.15-0.2 km (0.09-0.12 mi) north of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Convent silty loam and silty clay loam soils found on natural levees.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV150

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River. These artifacts include 64 glass shards, 18 brick fragments, 58 historic period ceramic sherds, 41 metal artifacts, 13 faunal artifacts including cow, pig, and unidentified bone fragments.

SITE SIZE: The site measures approximately 1.4 ac. (0.6 ha.) in extent.

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 0 to 200 cmbs (0 to 78.7 inbs). A typical backhoe trench included Stratum I, (0 to 35 cmbs/0 to 13.8 inbs), 10YR4/1 dark grey loamy clay; Stratum II, (35 to 39 cmbs/13.8 to 15.4 inbs) 10YR 5/3 brown silty loam, Stratum III, (39 to 65 cmbs/15.4 to 25.6 inbs) 2.5Y4/1 dark grey silty clay; Stratum IV, (65 to 85 cmbs/25.6 to 33.5 inbs) 2.5Y5/2 grayish brown silt; Stratum V, (85 to 112 cmbs/33.5 to 44.1 inbs) 10YR4/2 dark grey brown mottled with 10YR4/4 dark yellow brown silty clay; Stratum VI, (112 to 123 cmbs/44.1 to 48.4) 2.5Y4/1 dark grey silt loam; Stratum VII, (123 to 200 cmbs/48.4 to 78.7 inbs) 10YR4/2 dark greyish brown silty clay.

FEATURES: Backhoe trench number 10 contained a burned surface underlain by an intact builders trench.

DATING/CULTURAL AFFILIATION: 19th to early 20th century.

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture and horse pasture.

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of twelve backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 194 item artifact assemblage consists of 41 pieces of metal, including nails, grommets, and stove parts; 64 glass shards, 58 historic ceramic sherds, 18 items of construction material (brick fragments); 13 faunal specimens including cow, pig and unknown bone fragments. These artifacts are indicative of a late 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

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DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16IV50 Site Survey Number

Site No. 16IV50

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (1 Entry)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (4 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	au	Auger Testing	rs	Remote Sensing
sy	Systematic Col.	tu	Test Units	dv	Diver Investigation
sht	Shovel Testing	exc	Excavation	obs	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	ti	Timber Industry	cw	Construction, Water
pd	Potted	nat	Natural	cto	Construction, Other
nn	None	di	Urban Develop.	uw	Underwater
ag	Agricltr (Plowing)	ot	Other, see site form		

Disturbance Degree (1 Entry)

unk	Unknown	mp	Minor Impact	dt	Destroyed
nn	None	mj	Major Impact	iu	Inundated

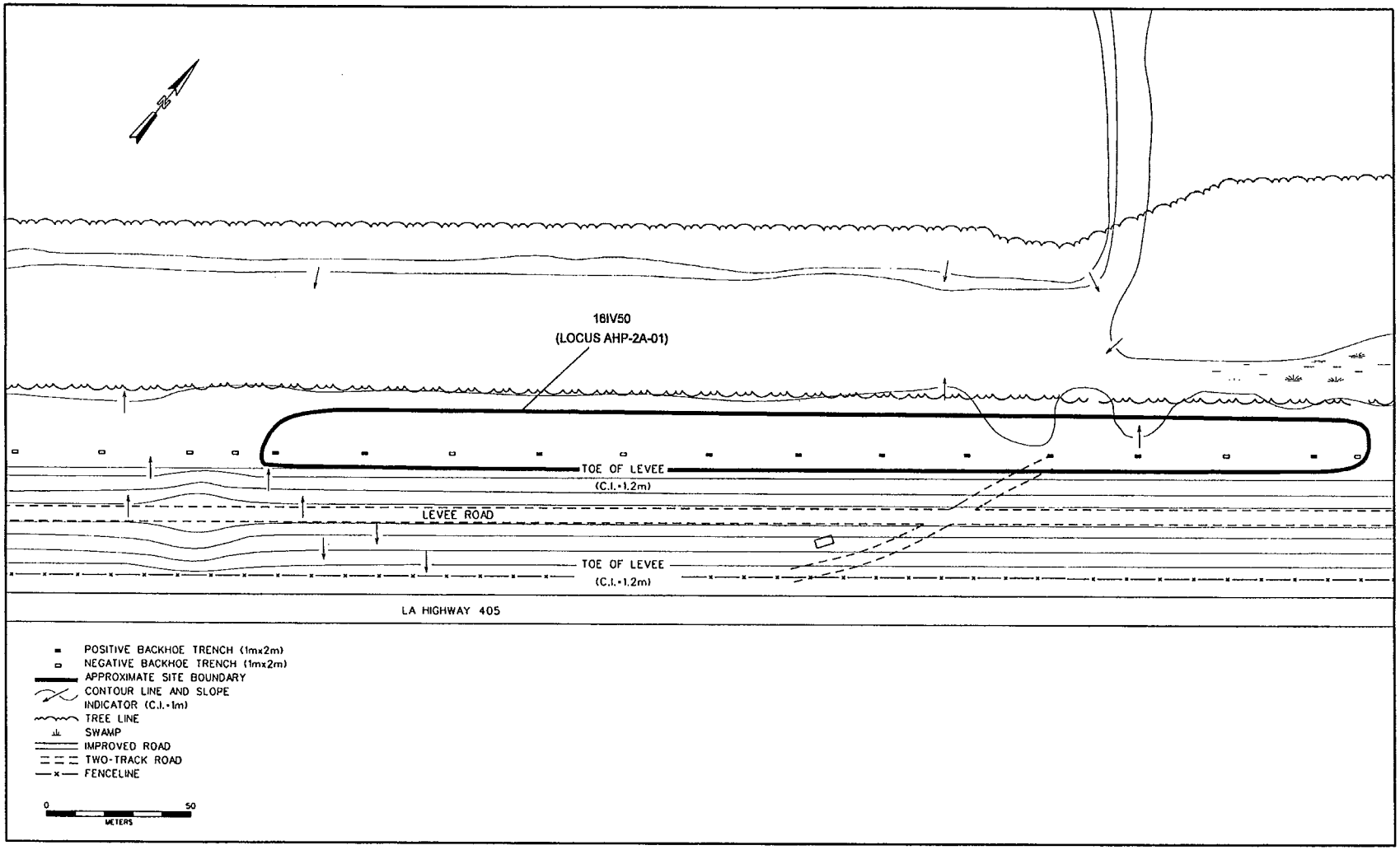
National Register Status (1 Entry)

unk	Unknown	ld	Listed	ps	Potent. Signif.
ne	Not Eligible	de	Declared Elig.	nd	National Landmark

References (4 Entries)

1) _____ 2) _____ 3) _____ 4) _____


405
16IV50
(LOCUS
AHP-2A-01)
IBERVILLE PARISH
ASCENSION PARISH
N
QUAD MAP: CARVILLE, LA.
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
CULTURAL RESOURCES LOCUS


16IV50
(LOCUS AHP-2A-01)
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
TOE OF LEVEE
(C.I.=1.2m)
LA HIGHWAY 405
POSITIVE BACKHOE TRENCH (1mx2m)
NEGATIVE BACKHOE TRENCH (1mx2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE INDICATOR (C.I.=1m)
TREE LINE
SWAMP
IMPROVED ROAD
TWO-TRACK ROAD
FENCELINE
0
50
METERS

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16IV51

OTHER SITE DESIGNATIONS: AHP-2B-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Iberville

__ **of Section** 14 **Township** 10S **Range** 14E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 683950E, 3342620N

GEOGRAPHICAL COORDINATES: Long. 91° 5' 21" west, Lat. 30° 12' 10" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 7.6 m (25 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.2 km (0.12 mi) north of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Convent silty loam and silty clay loam soils found on natural levees.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV150

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River.

SITE SIZE: The site measures approximately 0.7 ac. (0.3 ha.) in extent.

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 50 to 80 cmbs (19.7 to 31.5 inbs). A typical backhoe trench included Stratum I, (0 to 11 cmbs/0 to 4.3 inbs), 10YR3/2 dark brown clay; Stratum II, (11 to 20 cmbs/4.3 to 7.9 inbs) 10YR5/3 brown silty loam, Stratum III, (20 to 35 mbs/7.9 to 13.8 inbs) 10YR3/3 dark brown silty loam with brick fragments; Stratum IV, (35 to 53 cmbs/13.8 to 20.8 inbs) 10YR4/1 grey silty clay; Stratum V, (53 to 79 cmbs/31.1 to 29.1 inbs) 10YR4/1 grey silty clay with strong brown traces; Stratum VI, (79 to 180 cmbs/31.1 to 70.9) 2.5Y4/1 dark grey silt loam; Stratum VII, (123 to 200 cmbs/48.4 to 78.7 inbs) 10YR4/2 dark greyish brown silty clay.

FEATURES: No intact cultural features were identified.

DATING/CULTURAL AFFILIATION: Late 19th to early 20th century

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture and horse pasture.

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of 12 backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 85 item artifact assemblage consists of 11 pieces of metal, including nails; 8 glass shards, 29 historic ceramic sherds, 5 items of construction material (brick fragments); 1 piece unidentified fired earth, 1 limestone fragment, 30 faunal specimens including cow, pig and unknown bone fragments. These artifacts are indicative of a late 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Potentially significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

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DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16IV51 Site Survey Number

Site No. 16IV51

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (1 Entry)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (4 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	**au**	Auger Testing	**rs**	Remote Sensing
sy	Systematic Col.	**tu**	Test Units	**dv**	Diver Investigation
sht	Shovel Testing	**exc**	Excavation	**obs**	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	**ti**	Timber Industry	**cw**	Construction, Water
pd	Potted	**nat**	Natural	**cto**	Construction, Other
nn	None	**di**	Urban Develop.	**uw**	Underwater
ag	Agricltr (Plowing)	**ot**	Other, see site form		

Disturbance Degree (1 Entry)

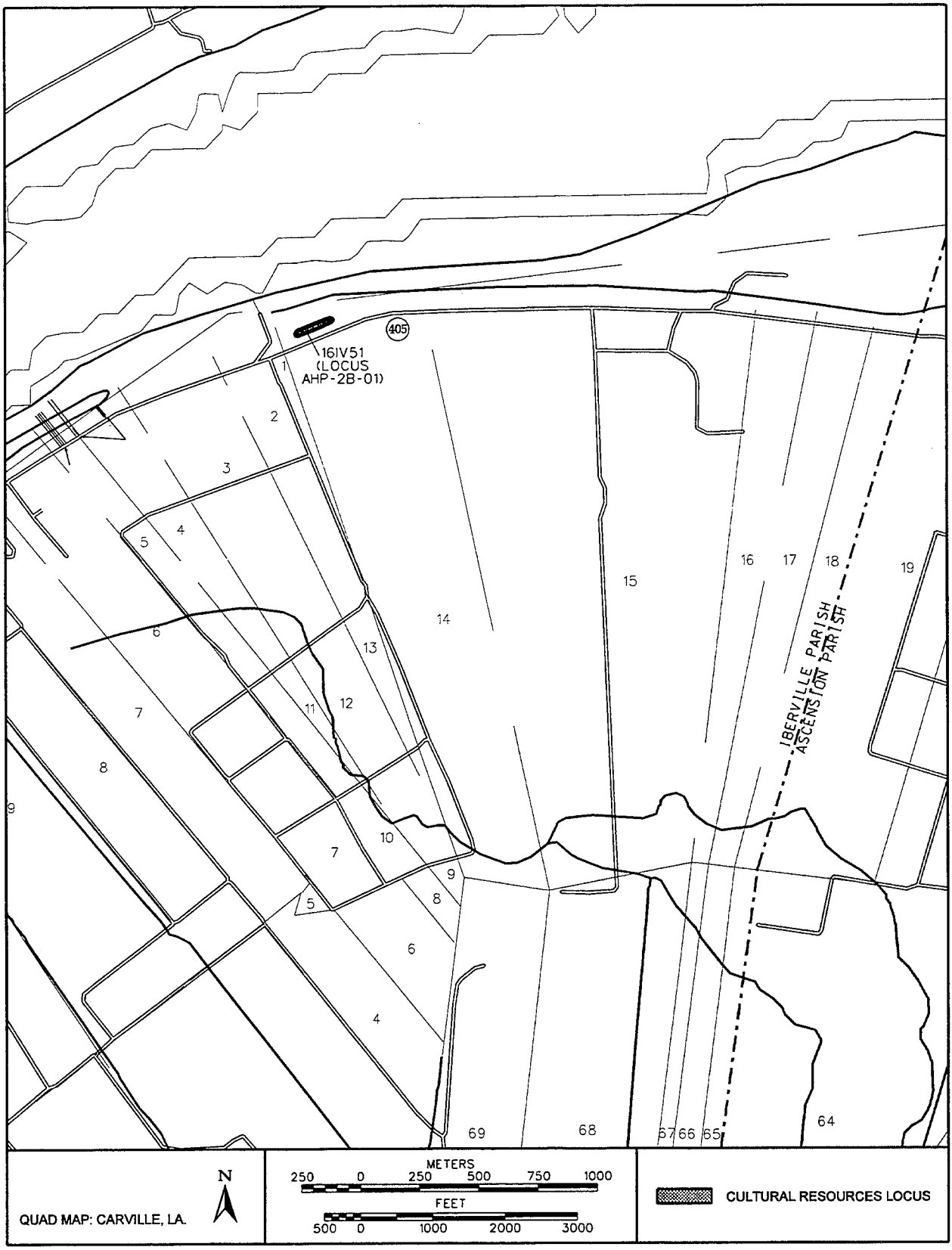
unk	Unknown	**mp**	Minor Impact	**dt**	Destroyed
nn	None	**mj**	Major Impact	**iu**	Inundated

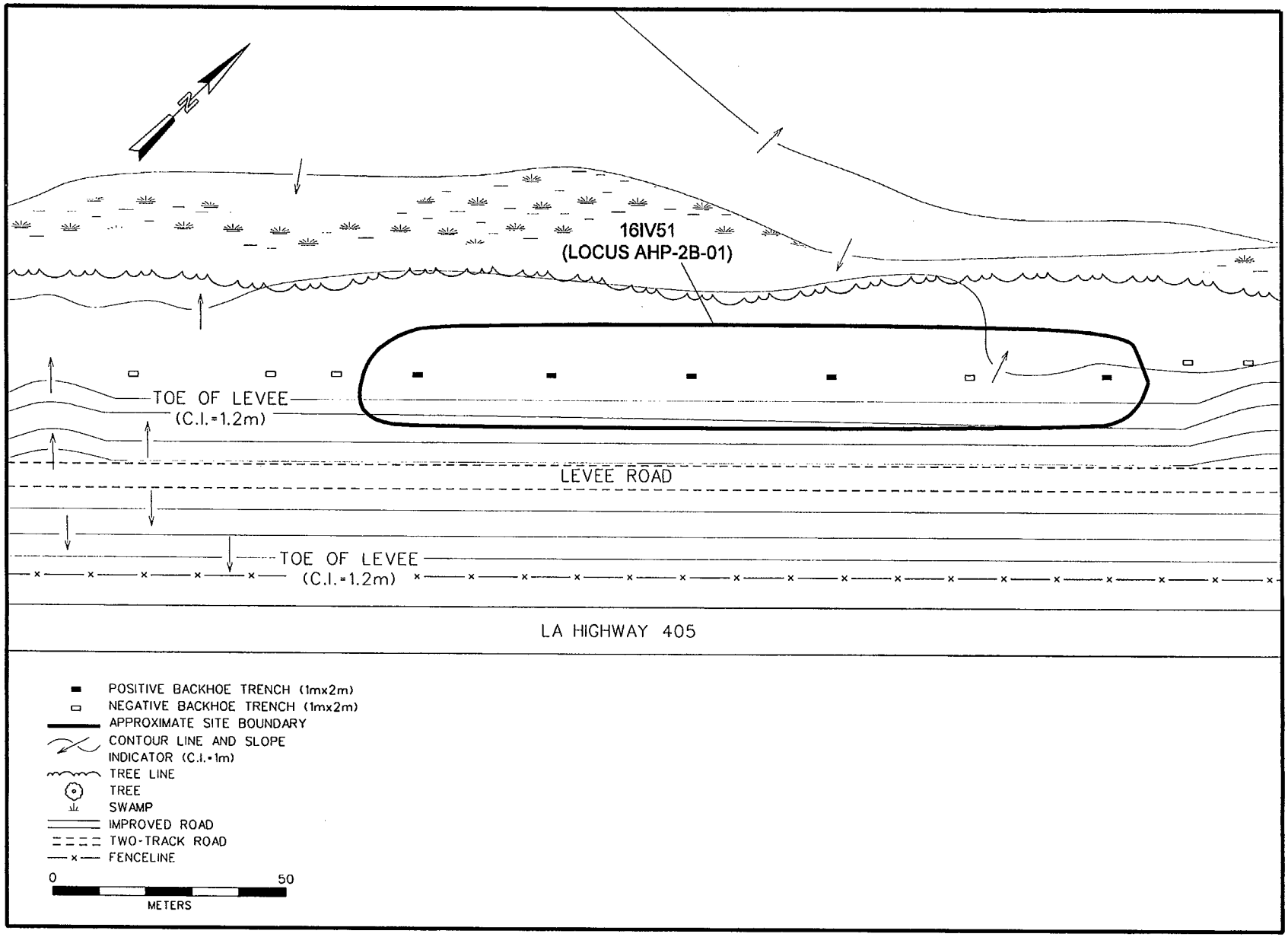
National Register Status (1 Entry)

unk	Unknown	**ld**	Listed	**ps**	Potent. Signif.
ne	Not Eligible	**de**	Declared Elig.	**nd**	National Landmark

References (4 Entries)

1) _____ 2) _____ 3) _____ 4) _____


405
16IV51
(LOCUS
AHP-2B-01)
IBERVILLE PARISH
ASCENSION PARISH
QUAD MAP: CARVILLE, LA.
N
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
CULTURAL RESOURCES LOCUS


N
16IV51
(LOCUS AHP-2B-01)
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
TOE OF LEVEE
(C.I.=1.2m)
LA HIGHWAY 405
POSITIVE BACKHOE TRENCH (1mx2m)
NEGATIVE BACKHOE TRENCH (1mx2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE INDICATOR (C.I.=1m)
TREE LINE
TREE
SWAMP
IMPROVED ROAD
TWO-TRACK ROAD
FENCELINE
0
50
METERS

STATE OF LOUISIANA
SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO.:** 16IV52

OTHER SITE DESIGNATIONS: AMP-2-01

SITE LOCATION AND APPROACH: Site is located between existing levee and borrow pits. Access to the site is from Louisiana Highway 405 from the levee access road.

