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of Engineers**

New Orleans District

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ARCHEOLOGICAL MONITORING, JACKSON TO
THALIA STREET FLOODWALL (PHASE III),
ORLEANS PARISH, LOUISIANA

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Final Report

February 1993

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19. ABSTRACT (continued). associated with a late-nineteenth ice factory that was formerly located at the site. Because of disturbance and lack of research potential, the report recommends that 16OR117 should not be considered eligible or potentially eligible for inclusion on the National Register of Historic Places.



DEPARTMENT OF THE ARMY

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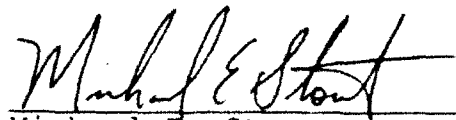
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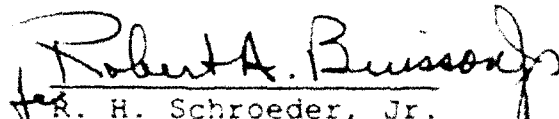
Planning Division
Environmental Analysis Branch

To The Reader,

This cultural resources effort was designed, funded, and guided by this office as part of our cultural resources management program. Documented in this report is archeological monitoring of a pre-construction inspection trench for a portion of the Jackson to Thalia Street Floodwall. This floodwall is a component of the Mississippi River and Tributaries project which provides flood protection for the City of New Orleans.

We concur that the archeological remains recorded during this project are not eligible for inclusion in the National Register of Historic Places. Therefore, no further archeological investigations are planned for this project.


Michael E. Stout
Authorized Representative
of the Contracting Officer


for R. H. Schroeder, Jr.
Chief, Planning Division

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CHAPTER 1 INTRODUCTION

This report presents the results of archaeological monitoring of the Jackson Avenue to Thalia Street Floodwall, Phase Three Component. The general location of the project area is shown in Figure 1. A more detailed map is included in Chapter 8.

The overall construction project is called "Mississippi River Levees, Orleans Levee District, Item M-97.2-L to M-95.6-L, Jackson Ave. to Thalia St. Floodwall, Orleans Parish, Louisiana." In 1982, a Memorandum of Agreement related to this project was signed by the New Orleans District Corps of Engineers, the Louisiana State Historic Preservation Office, and the Advisory Council on Historic Preservation.

The Memorandum of Agreement required that the New Orleans District prepare an historical and archival assessment of the project corridor to document historic land use changes in the project area. Research focused on that issue was included in an archival overview of all of the New Orleans floodwall alignments (Reeves and Reeves 1983). Goodwin et al. (1985) used that document as a basis for evaluating the historical significance of sites predicted to exist within the floodwall alignments. Both of these reports are reviewed in Chapter 6, which also reviews results of previous monitoring efforts.

Reeves and Reeves (1983:200) indicated that until 1891 there were no buildings within the portion of the floodwall corridor that is the subject of the present report. At that date, the Municipal Ice Manufacturing Company erected an ice-manufacturing facility. Goodwin et al. (1985:81-82) recommended that ice factories be considered historically significant in terms of the economic development of New Orleans and that the former site of the Municipal Ice Manufacturing Company's plant be monitored.

Harris et al. (1988:40, 88) reported the results of an earlier monitoring effort at the predicted site of the ice house. At that time, only one bottle was recovered from the floodwall inspection trench. A wooden structural feature was recorded and was interpreted as the possible remains of a wharf. The area was assigned a state site number (16OR117). It was