PARISH: Iberville

__ **of Section** 4, 5 **Township** 10S **Range** 13E

USGS QUADRANGLE: USGS 7.5' Series Topographic Quadrangle, Carville, LA 1974

UTM COORDINATES: Zone 15 683200E, 3342370N

GEOGRAPHICAL COORDINATES: Long. 91° 5' 49" west, Lat. 30° 12' 2" north

PHYSICAL SETTING

LANDFORM: The site is located on an alluvial floodplain of the Mississippi River.

GEOMORPHIC PROCESSES: Recent alluvium.

ELEVATION AND RELIEF: The elevation is approximately 6.1-7.6 m (20-25 ft) NGVD 1929; the terrain is flat.

NEAREST WATER: The Mississippi River is located 0.2-0.3 km (0.12-0.19 mi) north of the site.

POSITION WITH RESPECT TO TERRAIN: The site is positioned on the natural levee.

SOIL CHARACTERISTICS: Soils characteristic of the area are the frequently flooded Commerce silty clay loam.

FLORAL COMMUNITIES: Species typical of the area include cottonwood, sycamore, elm, pecan, hackberry, dogwood, sweet gum, and dewberry.

FAUNAL COMMUNITIES: Species typical of the area include deer, raccoon, opossum, armadillo, rabbit, fox, and hawk.

NEAREST KNOWN SITE: 16IV150

SITE DESCRIPTION

SITE DESCRIPTION: The site consists of a scatter of historic period artifacts on the floodplain of the Mississippi River.

SITE SIZE: The site measures approximately 0.52 ac. (0.2 ha.) in extent.

CONFIGURATION: The site is oblong.

DENSITY OF CULTURAL MATERIALS: The artifact density is moderate to high.

DEPTH OF DEPOSIT/STRATIGRAPHY: Artifacts were recovered from subsurface contexts ranging from 0 to 60 cmbs (0 to 23.6 inbs). A typical backhoe trench included Stratum I, (0 to 38 cmbs/0 to 15 inbs), 10YR4/2 dark greyish brown loamy clay; Stratum II, (38 to 47 cmbs/15 to 18.5 inbs) 10YR5/2 greyish brown silty clay; Stratum III, (47 to 88 cmbs/18.5 to 34.6 inbs) 10YR5/2 greyish brown silty clay with 10YR4/1 dark grey; Stratum IV, (88 to 166 cmbs/34.6 to 65.3 inbs) 10YR7/1 light grey silty clay.

FEATURES: No intact features were identified at this site.

DATING/CULTURAL AFFILIATION: Early 19th to early 20th century.

PRESENT CONDITION/PRESERVATION: The site is currently covered by 50 cm (19.7 in) of fill associated with the artificial flood control structure.

PRESENT USE: Batture and horse pasture.

PRESENT AND FUTURE IMPACTS: Planned concrete slope paving.

COLLECTIONS

SURVEY/EXCAVATION METHOD: A total of 18 backhoe trenches were excavated to identify and delineate the site.

DESCRIPTION OF MATERIAL: The 65 item artifact assemblage consists of 30 glass shards, 27 historic ceramic sherds, 3 metal artifacts (a nail and miscellaneous items), and 5 items of construction material (brick fragments). These artifacts are indicative of an early 19th to early 20th century historic period occupation.

SITE EVALUATION

RESEARCH POTENTIAL: Research potential on this site appears to be high.

STATE OR NATIONAL REGISTER ELIGIBILITY: Potentially significant.

RECOMMENDATIONS: Additional National Register eligibility testing is recommended.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS AND AVAILABILITY: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

PHOTOGRAPHS AND MAPS: To be curated with the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge, Louisiana upon completion of the project.

REFERENCES: George et al. 1999. *Phase I Cultural Resource Survey for the Alhambra To Hohen-Solms and Hohen-Solms to Modesta Levee Enlargement and Concrete Slope Pavement Projects.*

RECORDED BY: Kari Krause, M.S.
Assistant Project Manager
R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123
Tel. (504) 736-9323

DATE: October 5, 1999

STATE OF LOUISIANA
CONTINUATION FORM

Site Name 16IV52 Site Survey Number

Site No. 16IV52

CAD CODING SHEET

Landform (2 Entries)

kn	Knoll	**sd**	Saltdome	**bea**	Beach	**nrs**	Nat. Relic Scar
rid	Ridge	**swa**	Swamp	**udw**	Underwater	**bat**	Batture
bn	Bench	**bsw**	Backswamp	**nal**	Natural Levee	**ot**	Other, see form
pm	Pimple Mound	**msh**	Marsh	**chr**	Chenier		

Soil Area (1 Entry)

cp	Coastal Plain	**fw**	Flatwoods	**ral**	Recent Alluvium	**cpr**	Coastal Prairies
cmr	Coastal Marsh	**mtl**	Miss. Terrace, Loessial Hills				

Soil Series Number _____

Cultural Features (1 Entry)

sar	Single Artifact	**psc**	Prehistoric Scatter	**ls**	Lithic Scatter
md1	Mound/Earthwork	**hsc**	Historic Scatter	**bu**	Burials
md2	Mounds/Earthwork	**hst**	Hist. Sheet Midden	**ss**	Standing Structures
her	Hist. Earthwork	**shm**	Shell Midden	**du**	Dump
ote	Other Earthwork	**erm**	Earth Midden	**hr**	Historic ruins
sw	Shipwreck				

Remarks (C.F.) _____

Cultural Affiliation (3 Entries)

pu	Prehis. (Unk.)	**tc**	Tchefuncte	**ms**	Mississippian
hu	Historic (Unk.)	**mar**	Marksville	**cad**	Caddo
ph	Pre./Hist. (Unk.)	**is**	Issaquena	**hi**	Hist. Indian Contact
pal	Paleo-Indian	**ba**	Baytown	**ex**	Hist. Explr. 1541-1803
mi	Meso-Indian/Archaic	**tro**	Troyville	**ant**	Antebellum 1803-1860
ni	Neo-Indian (Unk.)	**cc**	Coles Creek	**war**	War & Aftrm 1860-1890
po	Poverty Point	**pq**	Plaquemine	**in**	Indust. & Modern 1890-

Remarks (C.A.) _____

Site Function (1 Entry)

pu	Prehist. (Unk.)	**fa**	Farm/Rural res.	**ci**	Commercial/Service
hu	Historic (Unk.)	**wt**	Watercraft P&H	**it**	Institut. (Rel. & Ed.)
ch	Chipping Station	**pt**	Plantation	**gv**	Governmental
cam	Camp	**hs**	Hist. Town/Vill.	**id**	Industrial
el	Extraction Locale	**ur**	Urban	**du**	Dump
ha	Preh. Hamlet/Vill.	**cr**	Cemetery (Mort.)	**ml**	Military
cer	Ceremonial Center	**ht**	Hist. Transport.		

Remarks (S.F.) _____

Description of Material (4 Entries)

cra	Ceramics, Aborig.	**she**	Shell	**wb**	Worked Bone
hc	Ceramics, Hist.	**ppo**	PPO's	**ub**	Unmodified Bone
cs	Chipped Stone	**gl**	Glass	**fl**	Flora
pp	Projectile Pts.	**me**	Metal	**wo**	Wood
gs	Ground Stone	**cmt**	Construct. Material (Brick, Wattle & Daub)		

Remarks (S.F.)

Method of Investigation at Site (2 Entries)

gra	Grab Surface Col.	au	Auger Testing	rs	Remote Sensing
sy	Systematic Col.	tu	Test Units	dv	Diver Investigation
sht	Shovel Testing	exc	Excavation	obs	Observed

Disturbance Agent/Present Use (1 Entry)

unk	Unknown	ti	Timber Industry	cw	Construction, Water
pd	Potted	nat	Natural	cto	Construction, Other
nn	None	di	Urban Develop.	uw	Underwater
ag	Agricltr (Plowing)	ot	Other, see site form		

Disturbance Degree (1 Entry)

unk	Unknown	mp	Minor Impact	dt	Destroyed
nn	None	mj	Major Impact	iu	Inundated

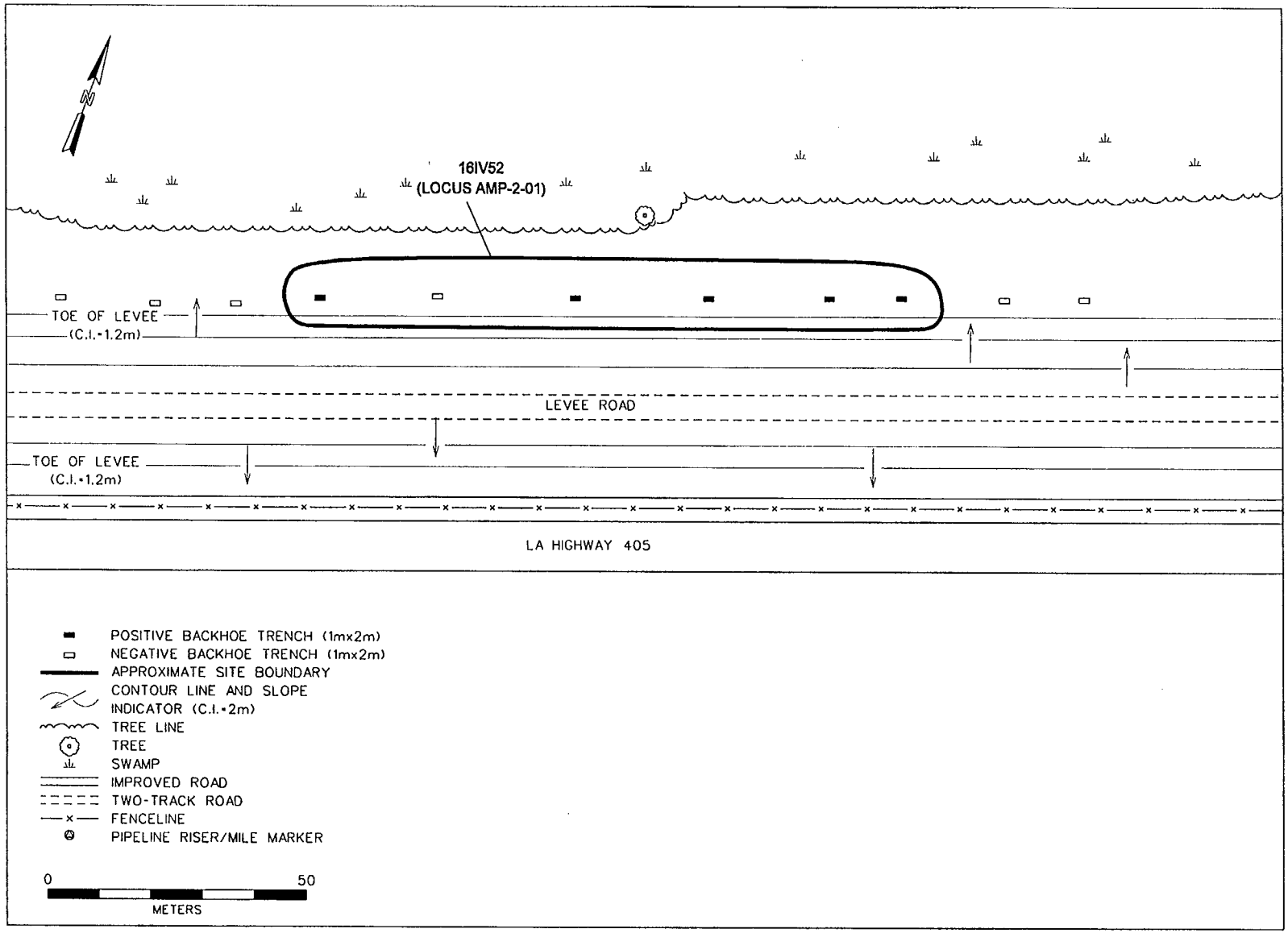
National Register Status (1 Entry)

unk	Unknown	ld	Listed	ps	Potent. Signif.
ne	Not Eligible	de	Declared Elig.	nd	National Landmark

References (4 Entries)

1) _____ 2) _____ 3) _____ 4) _____


16IV52
(LOCUS
AMP-2-01)
405
IBERVILLE PARISH
ASCENSION PARISH
QUAD MAP: CARVILLE, LA.
N
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000
CULTURAL RESOURCES LOCUS


N
16IV52
(LOCUS AMP-2-01)
TOE OF LEVEE
(C.I.=1.2m)
LEVEE ROAD
TOE OF LEVEE
(C.I.=1.2m)
LA HIGHWAY 405
POSITIVE BACKHOE TRENCH (1mx2m)
NEGATIVE BACKHOE TRENCH (1mx2m)
APPROXIMATE SITE BOUNDARY
CONTOUR LINE AND SLOPE INDICATOR (C.I.=2m)
TREE LINE
TREE
SWAMP
IMPROVED ROAD
TWO-TRACK ROAD
FENCELINE
PIPELINE RISER/MILE MARKER
0
50
METERS

APPENDIX III

MITIGATION PLAN

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PROPOSED MITIGATION PLAN FOR PHASE III INVESTIGATIONS AT SITES 16IV49 AND 16IV50 IN IBERVILLE PARISH AND SITES 16AN69 AND 16AN70 IN ASCENSION PARISH, LOUISIANA

Introduction

This chapter presents a proposed mitigation plan for Sites 16IV49 and 16IV50 in Iberville Parish and Sites 16AN69 and 16AN70 in Ascension Parish, Louisiana prior to the implementation of the concrete slope paving and levee re-contouring project currently proposed by the U.S. Army Corps of Engineers, New Orleans District. Phase I cultural resources survey and archeological inventory of these four sites was completed on behalf of the U.S. Army Corps of Engineers, New Orleans District by R. Christopher Goodwin & Associates, Inc., in July, August, and September of 1999. Each of these sites is located within the Areas of Potential Effect associated with the Alhambra to Hohen-Solms and Hohen-Solms to Modeste project items, and each site will be impacted to varying degrees by the installation of the concrete slope paving and/or by the proposed re-contouring of the existing levee. The following mitigation or treatment plan discusses the research goals, methods of excavation, and data analysis procedures proposed for each site. In addition, a variety of research issues may be addressed through examination of the data derived from these investigations; these issues are identified below.

Data Requirements

Mitigation of impacts to Sites 16IV49 and 16IV50 in Iberville Parish and Sites 16AN69 and 16AN70 in Ascension Parish will require careful sampling at each of the identified sites. This sampling, coupled with a variety of specialized analytical techniques, will be designed to describe fully the type and function of each artifact recovered from the sites, the spatial relationships of all recovered artifacts and ecofacts, the type and function of all identified cultural features, and the range and nature of cultural activities associated with each of the four sites. The systematic study of the historic period ceramic, glass, metal, and construction-related artifacts, as well as the ecofacts recovered and the geomorphological contexts identified in the field, will be essential. These data will be used to identify the locations of various historic period activities, and to define the geomorphological processes that led to the formation of these four sites.

The laboratory methods utilized during this investigation will describe the range of variability and the characteristics of all cultural material recovered within the sampled portions of the Areas of Potential Effect. In addition, laboratory analyses will provide detailed typological inventories and interpretation of the historic artifacts recovered from each site. Detailed faunal and botanical analyses will be performed on those specimens originating from undisturbed contexts. When synthesized, the field effort and laboratory analysis will provide insights into site function, documenting the various cultural processes operative at the identified sites during the historic period.

Continued detailed cartographic research concerning the identified sites will be conducted as part of the mitigation effort. All historic maps collected during Phase I cultural resources survey and archeological inventory will be re-

examined in light of their potential to provide additional insights into the sites proposed for mitigative excavation. Moreover, further cartographic research will be conducted in an effort to recover additional data regarding the historic period use of the identified sites. All of the data collected from historic period maps of the areas surrounding Sites 16IV49, 16IV50, 16AN69, and 16AN70 will be combined into a series of data layers that will be overlain onto existing site plan views and U.S. Army Corps of Engineers, New Orleans District construction plans. The result will be a series of data-rich maps that will indicate the potential locations of historic period structures and activity loci that may be excavated and recorded during the subsequent mitigation process. These overlay maps will be used by field personnel to aid in the final determination of the placement of excavation units.

During the additional historical research, a chain-of-title search also will be conducted for each of the parcels of land containing the identified sites. Historians from R. Christopher Goodwin & Associates, Inc., will visit all appropriate repositories of tax maps and assessor's records in an effort to reconstruct the process by which the land containing the identified sites first was purchased and later subdivided into smaller lots. This process may allow for the identification of particular historical events and activities that occurred within the vicinity of Sites 16IV49, 16IV50, 16AN69, and 16AN70. In addition, the chain-of-title research may permit the collection of additional data relevant to the numbers and types of structures once positioned within the vicinity of the identified sites, as well as their method of construction, function, and time of abandonment/demolition.

It is anticipated that additional historic research will provide important insights into the cultural development and character of the proposed project reach. In addition, this research will build on previous investigations of historic data relevant to each of the identified sites. The results of historic period research conducted during the Phase I cultural resource survey and archeological inventory of the proposed project reach is summarized below. This summary presents a broad overview of the type and quality of historic period archeological data that may be acquired during mitigative investigations of Sites 16IV49, 16IV50, 16AN69, and 16AN70.