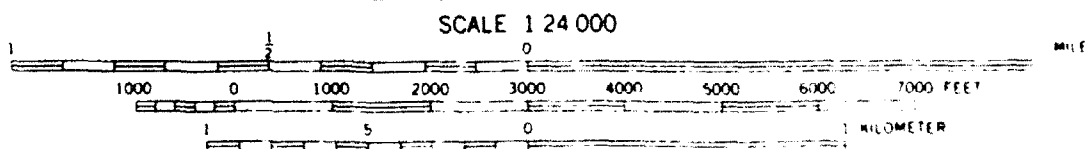
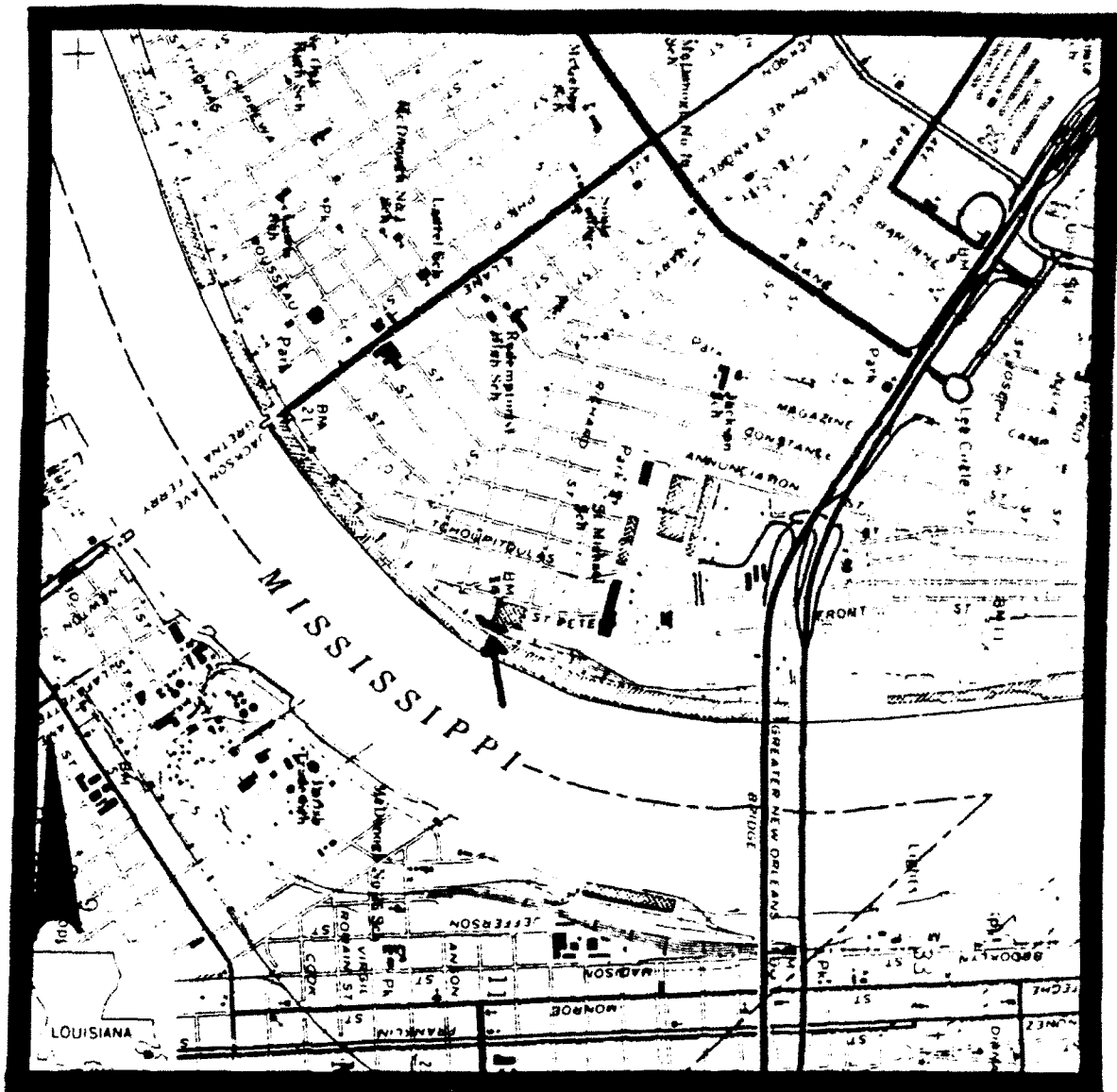


Figure 1. Excerpt of the New Orleans East 7.5' quadrangle (1989) showing the project area.

not considered a significant archaeological site in terms of National Register criteria.

This report presents the results of additional monitoring at 16OR117 in 1991. Structural remains of the ice-manufacturing facility were recorded, but these were not associated with artifacts. Because most of the area occupied by the ice house has been disturbed and because the structural remains encountered do not exhibit further research potential, it is recommended that 16OR117 continue to be considered "not significant" in terms of NRHP criteria.

CHAPTER 2 GEOMORPHOLOGY OF THE STUDY AREA

The project area is located adjacent to the Mississippi River near the east or left descending bank in a section of the Mississippi River delta plain that was deposited only a few thousand to a few hundred years ago. The Mississippi River delta plain consists of deposits of abandoned and active deltas and channels. These deltas partially overlap, and are the product of shifting of the Mississippi River during the Holocene (Mossa 1991:4, 10).

Deltaic development of the Holocene Mississippi River began when sea level rise began to slow. The delta plain consists of six major Holocene complexes, and there is some evidence to suggest that older complexes and lobes are buried beneath these. Four of the complexes (Maringouin, Teche, St. Bernard, and Lafourche) are deteriorating at present. Two (the Modern and Atchafalaya) are actively prograding (Mossa 1991:9).

The constructive phase of delta complexes begins with dispersion and deposition of sediments onto the inner continental shelf. The platform builds up due to deposition associated with flooding. Sediments deposited on the outside of bends form natural levees consisting of alluvial ridges sloping away from the river. These natural levees coalesce and increase in elevation through time, and thus attain an elevation sufficient to confine flow except during high water stages. Eventually, upstream diversion occurs when the active channel shifts to a shorter course and formation of a new delta begins. A destructive phase then begins for the abandoned delta complex. In the case of the Modern complex, channel abandonment and initiation of the destructive phase have been prevented through the efforts of the U.S. Army Corps of Engineers (Mossa 1991:11-13).

The present project area is a product of batture accretion during the first half of the nineteenth century. Historic maps documenting that development are reviewed in Chapter 6. This process is referred to as "lateral accretion." It generally occurs along the convex bank (point bar) that lies opposite the concave bank (cut bank) of a meander bend. Lateral accretion is the result of deposition of sand within slackwater areas. The sand itself is derived partly from areas located upstream and subject to scouring.

Artificial levee construction at New Orleans began in the early 1720s as a response to overbank flooding of the newly established city. By 1724, the artificial levee extended 3000 feet along the river. By 1727, the levee was described as being three feet high and eighteen feet wide at the top with a roadway on its crown (Franks 1991:54). The presence of this levee probably modified to some extent lateral accretion that was already underway when the first levee was constructed. Nevertheless, the point bar at the location of the project area was continuing to develop during the first half of the nineteenth century.

The review of historic maps in Chapter 6 indicates that the project area was within the Mississippi River channel during the early 1800s. Therefore, no prehistoric remains would be anticipated there. For this reason, this report does not include an overview of prehistoric settlement in the vicinity of New Orleans. Also, the only remains anticipated for the eighteenth century would be related to maritime activity.

CHAPTER 3 ENVIRONMENTAL SETTING

New Orleans is located within the subtropics, and its weather is strongly influenced by the nearby Gulf of Mexico. Rainfall exceeds 160 cm (64 inches) annually. Periods of greatest rainfall generally occur in August and September. October is, on average, the driest month. The mean annual temperature is about 21 degrees Centigrade (70 degrees Fahrenheit), with a mean low in January averaging 11 degrees Centigrade (52 degrees Fahrenheit) and a mean high in July of about 29 degrees Centigrade (84 degrees Fahrenheit). The growing season exceeds 260 days (White et al. 1983:103).

Hurricanes and storm surges occur intermittently, and these have profound effects on floral, faunal and human communities. Hurricanes and tropical storms are characterized by low barometric pressure. This causes a significant rise in sea level. In combination with winds up to 200 or more km/hr, storm surges as great as 7 m (23 ft) can drive gulf, lake, and river waters a considerable distance inland. The flooding problem is aggravated by accompanying tropical rains (Bahr et al. 1983:22-23).