Historical research conducted during the Phase I survey for this project resulted in the identification of numerous structures within the vicinity of the identified sites. It was determined, for example, that seven historic period structures and a single historic period cemetery are situated within the immediate vicinity of Site 16IV49. These structures consist of the remains of Braziel Baptist Church and cemetery complex, five "cabins," and one "cottage." The footprints of all of these structures are situated within approximately 10 m (32.8 ft) south of the single backhoe trench transect excavated within the site limits. They currently are located beneath the toe of the extant levee. In addition, it appears likely from historic period map analysis, thermal imaging, and remote sensing, that the cemetery associated with the Braziel Baptist Church, now relocated to the landside of the levee, exists beneath the levee structure. Examination of construction plans for the extant levee indicate that ground disturbing activities associated with the construction of that structure were confined to the excavation of an exploratory trench measuring approximately 1.2 m (4 ft) in width by 1.8 m (6 ft) in depth, combined with grading activities. Thus, disturbance of the Site 16IV49 area may not have been severe enough to destroy buried cultural deposits in the area.

In addition, 14 historic period structures were identified on historic period maps of the area encompassing Site 16IV50. These structures all were described as "cabins." They likely are the remains of workers' quarters associated with the former Celeste Plantation. According to map overlays, these structures are located within approximately 5 m (16.4 ft) of the single transect of backhoe trenches that was excavated across the Area of Potential Effect associated with this site. In fact, one of the trenches, Backhoe Trench 10, revealed the presence of a cultural feature that may be structural in origin, i.e., a builder's trench.

During initial survey, 11 historic period structures were noted in the immediate vicinity of Site 16AN69. These buildings were described as nine "cabins", "one "cottage," and one "store." While foundations for these structures

were not noted during Phase I survey, two cultural features representative of a domestic use the area were identified and recorded. These included a possible builder's trench and a midden feature. These features were situated within approximately 10 m (32.8 ft) of the location where historic period maps of the site area depicted several now destroyed buildings.

Finally, 23 historic period structures were identified on historic maps depicting the Site 16AN70 area. These structures consisted of 21 "cabins," the "Modeste Post Office and Store," and the "Welcome Store." A total of nine of these buildings were located within approximately 5 m (16.4 ft) of backhoe trenches excavated during the Phase I cultural resources survey and archeological inventory. In fact, one of the excavated backhoe trenches, Backhoe Trench 9, revealed a cultural feature consisting of a brick and mortar foundation. This foundation feature was situated in the immediate vicinity of the location where a series of historic period maps depicted a "cabin" structure. It may represent the remains of a workers' residence associated with the Babin and/or Africa Plantations.

Thus, numerous historic period structures were recorded within the vicinity of the identified sites during background research for the Phase I cultural resource survey and archeological inventory of the Alhambra to Hohen-Solms and Hohen-Solms to Modeste project items. In addition, survey of the area encompassing the sites produced archeological data consistent with a domestic use of these sites. It is very likely that additional historical map research, used in conjunction with other types of historic research, i.e., records review and chain-of-title research, will produce additional important insights into the cultural development of the proposed project reach. This research will provide a stronger foundation for a solid research design to guide data recovery excavation of the identified sites. The following sections describe the field methods that will be employed during mitigative investigations.

Field Design and Research Methods

Mitigation efforts will be designed to define the extent and specific nature of the historic period components contained within the Areas of Potential Effect associated with each of the sites. This will include the recovery of a representative sample of the archeological data associated with each activity area identified within the Areas of Potential Effect, and the reconstruction of past activities at these sites. The following section outlines the field methods to be used to complete the mitigative excavations proposed for Sites 16IV49, 16IV50, 16AN69, and 16AN70.

Field Design

The field effort will take a staged approach to permit accurate archeological characterization of each cultural resource under investigation. Prior to initiation of any excavation, a site datum will be established and an archeological control grid will be superimposed across each site. This will allow for the construction of a topographic map depicting natural and cultural features associated with each of the sites. This map will be created with a contour interval of 5 cm (1.9 in) or less, depending upon the topography of the sites being mapped. Data recovery then will be conducted in several stages (discussed below), with management summaries circulated to each of the consulting parties following the completion of each stage of the investigation.

The excavation will begin with the removal of the overburden or fill from each site. This procedure will be accomplished with a rubber-wheeled road grader that will not impact the integrity of the underlying subsurface deposits. Stripping of each site area will proceed only as far as necessary to remove both the fill deposited during construction of the existing flood control levee and silts associated with high water stages of the Mississippi River. Once the fill has been removed, i.e. 15 to 40 cm (5.9 to 15.7 in), each site will be mapped a second time, being careful to document variations in topography and noting natural and cultural features present within each site. The second stage of mapping also will allow calculation of the thickness of overburden at each site. After removal of the overburden from each site, a number of 1 by 2 m (3.3 by 6.6 ft) excavation units will be excavated within the Area of Potential Effect associated with each site (see below), in order to identify and confirm the presence of potential historic period activity loci.

Proposed Fieldwork at Site 16IV49

Data recovery excavations at Site 16IV49 will consist of the mechanical removal of approximately 4,937 m^2 (53,147 ft^2) of overburden from the site area and the subsequent excavation of up to 30 1 x 2 m (3.3 by 6.6 ft) excavation units. This 60 m^2 (646 ft^2) will be excavated by hand in order to examine carefully the archeological deposits found throughout the non-cemetery portion of the site, and to document more clearly the geomorphological development of the general area. The excavation of up to 30 1 x 2 m (3.3 by 6.6 ft) units represents approximately one percent of the total Area of Potential Effect associated with Site 16IV49. In addition, a determination may be made to expand the size of an excavation unit in areas of the site where cultural features have been identified or only partially exposed. That is, in areas where features are encountered, units may be combined to form 2 x 2 m (6.6 x 6.6 ft) or larger excavation blocks, as appropriate. This mitigation effort does not include the cemetery portion of the site. That part of the site currently is under investigation under a separate delivery order for the U.S. Army Corps of Engineers, New Orleans District, and recommendations for the possible identification and removal of the human interments that may be contained within the site boundaries will be discussed in a separate report.

Proposed Fieldwork at Site 16IV50

The mitigation effort at Site 16IV50 will be initiated through the mechanical removal of approximately 5,100 m^2 (54,897 ft^2) of overburden from the site area. After the removal of the overburden and subsequent site mapping and recordation of each exposed cultural features, up to 30 1 x 2 m (3.3 by 6.6 ft) units, or 60 m^2 (646 ft^2), will be excavated by hand to identify and record a representative sample of artifacts and cultural features contained within the site. The excavation of up to 60 m^2 (646 ft^2) represents approximately one percent of the total Area of Potential Effect associated with the site. In addition, the excavation of the units will permit detailed recordation of the geomorphological development of Site 16IV50. Finally, some of the excavation units may be increased in size to expose any cultural features identified as a result of the mitigative action.

Proposed Fieldwork at Site 16AN69

Data recovery excavations at Site 16AN69 will begin with the removal of all recent fill from the site area. In order to remove this fill, an area measuring approximately 4,815 m^2 (51,840 ft^2) will be stripped with a road grader. After the removal of the overburden, the site will be mapped, being careful to record variations in topography, as well as the distribution of natural and cultural features within the site. Data recovery excavations will continue with the excavation of up to 70 1 x 2 m (3.3 by 6.6 ft) units or 140 m^2 (1,510 ft^2), i.e., approximately one percent of the total site area. These units will be excavated by hand in order to recover a representative sample of the cultural features and artifacts contained within Site 16AN69. In addition, some of the units may be expanded to expose larger portions of buried cultural horizons or cultural features. Larger excavations in these areas will be important for the collection of data that may provide additional insights into past activities at the site.

Proposed Fieldwork at Site 16AN70

Mitigation of Site 16AN70 will begin with the mechanical removal of all fill associated with the construction of the existing flood control levee. During this operation, it is anticipated that approximately 12,300 m^2 (132,400 ft^2) of overburden will be removed. After removal of the overburden, all natural and cultural features, and variations in topography at the site will be mapped. In addition, it is anticipated that up to 30 1 by 2 m (3.3 x 6.6 ft) units, or 60 m^2 (646 ft^2), will be excavated by hand at Site 16AN70. Exposure of 60 m^2 (646 ft^2) represents approximately one percent of the total site area. These units will be excavated in an effort to collect and record a representative sample of artifacts contained within Site 16AN70 prior to levee contouring and the installation of the concrete slope paving. Finally, if deemed necessary, some of the units may be increased in size to expose completely cultural features or to define better those buried cultural horizons that may provide important data regarding cultural processes in operation within the overall site area.

Reevaluation of the Cultural Deposits at Sites 16IV49, 16IV50, 16AN69, and 16AN70

Following completion of these excavations, the cultural deposits at each site will be reevaluated to determine if further excavations are warranted. The initial units will define the areas of historic period activity, burial areas, and any isolated areas of cultural activity loci. These excavations also will be aimed at corroborating the vertical and horizontal boundaries of the historic period components situated within the Area of Potential Effect associated with each site. If the data obtained from the initial excavations reveal the presence of clear non-burial activity areas and/or concentrations of cultural features within the site boundaries, additional excavation may be required to mitigate adequately these sites. In such cases, excavation blocks may be combined in areas where larger aerial exposures are warranted. The exposure of large contiguous excavation blocks will allow intra-site spatial patterns to be discerned and recorded accurately at each of the identified sites. In addition, larger excavation blocks will permit detailed investigations of cultural features situated within the Areas of Potential Effect, as well as providing information on functional and formational contexts. Finally, the broad stratigraphic window provided by block excavations will permit identification of formational and post-depositional processes at each of the sites identified. During mitigation of these four sites, approximately 440 m^2 (4,736 ft^2) of site area will be excavated by hand.

Research Methods

This section provides an overview of the field methods that will be employed during the data recovery excavations of Sites 16IV49 and 16IV50 in Iberville Parish, and Sites 16AN69 and 16AN70 in Ascension Parish, Louisiana. Items discussed under this heading include site mapping, mechanical removal of overburden from each of the sites prior to excavations, unit excavation, treatment of cultural features, geomorphological analyses, and procedures to be followed in the event that human remains are discovered as a result of this mitigative effort.

Site Mapping

During the initial Phase I cultural resources investigation, datum points were established at each site. Prior to initiating the mitigation process, these datum points will be reestablished, and assigned grid coordinate N1000, E1000; all subsequent unit coordinates will be provided with north and east prefixes relative to the data control points. The grid constructed at each site will provide coordinates for all specific measurements, such as point proveniences and elevations. The topographic survey will be performed using a TOPCON GTS-303 Electronic Distance Meter (EDM); the data will be collected and stored in a Hewlett-Packard 48GX Data Collector using a Tripod Data Systems surveying interface. The data also will be recorded manually to guarantee retention.

Use of the EDM will permit subcentimeter accuracy in both grid placement and in the collection of elevation data points from across each site. Natural and cultural features present at each site also will be noted and their locations recorded using the EDM. Where possible, backhoe trenches excavated during the initial survey effort also will be tied into to this grid. Finally, the site datum will be used to establish vertical control across the site. All vertical measurements will be recorded as depth below datum (bd), with reference to each local datum. Below surface (bs) measurements also will be calculated; these measurements will represent the difference between ground surface level and the datum plane. Finally, all site datum points will be tied to the nearest U.S. Army Corps of Engineers, New Orleans District, benchmark situated on the extant levee.

Removal of Overburden

A layer of overburden related to the construction of the extant flood control levee and subsequent high water deposits is present on each of the sites. This layer varies in thickness from approximately 15 to 40 cm (5.9 to 15.7 in). Removal of the overburden will be accomplished using a rubber-wheeled road grader. The rubber-wheeled vehicle will be used to minimize impacts to the buried cultural deposits.

During the stripping process, thin layers of overburden (ca. 3 to 5 cm [1.2 to 2 in]) will be removed with each pass of the road grader or backhoe. During the removal of this overburden, two archeologists, one stationed to either side of the vehicle, will examine visually the exposed area for the presence of cultural features and/or artifacts, as well as for changes in stratigraphy. Once an underlying intact stratum is revealed, use of the road grader will be terminated, and the locations of units to be excavated will be positioned using an EDM. Unit locations will be determined based on the presence of cultural features or high-density artifacts scatters. This process will be repeated at each of the sites recommended for data recovery excavations.

Unit Excavation

All unit and block excavations will be conducted by hand. Soil will be removed in 10 cm (3.9 in) levels within natural strata, and all units will be excavated at least two levels (i.e., 20 cm [7.87 in]) into the underlying sterile soils. All soil removed from the excavation units will be screened through 0.635 (0.25 in) mesh to insure the recovery of small artifacts and ecofacts. Data will be recorded for each excavation level completed as a result of this excavation; these forms will include information such as depth below datum, types and quantities of artifacts collected, Munsell Color Chart soil characteristics, and any special samples collected, including soil samples. All excavation units will be recorded on individual site maps labeled relative to their particular grid location. Standard soils nomenclature will be used to describe the soil matrices, and pertinent soils attributes will be recorded. Soil attributes, including color and texture, will be recorded with reference to standard soil descriptions provided in the Munsell Color Charts.

In addition, standard volumetric samples (1 to 2 liters) will be taken from all buried midden strata. Representative samples of this material will be floated in the laboratory (see below). Flotation should permit the recovery of those small faunal and botanical remains that would pass easily through a 0.64 (.25 in) screen. Finally, a representative sample of the completed units from each site will be inspected in order to record the geomorphological properties of the area, as well as to identify any post-depositional processes that may have affected the overall integrity of the cultural deposits.

Feature Excavation

When identified, all cultural features will be photographed and drawn in plan view. In addition, all cultural features will be plotted on a master site map depicting the location of all natural features, as well as the completed excavation units. After this preliminary information has been collected and recorded permanently, excavation of the cultural features will be initiated. All cultural features will be bisected to reveal their vertical cross-sections or profiles. During the excavation of each cultural feature, a minimum of 10 liters (2.6 gallons) of soil will be retained for flotation analysis; in cases where features are small or they display some unique qualities, additional soil may be collected. Once the profile has been revealed, it will be drawn and photographed. During excavation of the remainder of the feature, soil will be screened through 0.318 cm (0.125 in) mesh to ensure the recovery of small artifacts and ecofacts. Finally, all soils identified within the features will be examined; attributes that will be recorded will include, at minimum, texture and color.

Unanticipated Discovery of Human Remains

During the Phase I cultural resources survey of the proposed Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items, one known and a second possible human burial were identified within the boundaries of Site 16IV49, later identified as the Braziel Baptist Church and cemetery complex. Should any other human remains be identified during the mitigation of the non-cemetery portion of Site 16IV49 or within the limits of Sites 16IV50, 16AN69, or 16AN70, all excavations will be halted immediately. After the identification of the human remains, personnel from R. Christopher Goodwin & Associate, Inc., will notify the Sheriff; the Coroner; the U.S. Army Corps of Engineers, New Orleans District; and the Office of Cultural Development, Division of Archeology, within 24 hours of the discovery of any human remains not associated with the Braziel Baptist Church and cemetery complex (Site 16IV49). An appropriate treatment plan then will be established. Finally, a treatment plan for the known human

remains identified within the limits of the Braziel Baptist Church and cemetery complex (Site 16IV49) will be discussed in a separate report chronicling the history of the church.

Geomorphological Analysis

Geomorphological analyses will be conducted at each site by a professional geomorphologist. This analysis will include a review of both general and specific references to the surficial geology and quaternary history of the proposed project reach. In addition, topographic and soil survey maps and geologic and hydrologic charts will be reviewed. Finally, a field visit to each site will be scheduled during which the geomorphologist will examine and describe a sample of the excavation units opened as a result of this mitigative effort.

Laboratory Methods

All cultural materials recovered as a result this data recovery effort will be cleaned and rinsed, as necessary. After drying, all artifacts will be sealed in clean plastic bags, with the pertinent provenience data written on the outside of each bag with a permanent marker. Each recovered item will be identified when possible and classified by material, type, and distinguishing attributes. The specific analytical procedures to be used during the laboratory analysis are presented below. Finally accessioning of the materials recovered during excavation will be accomplished using an MS Access database program.

Prehistoric Artifacts

While the recovery of such items is unlikely in light of the results of the Phase I cultural resource survey and archeological inventory of the proposed project reach, it is possible that some prehistoric artifacts may be recovered as a result of the proposed mitigation effort. These artifacts may include prehistoric lithic and ceramic materials. The following sections describe briefly the laboratory procedures that will be used to identify and classify any prehistoric materials recovered during the mitigation of Sites 16IV49, 16IV50, 16AN69, and 16AN70.

Prehistoric Lithic Artifacts

The lithic analysis protocol used during the laboratory analysis will be a "technological" or "functional" one designed to identify reduction trajectories, lithic industries, and tool functions. The protocol will focus on recording the technological characteristics of the lithic artifacts. The lithic artifact database will be organized by lithic material group, type, and subtype. The first level will describe the raw material type of the artifact. Lithic materials will be identified by utilizing recognized geological descriptions and terminology (Fenton and Fenton 1940; Whitten and Brooks 1972), and with the use of type specimens of known source. Lithic raw materials will be divided into distinct categories based on three factors: texture, color, and translucence.

"Chert" will be identified as a very fine to medium grained cryptocrystalline or microcrystalline sedimentary rock that varies in color from white to dark brown or black. "Chalcedony/agate" will be included those very fine to medium grained microcrystalline quartz sedimentary rocks that vary in color from transparent light gray to translucent dark brown. Translucence will be tested by holding the material up to a 60 or greater watt incandescent light. Although all cherts are diaphanous, chalcedony tends to be more so than other types of chert. If present, "silicified sandstone" will be defined as very fine to medium sand in a silica matrix. The cementing silica generally will be colorless to light gray or white with some individual sand grains visible in the matrix. Textures for this category probably will be somewhat grainy due to the failure of fracture planes to slice through all of the sand grains.

Chert and chalcedony may have been subjected to heat treating and they may vary in both color and luster as a result. Heat treating most likely will be denoted by a light pink to red hue. Luster will be used as a factor for determining the presence or absence of thermal alteration when color differentiation is insufficient. Other factors used as indicators of heat treating will include the presence of pot lid fracturing and crazing.

The second level, type, will be used to define the general class (e.g., unmodified flake,

core, or preform) of lithic artifact, while the last level, subtype, will specify morphological attributes (e.g., primary cortex, extensively reduced, or corner notched). These levels will follow classifications outlined by Callahan (1979), Crabtree (1972), and Servello (1983), among others.

Typological identifications for temporally and regionally diagnostic tools also will be included in the analysis. Such identifications will be made by reference to established lithic artifact typologies (e.g., Cambron and Hulse 1975; Ensor 1981; Perino 1985, 1991; Suhm and Jelks 1962). Identifications also will be based on both artifact form and morphometric attributes.

Prehistoric Ceramic Analysis

The prehistoric ceramic taxonomy will be organized by type, variety, surface decoration, aplastic inclusions, and vessel portion. The database will be designed to allow the analyst to record established ceramic types, as well as ceramic modes and attributes. The first level, type, will represent the established named ceramic type according to published sources such as Aten (1983), Frank (1976), Phillips (1970), and Suhm and Jelks (1962). The second level, variety, will identify the named ceramic variety according to the published typologies. Decoration will be used to describe the surface decoration present on the sherd (i.e., plain, brushed, ridged, or incised). The aplastic inclusion category will list the principal temper types observed in the paste of the sherd. Aplastic inclusion combinations (e.g., sand/grog and clay/grog) will be used to denote only the presence of those inclusions, not the numerical predominance of one over the other. The vessel portion column will list the part of the ceramic vessel from which the sherd was derived. Possible values in this field will include body, rim, base, neck/collar, and so forth. The "additional description" column will be used to record other observations.

Historic Period Artifacts

Based on the results of the Phase I investigation of the proposed project reach, it is expected that data recovery excavations of Sites 16IV49, 16IV50, 16AN69, and 16AN70 will produce a wide variety of historic period artifact types dating from the late eighteenth through the early twentieth centuries. Expected historic period artifact types include ceramic sherds, glass shards, metal artifacts, construction materials, personal items, pieces of hardware, and synthetic artifacts. For the purposes of the laboratory analysis, however, the recovered materials will be categorized into seven distinct groups. These groups will consist of historic period ceramics, glass, nails, buttons, miscellaneous artifacts, faunal remains, and botanical specimens. The miscellaneous artifact category will include those artifacts that do not easily fit into other categories. This category also will include artifacts that, according to their material of manufacture, might otherwise be subsumed under another category, but that will fit more easily into the miscellaneous category. For example, porcelain figurine fragments, while a ceramic artifact type, may be described more easily as a miscellaneous artifact simply because there may be so few of them recovered or because they do not lend themselves well to the traditional rigors of ceramic vessel analysis. Similarly, glass marbles or some iron tool fragments may be included in the miscellaneous artifacts category, rather than in the glass or metal categories.

The following discussion addresses the diagnostic characteristics that will be utilized during the analysis and interpretation of the various artifact subassemblages. In addition, it identifies the specific methods that will be applied to each class of cultural material.

Historic Period Ceramics

Analysis of the historic period ceramic sherds recovered during data recovery excavations of Sites 16IV49, 16IV50, 16AN69, and 16AN70 will proceed in two stages. The primary analysis of the historic period ceramic sherds will entail a detailed descriptive and functional examination of each recovered ceramic sherd. This level of analysis will document ceramic sherd decoration, paste type, vessel portion, and function. The second stage of the historic period ceramic analysis will involve the determination of the minimum number of ceramic vessels represented at each site. This analysis will not only permit a count of the number of ceramic vessels recovered from each site, but it also will aid in determining vessel form since some sherds may

have to be cross-mended during completion of the minimum number of vessels count, thus allowing identification of the vessel form.

Ceramic sherds recovered as a result of these investigation will be analyzed using a variety of methods. While Miller (1980) advocated that classification of historic period ceramic sherds should be made primarily on decorative type, this method obscures variability in the paste and other important chronological information. Worthy (1982), in contrast, suggests a classificatory scheme based on the integration of technology, form, function, and decorative elements. While this scheme may be effective, it requires that large portions of vessels be recovered; based on the results of the Phase I investigation, it this may not be the case. Therefore, the basic classificatory typology that will be used during the laboratory analysis will combine elements suggested by both Miller (1980, 1991) and Worthy (1982). These methods will focus primarily on paste color and vessel type, and secondarily on type of glaze, decorative elements, and vessel form. Attributes to be recorded will include paste, glaze type, decorative technique, and pattern. In addition, maker's marks will be identified and described using a variety of published sources, including Coysh and Henrywood (1982), Kovel and Kovel (1986), and Cushion (1976). Vessel form and function also will be noted when possible.

Minimum Vessel Count

In order to conduct analyses based on vessel form, and to enable application of Miller's economic scaling (Miller 1980 and 1991) to the ceramic subassemblage recovered from Sites 16IV49, 16IV50, 16AN69, and 16AN70, a minimum vessel count will be compiled. The minimum vessel count will be undertaken after the primary ceramic analysis is completed, and it will require the separation of all rim sherds from the remaining ceramic subassemblage. After all rim sherds are isolated, they will be sorted into categories based on the type of paste, glaze, decorative design, vessel shape, and curvature. Ceramic sherds then will be grouped as a single vessel either when there are direct crossmends, or when the sherds meet all of the following criteria: the sherds must share a common vessel form (e.g., bowl, plate, and bottle) and they must exhibit the same curvature in cross-section, thickness, granularity and color of paste, type and tone of glaze, and the same decorative pattern and color tone (e.g., variations in shades of purple). Each identified vessel will be assigned a sequential number in addition to the identifying catalog number of each sherd. Each vessel will be entered into the ceramic database that will include fields for vessel number, catalog number(s), paste type, glaze type, decorative type and pattern name, vessel form, rim diameter, and presumed function of the vessel.

Mean Ceramic Dates

In addition to minimum vessel counts, mean ceramic dates will be calculated for samples of historic period ceramics recovered from the various strata contained within Sites 16IV49, 16IV50, 16AN69, and 16AN70. These dates will be calculated using South's (1977) formula. As South (1977:75) states:

> Although this frequency-adjusted manufacture date might be assumed not to have anything to do with the occupation date for an historic site, we will see that there is remarkable similarity between the mean ceramic date derived from use of the formula and the historically known median occupation date of the . . . sites on which it is based.

Thus, in the proposed mitigation effort, South's (1977) formula will prove useful in producing mean ceramic dates that may be cross-checked against chronological data for each site derived from historical map series, census data, and/or other forms of historical information.

Glass Artifacts

Analysis of glass artifacts recovered from Sites 16IV49, 16IV50, 16AN69, and 16AN70 will include classification by manufacturing technique, form (including finish, base, and lip form), color, maker's marks, embossed lettering, decoration, and function. The chronology will be derived from known dates of manufacture for techniques developed during the late eighteenth, nineteenth, and early twentieth centuries. Functional identification of the various glass forms will be used to illuminate behavioral patterns, health concerns, and status, while the identifica-

tion of maker's marks will be informative for the analysis of local and regional trade

An important source that will be utilized during the identification and description of glass artifacts is *The Parks Canada Glass Glossary* (Jones and Sullivan 1989). In addition, *The Bottle Book* (Fike 1987) will be consulted extensively during identification of both pharmaceutical and medicinal bottles. Finally, *Bottle Makers and Their Marks* (Toulouse 1971) will be used to help identify and date those shards exhibiting maker's marks recovered from the site. In addition, a number of secondary resources will be referenced during the analysis.

Color

To ensure consistency in the identification of glass color, certain colors will be carefully defined. For example, "black" glass actually may be a very dark olive green color that appears black in reflected light. Sometimes referred to as "English style" glass, black glass contains high levels of iron, manganese, carbon, and occasionally cobalt (Jones and Sullivan 1989:14). Dates of manufacture for black glass originate at the beginning of the seventeenth century, when English glasshouses made the transition from wood to coal furnaces. Used mainly for wine bottles, it was one of the dominant types in use until ca. 1820, when olive green colored bottles became more prominent.

The aqua-colored glass category will include a wide range of near colorless glass characterized by a light blue to green tint. A variety of bottle types, including pharmaceuticals and mineral or soda water bottles, were manufactured from aqua-colored glass.

In 1864, William Leighton created a formula to produce a clear, soda-based, lime glass that was less expensive than the previously manufactured lead glass (Goodwin et al. 1984:42). By 1875, manufacturers were adding manganese to the batch to neutralize the naturally green tint (Jones and Sullivan 1989:13). Because of the presence of the manganese oxide, this glass "solarizes," or acquires an amethyst tint after prolonged exposure to sunlight. By the last quarter of the nineteenth century, manganese glass dominated the market for food storage containers. Manganese glass continued in use until the events associated with World War I cut off the supply of manganese oxide in 1915 (Munsey 1970:55). A number of other clear glass objects were made using manganese glass, including bases for oil lamps and various forms of tableware.

Manufacturing Method

Because of the fragmentary nature of the majority of the glass assemblage, manufacturing method may be difficult to identify with specificity. For this purpose, bases and necks will be useful, as, of course, will be the recovery of whole or nearly whole bottles for identifying manufacturing methods.

During the nineteenth century, major innovations occurred in glass manufacturing. Until the beginning of the nineteenth century, the majority of glass vessels were free or hand blown (Lorraine 1968). This produced an asymmetrical shape, with irregular vessel wall thickness; no mold seams were evident on these vessels (Goodwin et al. 1984:41). The finish generally included a straight lip with an applied string rim. The basal kick-up tended to be high, and of varied profile.

In addition to free blown glass, a one-piece dip mold often was used to form the body of a bottle. An example of a dip-molded bottle was the four-sided case bottle produced during the seventeenth and eighteenth centuries. Dip molds formed the body and base of the bottle at the same time, leaving the shoulder, neck, and finish to be completed by hand. This tapered mold generally left no mold seams on the body, but a bulge occasionally was located at the shoulder as a result of overblowing the mold. This technique remained in use to produce a variety of bottle forms during the eighteenth century and it continued into the nineteenth century (Jones and Sullivan 1989:26).

A pontil was used to hold both free blown and dip-molded bottles during the finishing procedures; the pontil was attached to the base of a bottle with molten glass. When the bottle was complete, the pontil was removed, leaving a "scar" or small irregular concretion of glass on the exterior of the base. In addition to the pontil scar, dip-molded bottles had walls of fairly uniform thickness, a matte finish on the exterior from contacting the mold surface, and they were hand finished.

With the advent of the three-piece hinged mold in the beginning of the nineteenth century, mold seams became a diagnostic element of the method of manufacture. The first of the three-piece molds was patented in 1803 by Charles Chubsee (Dumbrell 1983:22). This type was replaced in 1821, by the simpler Ricketts three-piece mold (Jones and Sullivan 1989:30). These three-piece molds contained a dip-mold body, with two additional pieces that formed the shoulder and neck. There usually was a plate that molded the base, but the finish had to be formed by hand with a finishing tool. Obvious mold seams encircle the body just below the shoulder, and along opposite sides of the neck, terminating just below the lip.

The finishing tool that was used to shape the lip and rim was introduced in British glass factories ca.1828 (Jones and Sullivan 1989:43). After the body was removed from the mold, a pontil rod was attached to the base to hold the bottle while the finish was formed. The finishing tools were used to form the lip and the string rim from extra glass laid along the lip, where the blow pipe was detached. At the same time, the tool also was used to shape and size the bore. Once the lip was finished, the pontil rod was removed from the base, leaving a scar similar to those found on free-blown or dip-molded vessels.

Another type of pontil scar was formed by simply using the blow pipe itself as the pontil. This left a circular scar, and sometimes a short, tubular length of glass in the base. In the mid-nineteenth century, the snap case, which held the vessel between four padded arms, replaced the pontil rod. Bottles finished through the use of a snap case show no evidence of a pontil scar (Jones and Sullivan 1989:46).

By the middle of the nineteenth century, two other methods of bottle molding were in use; these included post bottom and cup bottom molds. These molds varied between two, three, and four piece bodies, but the method in which the base was formed was distinctive. The post bottom mold had a circular or oval plate that formed the center of the typically indented base. This frequently was embossed with a maker's mark or with the mark of the company that ordered the bottle. The segments of the body mold extended onto the base, and across the resting point of the bottle. This mold type was identifiable by the circular mold seam found around the center of the base, and by the body seams that meet the seam at the base.

In contrast, the cup bottom mold formed a vessel with no seams on the base. The base was formed by a mold plate with a shallow indentation or cup cut into it. This left a distinctive seam around the body of the bottle just above the base. Both of these techniques still required the use of a finishing tool to create the lip and string rim, though this usually was done while the bottle was held by a snap case.

Towards the end of the nineteenth century, molded bottles were superceded by automated glassblowers. The first semi-automatic process was developed in 1881, but it was used mostly in the manufacture of fruit jars. It was not until Michael Owens patented his fully automatic bottle-making machine in 1903 that machine-made bottles became popular. Machine-made bottles contained both body and neck seams that continued onto and over the finish, which was formed as part of the mold. They also had a characteristic suction scar on the base (Jones and Sullivan 1989:38).

The finish on a bottle usually was the last part of the vessel to be formed. This included the lip, string rim, and the interior bore. Early bottle finishes were hand-formed, usually by simply smoothing the cracked-off neck and by adding a string rim. Sometimes the lip was everted or flared, especially on pharmaceutical bottles. From the late 1820s to the beginning of the twentieth century, when machine-made bottles became common, these finishes were formed with a finishing tool that was used to shape the bore, lip, and string rim at the same time.

Tablewares typically were made from higher quality glass. These bowls, plates, cups, and glasses usually were decorated, often by cutting or engraving. During the late seventeenth century, a process for molding glassware objects was developed; this technique was refined to allow the molding of hollowware objects during the 1820s (Jones and Sullivan 1989:34). This "pressed glass" became an inexpensive variety of tableware that still is prevalent today. Unlike cut glass, pressed glass is characterized by duller edges on the faceted decoration. A wide range of decorative motifs could be used on pressed glass tablewares. Mold seams may be present unless they

have been ground off. Pressing also was used on a number of non-tableware objects.

Nails

A separate database will be created for the analysis of the nails recovered during the excavation of Sites 16IV49, 16IV50, 16AN69, and 16AN70. This analysis will focus on material, form, method and date of manufacture, size, and type. The variable "nail type" will be based on types defined previously in the volume *Historic Louisiana Nails: Aids to the Dating of Old Buildings* (Edwards and Wells 1993). Whole nails will be defined as those with a head, or a finished end. These will be separated from the nail fragments, and they will be sorted by size and manufacturing method.

Edwards and Wells' (1993) criteria will be used to identify the various nail forms recovered from Sites 16IV49, 16IV50, 16AN69, and 16AN70; these may include such nail types as sprigs, brads, common nails, and spikes. Sprigs are small, headless nails used for finishings on furniture or architecture. Brads, also generally used for finishing, are headless or have a small L-shaped projection instead of a head. "Common" nails consist of all other headed nails measuring less than 6 in (15.24 cm). Spikes also are common on historic period sites; these headed nails generally measure greater than 6 in (15.24 cm) in length. The size categories used in the analysis will be 0 to 1 in (0 to 2.54 cm), 1 to 2 in (2.54 to 5.08 cm), 2 to 4 in (5.08 to 10.16 cm), 4 to 6 in (10.16 to 15.24 cm), and 6 to 10 in (15.24 to 25.4 cm). English measurement will be used during the nail analysis to correlate better the analytical and manufactured sizes.

Nail manufacturing methods included forging, cutting, and drawing. Hand-shaped, forged, or wrought nails were popular from the 1730s to the 1820s (Edwards and Wells 1993:2, 45). The transition from wrought nails to cut nails took place between 1790 and 1830, though there was some overlap in popularity (Nelson 1968). Cut nails were produced in several varieties by cutting flat iron sheets into nail blanks. These nails were common during the late eighteenth through mid-nineteenth centuries. Wire nails, manufactured by drawing out an iron wire, were circular in form; they were produced after 1850, and by the end of the nineteenth century they had become more popular than cut nails.

Several diagnostic features will be used to identify and date the nails that are suitable for type analysis. These will include surface texture; shape of the shaft (taper and cross-section); shape of the neck, head, and point; and morphology of the nail burr (a thin ridge running along one or several edges of the nail). The material from which the nail is manufactured, typically iron or steel, and other markings such as cold-shuts (creases or rifts in the metal) on hand-wrought nails, and cut-face cracking on cut nails, also will be useful during identification (Edwards and Wells 1993:26-43).

Also noted in the analysis will be whether or not the nail was clinched. A clinched nail was hammered through the wood and then bent over so that the point could be hammered back into the wood or bent over flat, preventing the nail from working loose. Clinching often was used when moveable parts, such as doors and shutters, were being secured. Wrought nails often were used in construction activities that required clinching, because the soft iron from which they were forged did not break when bent (Edwards and Wells 1993:3).

Buttons

A variety of sources will be utilized during the analysis of the buttons recovered from Sites 16IV49, 16IV50, 16AN69, and 16AN70. *The Big Book of Buttons* (Hughes and Lester 1981) will be consulted for information about construction techniques, shank types, and dates, and this reference will be especially useful during the classification of both metal and glass buttons. Lamm et al. (1970) discuss manufacturing methods, functions, and classification of porcelain buttons and various ceramic button patents. Additional button patents are discussed by Prosser (1968) and Kelso (1971) has prepared a classification of shell buttons that will be useful for the analysis of any buttons of this type recovered from the sites.