Chapter 6 of this report provides a detailed history of the project area. That history demonstrates that the area was actually within the Mississippi River through the first part of the nineteenth century. While land formation was occurring during that period, wharves were present at the river's edge. During the latter part of the nineteenth century, the project area was on the landward side of the artificial levee. This allowed construction of various industrial facilities, roads, and railroads.

CHAPTER 4 AN OVERVIEW OF THE GROWTH AND DEVELOPMENT OF NEW ORLEANS

The French Colonial Period

Although LaSalle had claimed for France all of mid-continental America drained by the Mississippi in 1682, France did little initially to develop the new territory. In 1698, Pierre LeMoyne d'Iberville, accompanied by his younger brother Jean-Baptiste LeMoyne de Bienville, was sent to establish French sovereignty over the Mississippi Valley and the Gulf Coast in the vicinity of the river's mouth. Bienville established Fort Maurepas at Biloxi Bay in 1699, and the following year he founded Fort de la Boulaye on the east bank of the Mississippi River somewhere within present-day Plaquemines Parish. Both sites were abandoned within a few years, and a settlement at Mobile became the center of French activity (Wilson 1987:1).

In 1717, the Company of the West, which was in charge of the colony's financial affairs, directed that a city named New Orleans be established on the Mississippi River some thirty leagues from the mouth (Wilson 1987:3-4). In 1718, Bienville, now commandant general of the colony, selected the site of the present-day Vieux Carre as the locale for establishing this new city. Colonists were recruited in France, Germany, and other European countries, and they were granted large concessions on the Mississippi River and some of its tributaries (Wilson 1987:4).

Construction within the city began in 1718. Father Charlevoix wrote in January of 1722 that New Orleans consisted of only about one hundred huts placed with little order, and one-half of a warehouse. (Wilson 1968:9). A plan dated April of 1722 placed the public square (Place d'Armes) in the center of the city. The city extended for four square blocks above and below the square, and six blocks back from the river. The blocks flanking the public square were reserved for use by the Crown and the church. Squares as far back as Bourbon Street were divided into lots which were to be granted to those individuals best able to construct houses. Subsequent plans from the 1720s show the city extended along the river to provide a total of eleven squares front (Wilson 1968:10-12).

In September of 1722, a hurricane destroyed most of the public and private buildings within the city proper.

Immediately afterwards, Bienville ordered the inhabitants to enclose their houses or lands within wooden palisades or forfeit their property to the Company. During that same year, several individuals were forced to remove structures erected within the alignment of projected streets. Orderly development was difficult to maintain during the early years of growth (Wilson 1968:13-15).

One significant achievement of the 1720s was construction of a levee to prevent inundation of the city by the river's floodwaters. It was erected between January of 1723 and May of 1724. In 1724, the levee was almost 3000 feet in length (Wilson 1968:15). By 1727, it was 5400 feet long, three feet high, and eighteen feet wide at the top with a roadway on its crown. By 1735, the levee extended about twelve miles below and thirty miles above the city (Elliot 1932).

When the Crown took possession of Louisiana from the Company in 1731, total population of the territory was about 5000, of whom approximately 3000 were slaves. The population was concentrated in New Orleans and its environs, and included 1000 soldiers and male civilians. Population remained stable in the city until 1745. The 1730s and 1740s were arduous for the colonists, as hurricanes and flooding alternated with years of drought. Crop losses were frequent and severe (Clark 1970:46-49).

Between 1745 and 1763, the population in New Orleans increased to almost 5000 whites and Blacks. Although new houses were mostly of wood, enough brick structures were erected to support production by three brick kilns just outside the city. Port traffic also increased as ocean-going vessels, canoes, dugouts, pirogues, batteaux, and flats anchored in the vicinity of the market, the King's Storehouses, and the Intendant's quarters. Many of the smaller vessels were bringing farmers and their produce to market. It was here that merchants, planters, African-American longshoremen, and the city's peddlers congregated. During this period, New Orleans was a frontier market town, a seaport, a provincial capital, and a military center (Clark 1970:49-51).