Several archeological sources also will be examined. Otto (1984) and South (1964) provide two of the seminal studies pertaining to eighteenth and nineteenth century buttons recovered from archeological sites. Otto (1984), in his study

of Cannon's Point Plantation in Georgia, used the buttons recovered from that plantation site in his review of plantation status patterns. Louisiana archeological site reports reviewed for this analysis will include an examination of the buttons recovered from the Greater New Orleans Bridge No. 2 right-of-way study (Thigpen 1986), the study of Ashland-Belle Helene Plantation (16AN26) (Yakubik et al. 1994), and the study of the Nina Plantation in Pointe Coupee Parish, Louisiana (Markell et al. 1999).

Miscellaneous Artifacts

The laboratory analysis also will include the examination of a wide range of miscellaneous artifact types. All metals other than nails will be classified as miscellaneous artifacts. Also included in this category will be worked bone artifacts, personal items, jewelry, beads, personal items, arms and ammunition, toys, and a variety of other artifact classes. The database created for this analysis will include the recorded material, type, dimensions, weight (if applicable), function, and physical characteristics of the item being examined. Any decoration, writing, or manufacturer's marks will be described and identified when possible. Specific classes of artifacts that will be included in the miscellaneous artifact category are described below.

Figurines

Porcelain figurines were manufactured in a variety of different styles and by different companies throughout the nineteenth and early twentieth centuries. Unfortunately, too little is known about the time frame associated with technical and stylistic changes in figurine production to use these attributes as an effective dating technique (Noël Hume 1969:316-319). Figurine fragments will be described thoroughly; descriptions will include material type, manufacturing process, size, and color, as well as any other diagnostic attributes.

Marbles

Many marbles recovered from historic seventeenth, eighteenth, and nineteenth century sites in the United States arrived as imports from Germany, England, and Holland. Traditionally, marbles have been made from a variety of materials including ceramic, stone, and glass (Carskadden et al. 1985:86). Stone marble production and export began in England and Holland during the seventeenth century; however, Germany dominated the market by the eighteenth century. German stone marble production peaked in 1740, and again between 1850 and the 1870s; it then waned by World War I. By 1846, Germany also was producing hand-made glass marbles; imports also were halted by World War I. Most hand-made marbles were out of production by 1920 (Randall 1971:104).

Early hand-made glass marbles usually included clear glass with spirals of different colors in the interior. Hand-made glass marbles were characterized by two pontil marks on opposite sides, and by a slightly irregular shape. The first machine-made marbles came into production in 1901; they differed from the hand-made marbles in that they usually were opaque and they contained a single pontil mark. By 1926, machine-made marble production was fully developed; more regularly shaped marbles with no pontil marks, in a variety of colors and patterns, became the norm (Randall 1971:104-105; Carskadden et al. 1985:91-93). Attributes recorded during the laboratory analysis will include material and method of manufacture, diameter, color, and decoration.

Tobacco Pipes

For analytical purposes, tobacco pipes will be divided into groups based on material type and form. Other attributes noted in the analysis will include glaze type, decorative elements, and maker's mark type if any are visible. Identification and dating of the pipes will be based on formal and decorative attributes, and on maker's marks, where present. Sources of great utility in identification and dating will include Humphrey (1969), Walker (1968 and 1983), Alexander (1990), Duco (1982), and Hansen (1971). In addition, pipestem bore diameters will be measured as appropriate, and dating methods using these data will be applied to the sample.

Beads

Bead analysis will rely on previously defined attributes and classifications established for glass trade beads (Sprague 1991). Attributes included in the analysis will include material, manufacturing method, style, shape, color, light

(opacity), luster, and bead and bore dimensions. The primary distinctions between beads will be the material and the method of manufacture. Historic period beads were manufactured either by drawing, winding, or molding. These methods are reviewed below.

Drawn beads were manufactured by blowing air into a gather of glass and stretching it into a long tube that then was cut to the desired size. This method often resulted in striations and elongated air bubbles that extend parallel to the long axis of the bead. Wound, or wire wound, beads were formed by wrapping a heated cane or rod of glass around a wire that created the perforation or bore of the bead. Wound beads usually exhibit striations and air bubbles that are oriented perpendicular to the long axis of the bead. Mold-pressed beads were made by clamping two halves of a mold around a gather of glass. A wire was inserted to form the perforation. This method created a seam that ran either parallel to or across the axis of the bead. On the more expensive molded beads, however, sanding and polishing has removed all evidence of this seam. In addition to a seam, most molded beads had distinctive conical or tapered perforations (Sprague 1991:150).

Faunal Material

To conform with the intent of a characterization of the deposits, appropriate sampling methods will be selected that will provide access to as broad a sample of faunal specimens as possible. Proveniences with fewer than 25 specimens will be included in the analysis in their entirety; those with more than 25 faunal specimens will be subjected to a 50 percent random sample. For this sampling procedure, tables of random numbers will be computer-generated. Bags containing faunal specimens from each analytic unit will be placed on a numbered grid and selected in accordance with the random number tables. Judgment, however, will be used in determining the final selection. For example, if a clearly unique specimen from a particular analytic unit is bypassed during the random number choice, it will be included later in order to ensure that the species list is as complete as possible. This process will result in a sample of faunal material from all areas and temporal periods of the sites sufficient to characterize the assemblage.

Primary data collected will consist of raw fragment counts, fragment counts adjusted for fitted specimens, and weights to the nearest 0.1 gram. Identifications will be carried out to the lowest taxon possible and will follow standard zoological classification and nomenclature. Also noted during the primary analysis will be worked bone, as well as evidence of butchering marks, burning and ashing, and gnaw marks.

Secondary data will be derived from calculations to determine the minimum number of individuals (MNI) represented for each taxon, and the biomass (meat weight) represented by the bone weight for each taxon. MNI will be calculated for each provenience or analytical unit, using the criteria of side, size, age, and sex (Wing and Brown 1979:123-126; Reitz and Scarry 1987:17). Biomass will be estimated using the log-log regression formula of skeletal mass allometry, based on bone weight (Wing and Brown 1979:127-129; Reitz and Scarry 1987:18-19, 67; Reitz et al. 1985). This method predicts the amount of meat that would have been adhering to the recovered bones; therefore, it will provide a relatively conservative estimate of the amount of meat contributed by each species represented in the assemblage.

Botanical Material

During data recovery excavations at Sites 16IV49, 16IV50, 16AN69, and 16AN70, soil samples will be taken of all cultural features; in addition, soil samples (1 to 2 liters) will be collected from each cultural strata. These samples will be subjected to a water separation or "flotation" technique in the laboratory. Flotation processing will employ standard and conventional techniques and equipment. Each soil sample will be measured volumetrically in one liter increments prior to flotation. The flotation technique will be of the modified tub type. A geological sieve with openings measuring less than 1 mm in size will serve as the flotation screen. Once filled with matrix, the flotation screen will be submerged partially in a tub of water and gently agitated back and forth to separate the matrix from the botanical specimens contained therein. The botanical specimens that float will be skimmed off with a kitchen strainer, placed in a drying flat, labeled as the "light fraction," and allowed to dry

at room temperature. Once all of the soil has been removed from the screen, the materials too heavy to float will be placed in a drying flat, labeled as the "heavy fraction," and allowed to dry at room temperature. The tub then will be cleaned between to prevent cross-contamination between samples.

After drying, the light fraction from each sample will be weighed and then sifted through a series of geological sieves (2.00 mm, 1.70 mm, 1.00 mm, 0.71 mm, 0.355 mm). All wood, nutshell, and seeds will be sorted from the greater than 2.00 mm fractions only; the remainder of the sample (less than 2.00 in size) will be visually scanned for botanical remains. When noted, whole seeds and seed fragments will be recovered from all size fractions, and their identification will be attempted. In addition, all botanical specimens measuring 2 mm or greater in size will be collected from the heavy fractions and included in the analysis.

Several categories of plant remains will be designed to describe the character of the remains. An "other stem (Monocot)" category will describe stem materials that were derived from an unidentified monocotyledonous plant. A Cheno-Am category will include small starch seeds that include both *Chenopodium* sp. (goosefoot) or *Amaranthus* sp. (pigweed). A general seed category will be created to describe all non-Cheno-Am seed remains. Finally, nut species will be divided among various species, e.g., hickory, oak, etc.

Identification of the plant remains will be made with the aid of standard reference guides and a reference collection of relevant species. The ubiquity (percent of total samples in which a given taxon is present) of each category will be calculated. Ubiquity is a good analytical technique in paleoethnobotany, because it is "useful, within limitations, for showing general trends when one has little control over the sources of patterning in one's data" (Popper 1988:64).

Research Issues

The final section of this mitigation plan reviews research issues germane to the archeological sites located within the Areas of Potential Effect that have been identified as significant cultural resources. The discussion is both topical and temporal in nature, and it focuses on how data recovery excavations at Sites 16IV49, 16IV50, 16AN69, and 16AN70 may provide data relevant to the variety of research issues that currently are under consideration and investigation by scholars working in this portion of southern Louisiana. In general, these research questions focus on issues related to riverine economic development in Ascension and Iberville Parishes, Louisiana. They relate to the development of the sugar and rice industries; regional diversity in plantation operations prior to and after the Civil War; the role of plantation workers both before and after the Civil War, as well as their living conditions; the rise of tenant farming in the region; and other finer-scale economic trends such as dietary reconstructions through time and space.

The Sugar Industry

According to *Louisiana's Comprehensive Archaeological Plan* (Smith et al. 1983), sugar production dominated the lifestyle and landscape of the Management Unit V area, which contains the proposed project area, for approximately 160 years (see Chapter IV of this document). While experimentation with sugar refining was conducted as early as the 1760s, full-scale sugar production became entrenched in the area by 1796. On the eve of the Civil War, the sugar industry was valued at approximately $194 million. With the onset of the war, however, the sugar industry declined rapidly and the number of sugar plantations dropped sharply from 1,200 before the war to 175 plantations after the war. Nevertheless, many planters returned to sugar cane farming after the Civil War, and sugar continues to be an important industry throughout the area today.

Although historians have produced much literature on the sugar industry and sugar plantations in the Southeast, few archeologists have made the sugar industry the focus of their attention. It is clear, however, that the archeological remains of sugar plantations can provide much needed information that is not available in documentary histories. The following section provides an overview of the archeological signature of sugar plantations, i.e., the footprint, that they may have left behind once they are abandoned. This is particularly important to the proposed mitigation of Sites 16IV49, 16IV50,

16AN69, and 16AN70, because they are located within what was once one of the richest sugar producing areas in southern Louisiana.

Archeological Expectations

Because Louisiana sugar plantations were distinct, self-contained agricultural communities that brought together different people of varying social and economic status, and because there were many technological aspects to historic period sugar making, there exists the possibility of recovering a wide-range of specialized artifact assemblages from these plantation sites. Table 1 summarizes the expected archeological remains associated with sugar plantations scattered between Baton Rouge and New Orleans; Table 2 lists the characteristic components of sugar industry assemblages by period along the Mississippi River. Except for postbellum pumphouses, the majority of the structures and agricultural features existed landward of the protection levee. Nevertheless, these once landward areas today may be present within the unprotected batture because of bankline change and levee setbacks; this is the case for Sites 16AN69 and 16AN70 in Ascension Parish and Sites 16IV48 - 16IV52 in Iberville Parish. Some of the early Mississippi River sugar plantation structures in Louisiana were constructed surprisingly close to the riverbank. Considering the changes in the position of the Mississippi River during the historic period, the remains of some of the early sugar plantations including the remains of round sugarhouses, may be located on the batture or in the river.

Priorities for Further Research

While numerous sugar plantations lined the Mississippi River prior to 1835, comparatively few archeological remains from these plantations have been excavated. While some archeological data from the domestic residences have been recorded, both the domestic and industrial aspects of these plantations remain poorly understood. Archeological deposits from all components of pre-1835 sugar plantations should be excavated to build a more complete database concerning the development of the sugar industry. Through these excavations, the historical development of sugar plantations, along with cultural adaptations to the sugar industry, can be understood better.

Sugar plantations that operated between 1835 and 1890 have been documented more fully than the earlier ones. A number of archeological excavations have recorded portions of these plantations, providing a growing body of useful data. Most aspects of these sugar plantations, however, have not been recorded adequately. Further archeological investigations should examine all of the industrial aspects of these plantations, as well as chapel and store remains. Additional examples of intact remains associated with big houses, manager's houses, slave cabins, and kitchens also should be excavated. While some components of sugar plantations are more fully understood, many aspects remain undocumented.

Priorities for further research concerning the southeastern Louisiana sugar industry include all of the components of pre-1835 sugar plantations. Industrial components, chapels, and stores from the 1835-1890 period also need to be examined, along with the well preserved examples of the various domestic remains.

The Rice Industry

In addition to the sugar industry, the rice industry was very important to the economy of southern Louisiana. After the Civil War, the economy of the proposed project area in particular, and of the South in general, was in ruin. Many wealthy planters lost their lands, as well as their labor supply. The rejuvenation of the sugar industry, which required large amounts of capital investment and land, was slow. As an alternative, many planters turned to rice farming because it required less land, fewer field hands, and smaller amounts of initial capital investment to be profitable. The transition to rice farming occurred throughout much of Louisiana, including the proposed project area. Celeste Plantation, for example, was one of the first plantations in the vicinity of the proposed project area to make the shift to rice farming after the Civil War. The following sections outline the archeological expectations of rice farming, as well as priorities for further research for this little studied topic.

Archeological Expectations

Several factors affect the archeological expectations for rice cultivation features within the

Table 1. Archeological Expectations of the Sugar Industry by Period along the Mississippi River.

PRE-1835	1835-1890	1890-1930
	I. Domestic and Service Plantation Structures	
Big House - Located away from lave cabins and industrial complex; large foundation remains; some with large porch and columns; auxiliary structures such as wells, privies, and kitchen; improved walkways and road; gardens; refuse deposits; numerous artifacts, including large percentage of kitchen-related artifacts; utilitarian through expensive ceramic wares.	**Big House** - Similar to pre-1835 remains; postbellum big houses generally were smaller than antebellum big houses.	**Big House** - Similar to pre-1890 remains; houses generally smaller than in antebellum; adjacent garage; internal plumbing, heating, and electricity.
Overseer House - Located near or somewhat removed from slave cabins and industrial complex; small to medium foundation remains; auxiliary structures such as wells and privies; refuse deposits; moderate quantity of artifacts; primarily utilitarian wares.	**Manager's House** - Similar to pre-1835 remains.	**Manager's House** - Similar to pre-1890 remains; adjacent garage; internal plumbing and electricity.
Slave Cabins - Located near industrial complex, in linear arrangement along road; one or two room foundation remains; communal auxiliary structures such as wells and privies; refuse deposits; low quantity of artifacts, including high percentage of architectural artifacts; primarily utilitarian wares.	**Slave Cabins** - Similar to pre-1835 remains; set back from public road; increasing individualism in postbellum; increasing quantity of artifacts because of age; primarily utilitarian wares.	**Agricultural Labor Cabins** - Similar to pre-1890 remains; primarily former slave cabins; possibly internal plumbing and electricity.
Kitchen - Located near the Big House; one or two room foundation remains with a large oven or fireplace; well; refuse deposits with numerous food remains; utilitarian wares, cooking wares, and implements.	**Kitchen** - Similar to pre-1835 remains.	**Store** - Similar to pre-1890 remains; decreasing dependency on riverine cargo transportation.
Chapel - Located near the public road, within large plantation complex; small rectangular foundation remains, one storied; low quantity of artifacts other than architecture-related; personal and religious items.	**Chapel** - Similar to pre-1835 remains.	
Store - Located near the public road and the river; near historically identified landing; medium foundation remains; wide variety of artifacts; packing remains such as crate nails.	**Store** - Similar to pre-1835 remains.	

Table 1, continued

PRE-1835	1835-1890	1890-1930
II. INDUSTRIAL PLANTATION STRUCTURES		
Sugarhouses - Located near the levees; separate mill, furnace, and storage structures: Mill - Circular structural remains consisting of postholes from wooden structures, and brick foundations from brick structures; minimum of 10 m in diameter, normally larger. Furnace - Rectangular foundation remains, possibly brick piers, with brick chimney and furnace remains; minimum of 7 x 10 m. Storage and Drying Sheds - Rectangular brick foundation remains for brick sheds, or rectangular posthole arrangements for wooden sheds; interior posthole arrangements for drying racks. These three structures would be adjacent to each other. Expected artifacts include architectural remains, metal hardware and tools and course unglazed earthenware, sugar cone and urn fragments, fragments of cooper lining for cypress vats.	**Sugarhouses** - Located away from the river, nearly equidistant between the levee and the backswamp. Primarily large rectangular structures housing the steam-powered mill, furnace, and drying rooms; brick or wood structures about 15 - 20 m x 30 - 50 m; artifact expectations include architectural remains; tools and hardware, boiler parts, ladles, screens, vats, and kettle fragments. This style of sugarhouse began to be utilized in 1817; by the 1830s, its use was widespread.	**Sugarhouses** - Located in similar location to 1835-1890 sugarhouses; very large sugarhouses with 15 - 30 m x 30 - 60 m brick or concrete foundations; above ground expression probably with intact features expected; artifact expectations include architectural artifacts, boiler parts, vacuum apparatus parts; metal tools and hardware, steam machinery parts, metal vats, pans, screens, pumps, hydraulics and piping.
Brick Kilns - Located near river or levee; rectangular brick foundation remains of varying size, with flues in brick floor, and brick walls; numerous brick wasters, glazed bricks or "shiners," fire bricks, and possibly tiles in vicinity; all bricks handmade.	**Brick Kilns** - Similar to pre-1835 remains.	
Stables and Barns - Located near industrial complex within plantation, close to the river, and the public road; normally at least 5 x 7 m, with brick foundation, or rectangular arrangement of posts; in addition to architectural remains, artifactual expectations include tools, harness equipment, horseshoes, hardware, wagon parts, and barrel fragments; few kitchen-related artifacts are expected.	**Stables and Barns** - Located near industrial complex, farther from river than during earlier period; expectations similar to pre-1835 remains.	**Stables and Barns** - Similar to 1835-1890 remains, with increasing variety of sizes, shapes, and construction materials; above ground remains probably; wide variety of tools and equipment expected.
Workshops - Carpentry, blacksmith, and machine shops often were located near the industrial complex, close to the river; the size of these workshops varied considerably, depending on the industrial need; wood postholes and brick foundations are expected; artifacts would include tools, hardware, and machinery parts, based on the specific type of workshop encountered.	**Workshops** - Located near inland industrial complex; expectations similar to pre-1835 remains.	

Table 1, continued

PRE-1835	1835-1890	1890-1930
	II. INDUSTRIAL PLANTATION STRUCTURES	
	Drainage Wheel - Located either near the industrial complex for supplying water to sugarhouses, or near backswamp to drain fields; some portable; wheels 3 - 5 m diameter; expected foundational remains include brick or wood base for wheel, and brick platform for steam engine; artifacts include equipment fragments, tools, and architectural remains.	**Drainage Wheel** - Similar to 1835-1890 remains.
		Pump House - Located on landside of levee, near public road; wide variety of construction materials and techniques; above ground remains likely; metal piping, boilers, steam engine, and pump fragments expected.
	III. SUGAR CANE FIELD REMAINS	
Drainage canals with cross-ditches.	**Drainage canals with cross-ditches.**	**Drainage canals with cross-ditches.**
Linear configured cane fields.	**Linear configured cane fields.**	**Linear configured cane fields.**
Rotated crop fields.	**Rotated crop fields.**	**Rotated crops fields.**

Table 2. Characteristic Components of the Sugar Industry Assemblages by Period along the Mississippi River.

Pre 1835	1835-1865	1865-1900	1900-1930
Cultivation Attributes			
plow, hoe, harvest knife, shovel, hatchet, saw, carts, oxen, horses	plow, hoe, cane, cutter, shovel, hatchet, saw, drainage wheel, steam engine, boiler, carts, oxen, horses, mules, narrow gauge rail cars	rotary hoe, cane cutter, disc cultivator, cane coverer, cane shredder, cane hooks, light draft plow, horses, mules, rail cars, cane sling, derricks, car loaders	rotary hoe, cane cutter, disc cultivator, cane coverer, cane shredder, cane hooks, light draft plow, trucks, tractors, horses, mules, rail cars, cane sling, derricks, car loaders, mechanical harvesters, hoeing machines, cane pilers
II. Processing Attributes			
feeders, rollers, gears, sprockets, sugar cones (containers), brick furnace, kettles, retaining vats, ladles, filters, hogsheads	feeders, iron rollers, large gears, sprockets, steam engine, boilers, vacuum apparatus, multiple effects apparatus, brick furnace, kettles, retaining vats, ladles, filters, hogsheads	feeders, iron rollers, large gears, sprockets, steam engine, boilers, vacuum apparatus, multiple effects apparatus, brick furnace, kettles, retaining vats, ladles, filters, hogsheads, hydraulic regulator, hepworth centrifuge	feeders, iron rollers, large gears, sprockets, steam engine, boilers, vacuum apparatus, multiple effects apparatus, brick furnace, kettles, retaining vats, ladles, filters, hogsheads, hydraulic regulator, hepworth centrifuge, multiple milling train

parishes containing Sites 16IV49, 16IV50, 16AN69, and 16AN70. First, many of the activities associated with rice production produced no identifiable archeological remains. For example, methods for harvesting and binding rice, as well as the type of plow used for field preparation, are rice production activities that have produced no recognizable archeological deposits. In addition, some archeological remains associated with rice production have been masked or destroyed by subsequent agricultural land-uses. Many fields once used for rice cultivation have been modified for other crop production, usually sugar. Canals, cross ditches, and rice levees, once an integral part of rice fields, have been incorporated into sugar fields, filled, or leveled. Finally, numerous natural and cultural activities have modified or destroyed many of the features associated with rice production.

Table 3 summarizes archeological features associated with rice production along the Mississippi River in the river parishes. Through an examination of this table, several factors become clear. Most of the archeological expectations are associated with rice irrigation. These include rice irrigation flumes, as well as the iron pipes, pump sheds, and various remains associated with the pumps. Similar structures often were used in conjunction with sugar or other crop production. In addition, farmers often grew sugar on the higher fields near the river, and rice in the lower, poorly drained fields positioned near the backswamps. In those cases, a "rice" dominated farmstead complex would not develop. Finally, as mentioned earlier, most of the rice field remains would be altered or destroyed through subsequent agricultural activities. Thus, while a variety of archeological remains may be associated with the rice farms, the majority of those that are likely to be recovered archeologically are related to rice irrigation systems.

Priorities for Further Research

There are several priorities for further research concerning the rice industry in the river parishes between Baton Rouge and New Orleans. These consist of identifying archeological features and deposits associated with rice production that have the potential to provide important additional information about that rice industry. There are at least six priorities for further archeological investigations concerning the in the parishes scattered between Baton Rouge and New Orleans. Three of these are associated with the batture and artificial levees, and three are associated with landward activities. Batture and artificial levee features that should be considered priorities for further research include early water lifting devices, pump sheds, and sluice gates. While they would date from 1860-1890, the range of variability and form of these features remains unknown. Likewise, while pump houses were common in the late nineteenth and early twentieth century, they are rarely mentioned in the documentary record, and their archeological remains have not been recorded adequately. Sluice gates were utilized, often with gravity-fed rice flumes, to control the flow of water through the artificial levees, or from borrow pits into the rice canals. Their construction has not been fully recorded archeologically.

The three landward classes of rice industry features and deposits that currently need further investigation are the farmstead domestic and structural complexes, the layout of rice field remains, and the construction of plank gates. Farmstead complexes, including barns and outbuildings directly related to the rice industry, have not been excavated. These should be studied, and compared with sugar plantations and other types of farmstead complexes, to determine any distinctions between the different complexes, and to establish why such differences exist. Finally, the spatial relationship of irrigation ditches and rice levees should be examined and compared between sites to determine chronological and regional variations, as well as to identify the factors that caused these variations. In addition, the construction of plank gates, which separated different sections of rice fields, should be recorded to record how the flow of water was controlled between sections of rice fields.

Landings, Wharves, and Levee-Related Structures

In addition to the sugar and rice industries, and even as a result of them, the batture area within the vicinity of Sites 16IV49, 16IV50, 16AN69, and 16AN70 may have had a variety of ancillary uses, including the location of landings, wharves, and levee-related structures, etc. The following section briefly presents the results an archival study of

Table 3. Archeological Expectation of the Rice Cultivation by Period along the Mississippi River.

PRE-1850	1850-1890	1890-1930s
I. Farmstead Structures - (Not rice specific; inland from levee.)		
Small Domestic Residences - Likely somewhat away from any slave cabins; proximate to barns and sheds; small to moderate house remains; auxiliary structures such as wells and privies; refuse deposits; moderate quantity of artifacts including many kitchen related artifacts; utilitarian through moderately high status wares.	**Small and Large Domestic Residences** - Likely away from slave cabins and production buildings; moderate to large structural remains, auxiliary structures such as wells and privies; kitchen; improved walkways and road; gardens; refuse deposits; moderate to large quantity of artifacts, including many kitchen related artifacts; utilitarian through high status wares.	**Small and Large Domestic Residences** - Set away from former slave cabins, tenant farm houses, and production buildings; small to large structural remains; auxiliary structures such as wells and privies; improved walkways and road; gardens; refuse deposits. moderate to large quantity of artifacts, including many kitchen related artifacts; utilitarian through moderately high status wares.
Multifunctional Barns and Sheds - Likely near main house or possible slave cabins; large to small structural remains; artifacts primarily architecture, various hardware, and farm production and maintenance equipment.	**Multifunctional Barns and Sheds** - Near slave cabins; large to small structural remains; artifacts primarily architecture, various hardware, farm production, and maintenance equipment.	**Multifunctional Barns and Sheds** - Near former slave cabins, tenant farm houses, or main houses; large to small structural remains; artifacts primarily architecture, various hardware, farm production, and maintenance equipment.
Few Slave Cabins - Somewhat removed from main house; one or two room structural remains; communal wells and privies; possible small communal kitchen; small quantity of artifacts with high percentage of low socio-economic level artifacts; utilitarian wares.	**Slave Cabins** - Set away from main house and public roads; one or two room structural remains; communal wells and privies; small quantity of artifacts with high percentage of low socio-economic level artifacts; utilitarian wares; linear configuration along plantation road; increased individualism after the Civil War.	**Some Former Slave Cabins** - Set away from main house; one or two room structural remains; wells and privies; small to moderate quantity of artifacts with high percentage of low socio-economic level artifacts; utilitarian wares.
		Tenant Farm Houses - Small houses on individually leased land tracts; small multifunctional barns and sheds in vicinity; refuse deposits; small to moderate quantity of artifacts with high percentage of low socio-economic level artifacts; utilitarian wares predominate.
II. Rice Field Remains (Inland from levee.)		
Drainage Canals with Crossditches (for irrigation).	**Drainage Canal with Crossditches (for irrigation).**	**Drainage Canals with Crossditches (for irrigation).**

Table 3, continued

PRE-1850	1850-1890	1890-1930s
	II. Rice Field Remains (Inland from levee.)	
Field Configuration - Irregular	**Field Configuration** - Irregular; larger, uniform field pattern (such as the checker-board pattern).	**Field Configuration** - Irregular; checker-board Field Patterns.
	Rice Levees - 25 - 50 cm high levees in rice fields used to divide the fields into irrigation sections.	**Rice Levees** - 25 - 50 cm high levees in rice fields, used to divide the fields into irrigation sections.
	Plank Gates Between Rice Field Sections - Located in drainage canals adjacent to rice levees; vertical boards or framework may survive.	**Plank Gates Between Rice Field Sections** - Located in drainage canals adjacent to rice levees; vertical boards or framework may survive.
	III. Irrigation (Batture and levee remains.)	
Openings in Levee	**Openings in Levee**	**Siphon Flumes (such as at 16SJB29)** - On batture, perpendicular to the river.
	Sluice Gates - Located at openings in levee or on boxed flumes/pipes; wood or iron gates on frames may survive.	**Pit Reservoirs** - Normally on riverside of levee; adjacent to boxed flumes, siphon flumes or pipes; often borrow pits.
	Boxed Flumes/Pipes (such as at 16SJ40) -On batture; passing through levee or into borrow pit.	**Iron Pipes** - About 12 inch/30 cm diameter.
	Some Pit Reservoirs - Normally on riverside of levee; may have boxed flumes, pipes, or pump fragments adjacent to reservoir; may use borrow pits.	**Steam Engine and Boiler Parts**
	Some Iron Pipes - About 12 inch/30 cm diameter.	**Steam Boiler Platforms** - Near siphon flume or iron pipes; brick of wood construction.
	Horse Powered "Persian Wheel" Pump Remains - Foundation adjacent to water source; associated with ditch or wood trough; precise form unknown.	**Coal and Coal Cinders**

Table 3, continued

PRE-1850	1850-1890	1890-1930s
	II. Rice Field Remains (Inland from levee.)	
	Few Steam Engine and Boiler Parts	**Pump Sheds** - Brick or wood platforms; associated steam engine boiler and parts; iron pipes.
	Few Steam Boiler Platforms - Brick or wood platforms; associated steam engine boiler and parts; iron pipes	**Machinery Parts**
	Pump Sheds - On batture or levee; small foundation remains, possibly made of square or rectangular post arrangement; brick or wood platform for pump; artifacts primarily architectural, machinery parts, and associated equipment.	
	Machinery Parts	

historic Mississippi River landings, wharves, and levee structures that were situated between Baton Rouge and New Orleans. This discussion provides a context within which such structures, identified within the vicinity of Sites 16IV49, 16IV50, 16AN69, and 16AN70 can be examined and discussed.

Landings

During the steamboat era (1825-1910), there were 1,069 recorded Mississippi River landings between Baton Rouge and New Orleans (Cayton 1881:17-35). Approximately 22 of these contained landing structures, wharves, ramps, walkways, or platforms (Hunter 1949:346). Mississippi River landings were places where people congregated. Besides a place for travelers and cargo, the river landings were akin to mini-markets; some people made their livelihood selling products to the boats, such as wood for steamboat engines, as well as fresh game and fish. Thus, landings may produce a wide variety of archeological signatures, ranging from storage facilities to production areas.

Wharves

There were 22 major historic landing points along the Mississippi River between Baton Rouge and New Orleans. These landing points were plotted according to contemporary Mississippi River directories: *The Western Pilot*, compiled by Samuel Cummings (1821 - 1859), Conclin's *New River Guide* (1849), the *Journals of Joseph W. Fawcett* (1844 - 1892), and Cayton's *Landings on All of the Western and Southern Rivers and Bayous* (1881). The river directories were published for pilots and boatmen attempting to travel up and down the treacherous "western" rivers such as the Ohio, the Missouri, the Kentucky, and the Mississippi.

Unfortunately, any structures that may have been associated with the landings described in these publications were poorly documented. Part of the reason historic landings were not described in great detail may lie in the fact that many of these places were considered disreputable. Although no design information has been recorded on historic landing structures, considering the speed of the Mississippi River currents, these landing structures most likely were marginal wharves. That is, they were designed parallel to the river, unlike piers which extended perpendicular to the river (Greene 1917). The materials used to construct these landing point wharves also are unknown. The historic steamboat warehouse landing at the Tally Ho Plantation in Bayou Goula in Iberville Parish, for example, was a wooden marginal wharf that was positioned on a curve in the batture bankline, according to an 1897 levee map. To maintain its stability against the rapid Mississippi River currents, a riprap gravity wall probably was built beneath the water. In addition to the marginal wharf on the river, the landing area at Bayou Goula maintained a wooden platform served as an extension of the warehouse. The platform was designed to keep cargo dry. It is uncertain when wooden warehouse platforms first were used along the Mississippi River. Considering the volatility of the rising river, however, such platforms probably were scarce, used only on unusually high ground, or situated away from the river.

Levee Structures

Besides the importation and exportation of people and products, the historic riverbank also was a place of community activity where social functions were held. Between 1880 and 1925, showboats, such as the *New Era* and the *New Sensation,* stopped annually at the larger landings and performed for the locals (Bryant et al. 1982; Gaudet 1982). In addition, the elevated levee was used during the historic period as a place for relaxing. Benches and platforms were constructed to watch the boats, and meet family and friends where the night breezes from the river were welcomed. After the great flood of 1927, however, the maintenance of the Mississippi River levee and batture areas was increased by the U.S. Army Corps of Engineers. Since that time, the use of the levee and batture areas have become restricted; industrial development such as barge moorings and petrochemical pipeline rights-of-way have limited the access to the riverbank areas, while batture vegetation has grown steadily. The higher post-1927 levees also permanently changed the river vista, further cutting the batture out of daily life. The batture and levee are no longer a communal place of repose for the people living along the various Mississippi River towns.

Priorities for Further Research

The available historical and archeological data indicate that outside of commercial centers such as New Orleans and Baton Rouge, few archeological remains of landings, wharves, and structures built on levees have survived. The expected remains are discussed below and summarized in Table 4.

Wharves rarely were constructed within the rural river parishes. The few that were constructed were located at the major landing points along the river, near post offices, stores, and other commercial centers. These wharves included both floating wharves and marginal wharves. Floating wharves consisted of barges or boats secured to the shore, with plank walkways extending onto the batture. There is no evidence to indicate floating wharves were constructed for that purpose. Rather, they were old vessels that no longer were used for riverine transportation. While useful equipment likely was removed from the vessels when they were transformed into floating wharves, the other attributes of the vessels remained virtually unchanged. Because of their placement within the dynamic Mississippi River, these floating wharves would have left few, if any, archeological remains. Any that may have survived likely are located along or within an accreting bank, where they would be protected from the damaging river currents. While unlikely, recovered vessels could be identified by their location at a historically recognized point or by positive vessel identification. Historic ships, boats, and barges are identified within *Louisiana's Comprehensive Archaeological Plan* (Smith et al. 1983) as important archeological resources. Any historic vessels, including remains of floating wharves, located during archeological surveys are potentially significant cultural resources, and are priorities for further archeological investigation.

Wooden marginal wharves consisted of posts driven into the river bed, and secured with riprap. If the superstructure of an historic marginal wharf survived, it certainly warrants architectural recordation and additional historical research. Where the lower portions of marginal wharves have survived, they must be evaluated within the context of the landward associations. These wharves did not exist within a vacuum, but rather they formed a vital link within an extended site complex. Warehouses, platforms, stores, post offices, commercial centers, plantations, landings and wharves, and nonstructural activity areas all formed interrelated parts of site complexes. During the evaluation of wharf remains, a portion of the evaluation must consider the research potential of the wharf within the entire site complex. While wharf remains may not possess the quality of significance in and of themselves, they may form significant contributing elements within a site complex.

Warehouses located on the batture adjacent to landings and wharves also may be important resources. These warehouses were used primarily for storing agricultural commodities such as sugar and rice prior to shipment. While few have been documented, they likely were associated with plantation complexes. For example, the Tally-Ho Plantation contained two warehouses adjacent to the Bayou Goula landing wharf during the late nineteenth century. Warehouses such as these were important components of the local economic network that have not been examined archeologically. The excavation of such a warehouse could provide important information concerning the transportation of goods from plantations to commercial centers such as New Orleans and Baton Rouge. This class of structures represents a priority for further archeological investigation.

Some platforms were located on the batture adjacent to landings and wharves. These platforms provided a dry place for the temporary storage of goods. As indicated above, some simply were old boats and barges dragged onto the batture; little archeological evidence of these structures has survived. Simple wooden platforms also may have been used. While archeological remains of these platforms may be extant, these types of structures have not been tested archeologically, and the nature of associated deposits is unknown. It is probable that the archeological deposits associated with these platforms are not significant resources. Located platforms, however, should be tested to provide the empirical data necessary for evaluation.