In overview, France succeeded in establishing a settlement on the Lower Mississippi that would in the next century become, for a time, one of the world's major ports. Further, she had fostered the growth of a plantation system capable of partially supplying the

local market with food and of producing some exportable commodities. However, French economic policy in the colony was largely a failure, for it enhanced the position of neither the mother country nor the colony in the developing world economy (Clark 1970:148).

The Spanish Colonial Period

Hostilities between France and Britain, subsequently termed the Seven Years' War in Europe and the French and Indian War in North America, ended in 1763. New Orleans and all of French territory west of the Mississippi were ceded to Spain. Spain's initial attempts to take control of the colony were marked by disorder. In 1769, Governor O'Reilly arrived with sufficient troops to take and maintain Louisiana for the King of Spain (Clark 1970:158-159; Wilson 1968:39).

The final three decades of French rule of Louisiana had seen little change in population size or productive capacity. It was during the Spanish period that new settlements grew throughout the entire Mississippi Valley which was New Orleans' natural hinterland. The city's promise as a major port, foreseen by early Company officials such as Bienville, began to be realized. Although prohibited by treaty from settling the old Illinois Territory west of the Appalachians, the British rapidly expanded the fur trade there. That trade now flowed through New Orleans, helping to revitalize commerce. Also, British settlers in the vicinity of Natchez, Baton Rouge, and other locales expanded rapidly the inhabited area of New Orleans' agricultural hinterland (Clark 1970:181-183).

Several events in the last two decades of the eighteenth century consolidated New Orleans' increasingly important role in world markets, a role seemingly guaranteed by her geographic location near the mouth of the Mississippi. In the 1790s, steam engines were harnessed to power looms, and Eli Whitney perfected the cotton gin. The cost of cotton clothing was thereby reduced which, in turn, increased the demand for raw cotton. Supply of and demand for that single commodity would pace the Industrial Revolution in the United States and Great Britain for decades to come. Nearly all of the raw cotton grown in America would pass through the port of New Orleans (Clark 1970:203).

Another critical factor in New Orleans' rise to pre-eminence followed the American Revolution, as large numbers of settlers arrived in the Upper and Lower

Mississippi Valley. Settlers in the Lower Valley produced exportable cotton, while those in the Upper Valley began raising grain and livestock, which for the coming decades would be shipped down the Mississippi to New Orleans (Clark 1970:202). New Orleans and the entire Louisiana Territory, despite their status as a Spanish colony, were drawn increasingly into the economic sphere of the newly formed United States and of the world's pre-eminent industrial power, Great Britain (Clark 1970:207-209).

Although economic growth of the Spanish colonial period alleviated recurrent shortages of food and other supplies suffered by New Orleans' residents under the French, life remained difficult. At least one visitor remarked on the unequal distribution of wealth as marked by the condition of many residences. The affluent ruling elite distinguished themselves by expenditures on visible symbols of wealth, including architecture, modes of dress and transportation, and home furnishings. Despite an extravagant and ostentatious lifestyle by the rich, the New Orleans environment remained that of a frontier town. Streets were unpaved and mostly unlighted, and were seasonally filled with either mud or potholes. Floods periodically topped the levee, leaving stagnant water and rotting fish in the city, along with garbage disposed of carelessly by the urban residents. Visitors commented on the stench emanating from the city. The environment was favorable to the proliferation of vectors of contagion, resulting in episodic outbreaks of epidemics of killing diseases (Clark 1970:252-253).

A devastating hurricane in 1779 destroyed most structures in New Orleans. Only a few years later in 1788, a fire within the area referred to at present as the Vieux Carre destroyed 850 buildings, including most of the mercantile business establishments and residences of the wealthy elite (Wilson 1968:44-45). After the 1788 fire, the city was quickly rebuilt. However, a second conflagration in 1794 within the Vieux Carre destroyed all of the structures in nine squares and in portions of four others. Again, rebuilding was rapid (Wilson 1968:48-49).