Historic period landings, wharves, and levee structures were an important part of rural life along the lower Mississippi River. These structures, have not produced many archeological remains. Landings normally were placed directly onto the batture, leaving few, if any, archeological deposits. The occasional wharves either were floating wharves,

Table 4. Archeological Expectations for Landings, Wharves, and Levee Structures.

Structure Type	Archeological Expectations	Evaluation
Landing	Normally placed on unimproved batture; occasionally covered with boards; possibly surrounded by refuse.	Normally not identifiable; located examples with archeological deposits should be evaluated, in part, in the context of the site complex.
Floating Wharves	At edged river; constructed of moored boats and barges; possibly stripped of much equipment; most destroyed, but remains on accreting bank possible.	Potentially significant, if located, priority for further research.
Marginal Wharves	Series of posts along edge of river, normally at an historically important point; possibly secured by riprap.	Intact examples potentially significant; remains should be evaluated, in part, within context of site complex.
Warehouses on Batture	Brick or wood foundation remains near historically important point; few valuable fixed remains (annual flooding); numerous architectural artifacts; may include numerous commercial artifacts.	Potentially significant; priority for further research.
Batture Platforms by Landings	Remains of boats or barges on batture; simple wood platforms; square or rectangular arrangements of posts; few associated artifacts expected.	Should be tested to provide the empirical data necessary for evaluation.
Structures on Levees	Located on levees; wood platforms on top of levee; stairways upside of levee; bench remains; some refuse.	Those located on abandoned levees should be tested to provide the empirical data necessary for evaluation.
Historic Artificial Levees	One to two meter high levee remains, expected on accreting or stable bank, or adjacent to cut-off lakes; most likely destroyed through natural and cultural processes.	Eighteenth and early nineteenth century levees are potentially significant; located examples should be evaluated.
Historic Revetments	Located on the riverbend or within accreting bank; brush or wood revetments anchored with riprap or other material; early concrete, asphalt, brick, or other experimental revetments.	Late 19th and early 20th century experimental revetments are potentially significant; located examples should be evaluated.

which normally left no archeological trace, or marginal wharves. While nearly intact historic marginal wharves may be significant, the surviving lower posts must be evaluated, in part, within the context of the site complex of which they are a part. Warehouse remains have not been recorded archeologically, and are a priority for further testing. Batture platforms associated with landings have never been recorded archeologically. Examples should be tested to provide the empirical data necessary for evaluation.

Comparisons of Antebellum and Postbellum Material Culture

Since the archeological sites discussed in this mitigation plan lie within the vicinity of a number of plantation-related structures that are depicted on a variety of historic period maps of the area, it is likely that data recovery excavations will permit the comparison of material culture between planter and slave, and slave and freedmen. A number of recent plantation studies have described the difficulty of conducting comparisons of this nature in the absence of strict definitions of the concepts of production, distribution, use, and discard of material objects (Howson 1990). This difficulty often has led to the simple conclusion that material remains produced, used, and discarded by these groups is similar, or has led to the search for "Africanisms" in the material culture (Emerson 1988; Yakubik 1993). The search for general patterns of material culture acquisition, use, and discard that may define the presence of planters, slaves, or freedmen (Otto 1984), or the search for material correlates of status (Adams and Boling 1989), continue to guide archeology related to plantation and tenant farming economies.

The descriptive elements of these studies, however, have proved very useful in characterizing some of the subassemblages associated with planters, slaves, freedmen, and tenant farmer occupations. For example, the synthesis of data recovered from sites on the Georgia and South Carolina coast by Adams and Boling (1989) suggest the existence of discernible differences in the frequency and types of artifacts recovered from planter and slaves sites; in the types and diversity of vessel forms from each site; and, in the relative economic scale represented by the CC index values calculated for assemblages from each site type. The CC index, devised by Miller (1980 and 1991), employs original price lists to establish a comparative scale of consumer costs related to ceramic ware purchases. The careful application of analytical procedures such as ceramic price scaling, the comparison of vessel forms from each site, and the degree of intra-site matching of ceramic types and of other artifact classes may aid in the detection of social interaction and differentiation between planters, slaves, freedmen, and tenant farmers. Research of this type has not been conducted within the immediate vicinity of the proposed project area, and it should be viewed as necessary to a thorough understanding of the degree and type of culture change that has taken place over the last 150 years or so.

In addition, analysis of the material culture from Sites 16IV49, 16IV50, 16AN69, and 16AN70 should seek to generate an independent body of data that is comparable to the models established for sites in coastal Georgia and South Carolina, as well as from similar contexts in south and central Louisiana, e.g., Nina Plantation in Pointe Coupee Parish, Louisiana. Comparisons of these models then can be attempted, and the degree of correlation or deviation from them established.

Finally, data recovery excavations conducted at Sites 16IV49, 16IV50, 16AN69, and 16AN70 should be organized in such a manner that a representative body of data is collected from each site. These data then can be analyzed on two levels, local and regional. Analysis on the regional level will permit the comparison of Sites 16IV49, 16IV50, 16AN69, and 16AN70 with similar sites in other portions of Louisiana. Such regional comparisons may help to identify broad similarities between sites across the state, or they may serve to underscore important differences that may be attributed specifically to the sites under study.

In addition, local-level analyses should be conducted. By "local," it is meant that comparisons in artifact content, feature distribution, and spatial patterning should be made between Sites 16IV49, 16IV50, 16AN69, and 16AN70. Data recovery excavations at these sites will provide an excellent opportunity to investigate and identify cultural change at series of archeological sites that occupy a fairly long stretch of the Mis-

sissippi River. In addition, archeological deposits that pre-date and post-date the Civil War at some of the sites within the proposed project area offer an excellent opportunity to examine antebellum and postbellum adaptations along a stretch of the Mississippi River that once was an important sugar and rice producing area.

The Rise and Decline of Tenant Farming in Southern Louisiana

At the close of the Civil War, the plantation economy of the South was in ruin. Many of the large plantations either had been destroyed by Union war campaigns or had much of their production materials confiscated to fuel the war effort. Despite these setbacks, some planters were able to reorganize by purchasing new equipment and consolidating smaller plantations into larger tracts of lands. Several plantations within the vicinity of Sites 16IV49, 16IV50, 16AN69, and 16AN70 were affected by the postbellum trend toward acreage consolidation. One example of such property amalgamation was the Germania Plantation (extending across both the Alhambra to Hohen-Solms and Hohen-Solms to Modeste Project Items), which was owned by George B. Reuss. Reuss combined several tracts, including the Mulberry and Cuba Plantations, to form the Germania Plantation (Mississippi River Commission 1907:25).

Along with the postbellum consolidation of sugar plantation came the conversion of former cane fields to rice acreage. As sugar production proved less profitable for financially distressed planters after the Civil War, a number of south Louisiana growers turned to rice cultivation as a supplement to or replacement for sugar cane agriculture. Because the necessary labor and stock could be utilized between the cane planting and grinding seasons, rice required little additional capital for successful cultivation.

There were several sugar plantations within the vicinity of Sites 16IV49, 16IV50, 16AN69, and 16AN70 that had made the partial switch to rice cultivation by the mid-1880s. Included among these properties were Celeste Plantation (fronting on the Alhambra to Hohen-Solms project item), and Woodstock Plantation (along the Hohen-Solms to Modeste project item). The first rice field in the region reportedly was cultivated at Woodstock, while Celeste Plantation was planted almost entirely in rice by the latter part of the century (Mississippi River Commission 1907:25).

Despite these changes to boost the productivity of the economically ravaged plantations, the relationship between planters and slaves, now freedmen, had changed radically. Formerly successful planters lost their abundant supply of labor and were forced to pay workers in order to continue operations. Despite the new status as freed persons, however, most former slaves had no place to go and continued to toil in the agricultural fields of the South under the newly established tenant farming land tenure system (Aiken 1978).

Under this tenure system, tenant farmers supplied only their labor for the production of crops, which in the case of southern Louisiana included sugar, rice, and, in some areas, indigo. Planters provided the land, workstock, farm implements, and dwellings. They also extended a line of credit to the tenant farmers, either in the form of cash or commodities, from a plantation commissary or store. In addition, as payment for their labor, the tenant farmers received a portion of the crops.

While this system of production was fairly successful at the outset, some basic changes in agricultural techniques introduced in the early twentieth century led to its demise. These changes included the introduction of the tractor to plantations on a wide scale, the mechanization of the harvest, and improved weed control methods (Aiken 1978). The development of the tractor for use as an agricultural tool began in the nineteenth century; however, with the abundance of cheap labor, planters at first were reluctant to purchase expensive farm tractors. Over time, the labor supply began to dwindle, and tractors were produced and purchased more often. The tractor provided a reliable source of power that was able to plow and ready fields on a larger scale (Aiken 1978).

In addition, several new methods were developed that mechanized the harvest of agricultural crops such as sugar, rice, and cotton. While at first they were not very reliable or widespread, these new machines were adapted quickly for use with the now ubiquitous farm tractor. The coupling of these two technologies mitigated investments in labor, and reduced har-

vest times dramatically. The net effect of this new technology was a dramatic reduction in the numbers of tenant farmers needed to sow, maintain, and harvest crops.

Finally, significant advances in weed control were made in the late nineteenth and early twentieth centuries. While weeding of crops previously was done by hand, eventually new machines and herbicides became popular (Aiken 1978). Rotary hoes and weeders that could be attached to the tractor significantly reduced the time and labor needed to keep agricultural field clear of weeds that so often choked crops and led to low productivity. In addition, major advances in chemistry aided the development of several new herbicides that controlled weeds. Large scale weed control freed planters from relying on tenant farmer labor, and also helped to boost crop productivity.

All of these changes in farming methods and equipment led to a more streamlined plantation effort. Where once hundreds of workers were necessary for the successful operation of the plantation, now agricultural surpluses, and by extension profits, could be produced with fewer individuals. Consequently, the tenant farming land tenure system largely had collapsed by the end of the first half of the twentieth century.

The investigation of the tenant farming land tenure system has not been a priority among Southeastern archeologists. Nevertheless, the investigation of archeological sites that can be attributed to tenant farmers may provide much needed insights into a social group that, while once integral the continued success of the plantation economy in the postbellum period, eventually was marginalized by the introduction of new methods of production and harvesting in the late nineteenth and early twentieth centuries. The investigation of possible archeological signatures of the tenant farming system will be investigated as part of the data recovery excavations of 16IV49, 16IV50, 16AN69, and 16AN70.

Dietary Reconstructions

The inclusion of a systematic sampling strategy and thorough analysis of the botanical and faunal remains will be important in reconstructing accurately the diets of the former occupants of Sites 16IV49, 16IV50, 16AN69, and 16AN70. The combination of botanical and faunal analyses can aid in the establishment of dietary resource patterns, as well as consumption patterns between and within the various socio-economic groups that may be represented at the sites.

Applicable faunal analyses will include an assessment of the numbers and the taxonomic representations of the faunal remains present in each archeological. Comparative studies of faunal remains from slave and planter sites in coastal Georgia and South Carolina, as well as from Nina Plantation (Markell et al. 1999), for example, suggest that distinct quantitative differences, both in numbers of animals consumed and in the variety of taxa utilized for food, are discernible (Reitz and Scarry 1987).

In addition, analysis of faunal specimens for evidence of butchering practices, and to determine the units of acquisition and relative meat yields, also may provide insights into the type and adequacy of the diets enjoyed by planters, slaves, postbellum laborers, and tenant farmers (Reitz and Scarry 1987). In the proposed study of Sites 16IV49, 16IV50, 16AN69, and 16AN70, dietary comparisons between planters, slaves, freedmen, and tenant farmers will be made, and, where possible, they will be compared to patterns observed in other regions of the South (Reitz et al. 1985; Otto 1984).

Summary

The proposed data recovery plan for Sites 16IV49, 16IV50, 16AN69, and 16AN70 consists of intensive investigations within portions of the Areas of Potential Effect at each site. Field investigations will consist of the mechanical stripping, the excavation of a number of units measuring 1 x 2 m (3.3 x 6.6 ft) in size, and the geomorphological investigation of each site. The laboratory analysis proposed here, including the analysis of lithics, prehistoric ceramics, historic period artifacts, and faunal and botanical specimens, will be comprehensive in nature. The results of these analyses, used in conjunction with data derived from intensive archeological investigations at each site, will be interpreted in light of the variety of research issues that are outlined above. The proposed data recovery efforts at Sites 16IV49, 16IV50, 16AN69, and 16AN70 will provide important data about historic period cultural developments within the river parishes of southern Louisiana.

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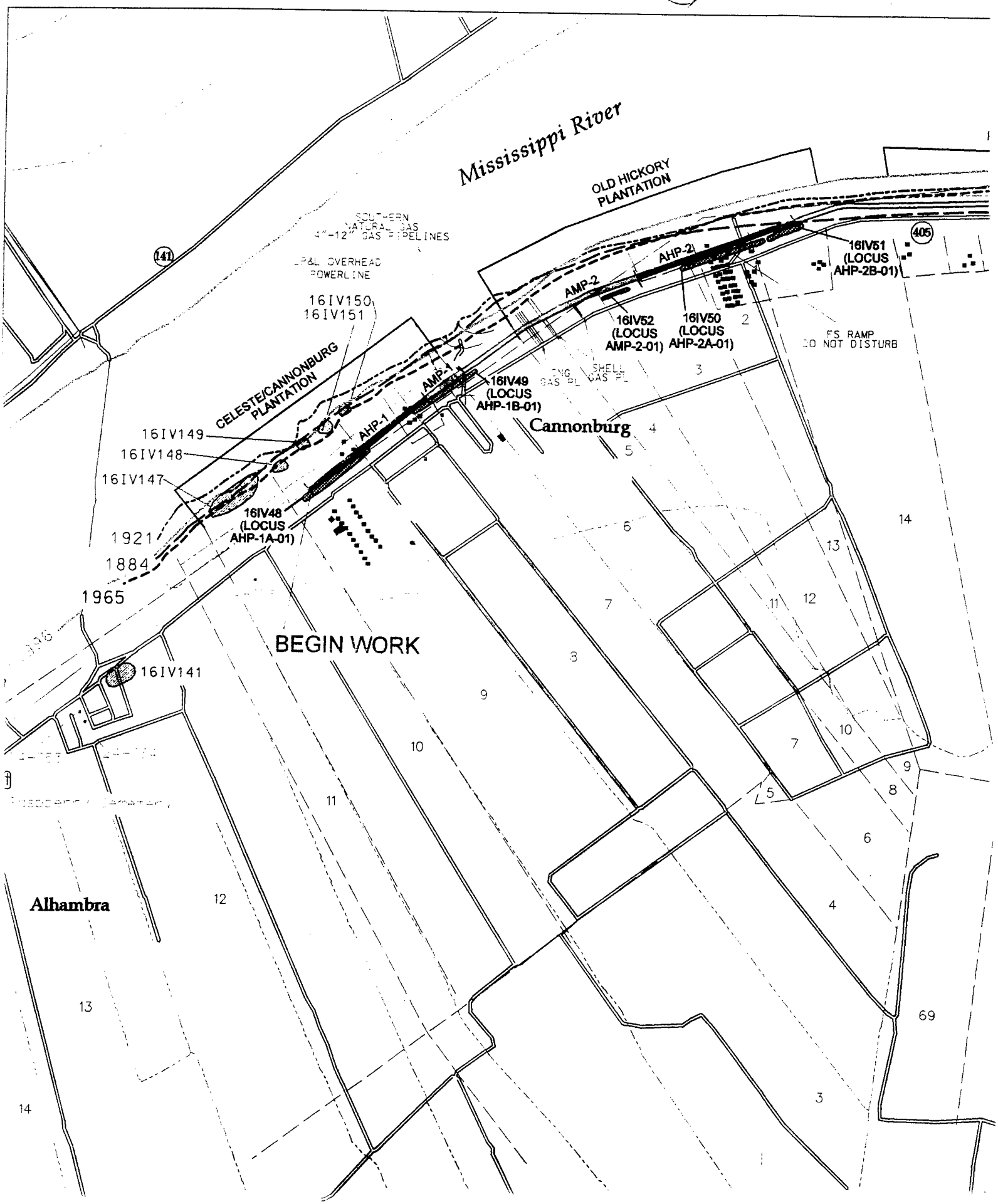
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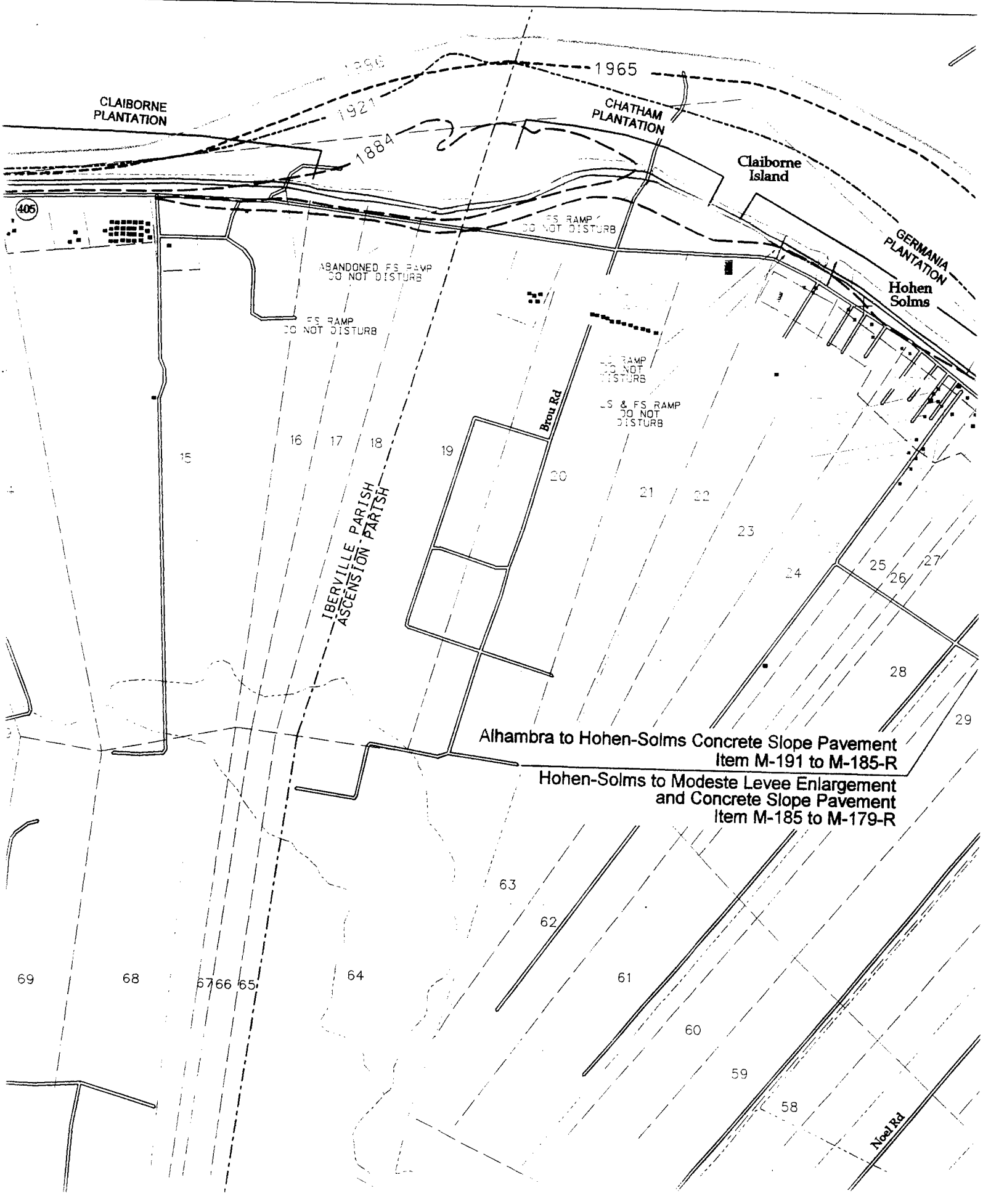
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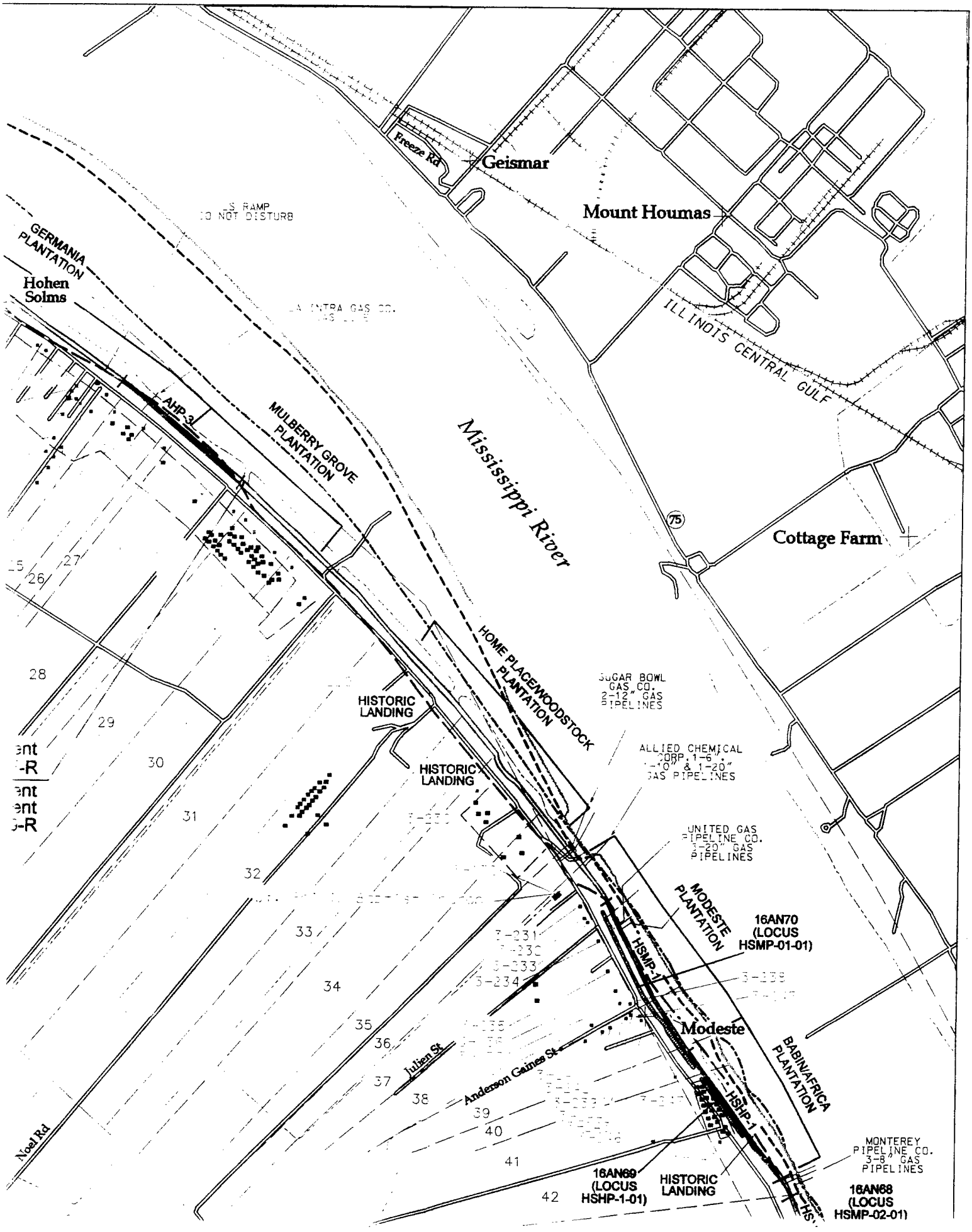
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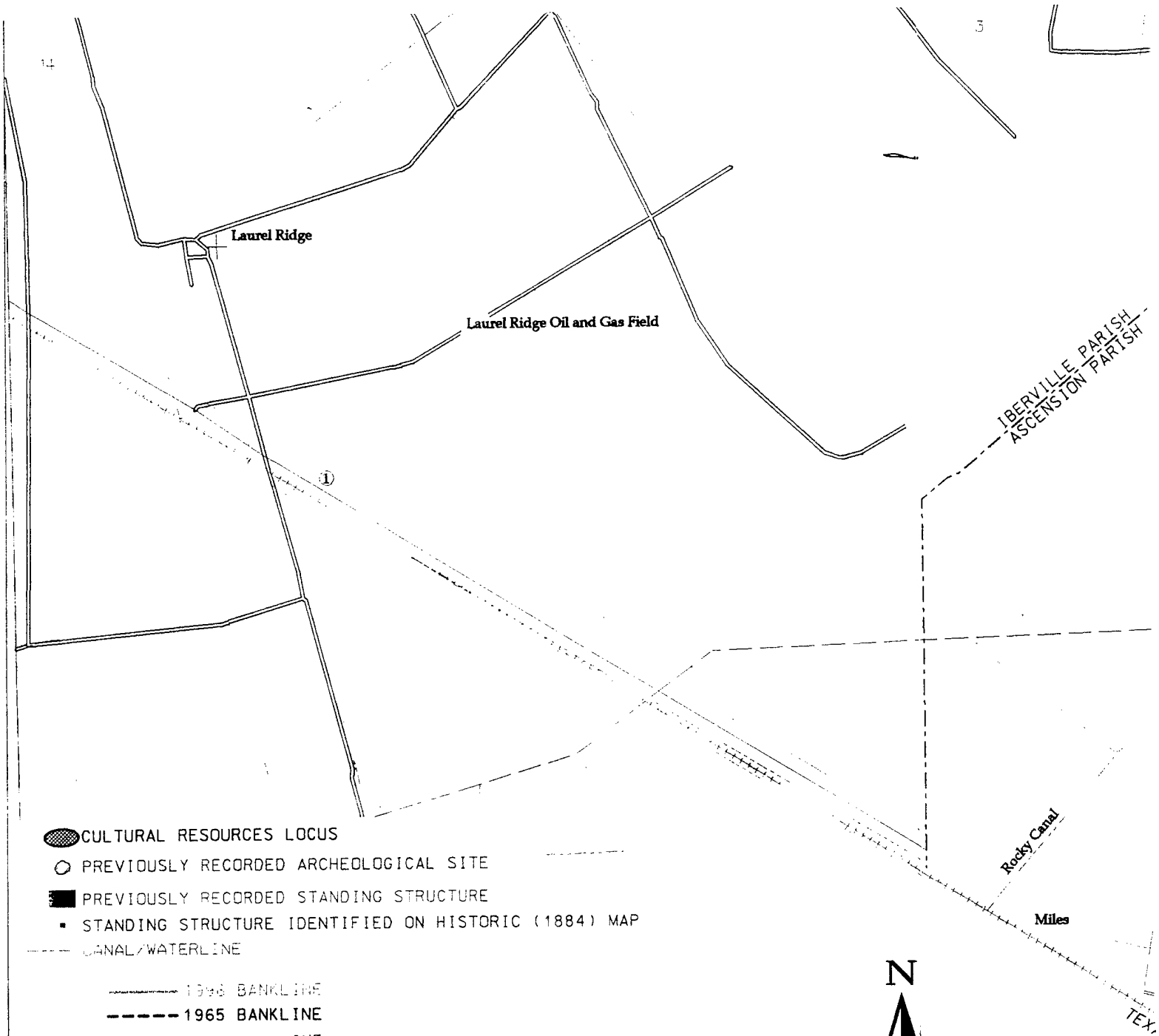
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Mississippi River
OLD HICKORY PLANTATION
SOUTHERN NATURAL GAS 4"-12" GAS PIPELINES
LP&L OVERHEAD POWERLINE
141
405
16IV150
16IV151
CELESTE/CANNONBURG PLANTATION
AHP-2
AMP-2
AHP-1
AMP-1
16IV51 (LOCUS AHP-2B-01)
16IV52 (LOCUS AMP-2-01)
16IV50 (LOCUS AHP-2A-01)
16IV49 (LOCUS AHP-1B-01)
16IV48 (LOCUS AHP-1A-01)
16IV149
16IV148
16IV147
16IV141
1921
1884
1965
BEGIN WORK
Cannonburg
Alhambra
ES RAMP
DO NOT DISTURB

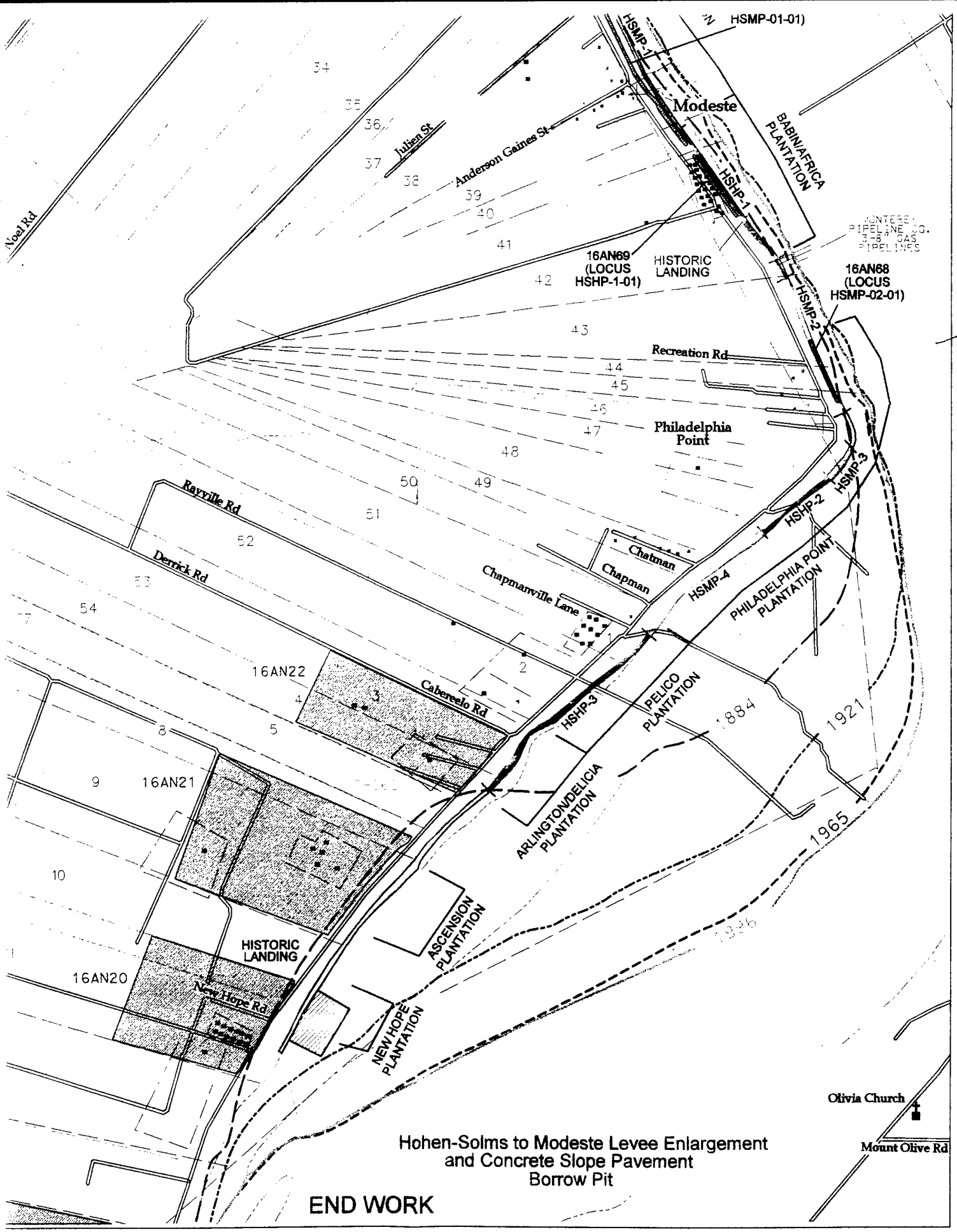

1965
1921
1884
CLAIBORNE PLANTATION
CHATHAM PLANTATION
Claiborne Island
GERMANIA PLANTATION
Hohen Solms
405
ABANDONED FS RAMP DO NOT DISTURB
FS RAMP DO NOT DISTURB
FS & FS RAMP DO NOT DISTURB
Brou Rd
IBERVILLE PARISH
ASCENSION PARISH
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
Alhambra to Hohen-Solms Concrete Slope Pavement
Item M-191 to M-185-R
Hohen-Solms to Modeste Levee Enlargement
and Concrete Slope Pavement
Item M-185 to M-179-R
63
62
61
60
59
58
64
65
66
67
68
69
Noel Rd


Freeze Rd
Geismar
Mount Houmas
DO NOT DISTURB
GERMANIA PLANTATION
Hohen Solms
ILLINOIS CENTRAL GULF
AHP-3
MULBERRY GROVE PLANTATION
Mississippi River
75
Cottage Farm
HOME PLACE/WOODSTOCK PLANTATION
HISTORIC LANDING
SUGAR BOWL GAS CO. 2-12" GAS PIPELINES
ALLIED CHEMICAL CORP. 1-6" 1-10" & 1-20" GAS PIPELINES
HISTORIC LANDING
UNITED GAS PIPELINE CO. 3-20" GAS PIPELINES
MODESTE PLANTATION
16AN70 (LOCUS HSMP-01-01)
HSMP-1
Modeste
BABINGAFRICA PLANTATION
Julien St
Anderson Gaines St
HSHP-1
Noel Rd
MONTEREY PIPELINE CO. 3-8" GAS PIPELINES
16AN69 (LOCUS HSHP-1-01)
HISTORIC LANDING
16AN68 (LOCUS HSMP-02-01)
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42


14
3
Laurel Ridge
Laurel Ridge Oil and Gas Field
IBERVILLE PARISH
ASCENSION PARISH
1
Rocky Canal
Miles
TEX
CULTURAL RESOURCES LOCUS
PREVIOUSLY RECORDED ARCHEOLOGICAL SITE
PREVIOUSLY RECORDED STANDING STRUCTURE
STANDING STRUCTURE IDENTIFIED ON HISTORIC (1884) MAP
CANAL/WATERLINE
1996 BANKLINE
1965 BANKLINE
1921 BANKLINE
1884 BANKLINE
HIGH ARCHEOLOGICAL POTENTIAL AREA
MODERATE ARCHEOLOGICAL POTENTIAL AREA
LOW ARCHEOLOGICAL POTENTIAL AREA
N
METERS
250 0 250 500 750 1000
FEET
500 0 1000 2000 3000


IBERVILLE PARISH
ASCENSION PARISH
59
58
71
72
73
74
76
88
75
87
86
11
12
85
13
84
14
16AN19
Rocky Canal
Miles
TEXAS AND PACIFIC
Noel
750 1000
3000

5


HSMP-01-01)
HSMP-1
Modeste
BABIN/AFRICA PLANTATION
HSHP-1
Julien St
Anderson Gaines St
Noel Rd
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
16AN69 (LOCUS HSHP-1-01)
HISTORIC LANDING
16AN68 (LOCUS HSMP-02-01)
HSMP-2
Recreation Rd
Philadelphia Point
HSMP-3
HSHP-2
Rayville Rd
Derrick Rd
Chatman
Chapman
Chapmanville Lane
HSMP-4
PHILADELPHIA POINT PLANTATION
16AN22
Cabereelo Rd
HSHP-3
PELICO PLANTATION
1884
1921
1965
1936
16AN21
ARLINGTON/DELICIA PLANTATION
ASCENSION PLANTATION
HISTORIC LANDING
16AN20
New Hope Rd
NEW HOPE PLANTATION
Olivia Church
Mount Olive Rd
Hohen-Solms to Modeste Levee Enlargement
and Concrete Slope Pavement
Borrow Pit
END WORK