A "Plan of the City of New Orleans" by Carlos Trudeau dated 1798 (Wilson 1968:Figure 47) demonstrates growth of the city during the period of Spanish rule. The original settlement still extended back six squares from the river, and eleven squares still fronted the Mississippi. Also, Trudeau's Plan shows that an upriver

area had been developed by that date. This was the Faubourg St. Mary, and it was here that newly arriving British and American immigrants established themselves. Subdivision of larger properties for residential development had not yet begun in a downriver direction. Trudeau's Plan also shows the fortifications which were begun in 1792 and which surrounded the old city (Wilson 1968:45-50).

New Orleans in the Nineteenth Century

Louisiana, including New Orleans, was retroceded to France in 1803, and in the same year became a part of the United States. In 1805, the City of New Orleans incorporated with its downriver boundary at Canal des Pecheurs (Fisherman's Canal) just below the U.S. Barracks (Wilson 1968:57-59).

The U.S. Census of 1810 recorded a population of 24,522 in New Orleans, making it the largest city south of Baltimore and the fifth most populous city in the United States. At the time of the Louisiana Purchase, elements of the population in descending order of numerical importance were French Creole, Black, and Anglo-American. The French and free Black population expanded most rapidly prior to the 1810 census, largely because of immigration from the French West Indies via Cuba (Clark 1970:275).

The downriver traffic to New Orleans consisted of flats, barges, and keels. The numbers of those vessels arriving each season increased from hundreds to thousands, and the value of goods shipped downriver increased from about \$1.5 million annually during the years 1801 to 1803 to twice that amount by 1807. Flour was the most important item in this trade. Corn and its derivatives, pork and pork products, lard, tallow, and whiskey were also shipped (Clark 1970:301-302).

The most important illicit trade during the first decade of American rule was that in imported slaves. The federal government prohibited importation of foreign slaves to Louisiana in 1804, and that prohibition became a national one in 1808. However, local entrepreneurs continued to advertise the sale of illegally imported Africans after the prohibition became effective. Concurrently, New Orleans became an important market for the legal sale of slaves imported from other slave states. The demand for labor in this and subsequent decades was greater than the supply, and New Orleans

would remain the South's most important slave market until the Civil War (Clark 1970:317-318).

The main effect of the War of 1812 on New Orleans prior to 1814 result from an increase in the degree of danger encountered by ships engaged in international trade. Late in the war, a British invading force led by General Henry Packenham arrived in Louisiana. Skirmishes between his forces and the American troops led by General Jackson took place on both sides of the river and within three miles of New Orleans in December of 1814 and January of 1815. Damage claims by plantation owners as close as two miles to the Vieux Carre were filed after the war. The main engagement at the Chalmette Battlefield on January 8, 1815 resulted in a decisive victory for the American forces. British troops were completely routed. Although the battle was unnecessary because peace terms had already been negotiated, the victory greatly enhanced American prestige and power.

New Orleans was deemed "America's Western Capitol" during the years from 1810 to the Civil War. She was the largest city west of the Appalachians in 1810, and only New York, Philadelphia, Boston, and Baltimore were more populous in that census year. For the next thirty years, the population growth rate exceeded that of all other American cities. By 1840, the population of the city was third in the nation with only several hundred fewer residents than second-ranked Baltimore. Newly arriving Americans continued to settle above the old city in the Faubourg St. Mary and in newer neighborhoods further upriver. The center of the city's commercial life was also now concentrated upriver from the original settlement. Descendants of the eighteenth century French Creoles continued to reside in the Vieux Carre, in the Faubourg Marigny, and in newly subdivided areas downriver. Many Irish and German immigrants also settled in the downriver portion of the city that later would become the Ninth Ward (Lewis 1976:32,39-40).

Steamboats were introduced to the Mississippi River in 1811, facilitating the growth of trade in an upriver direction. Regular service in the 1830s and 1840s dramatically increased the volume of trade between New Orleans and rapidly developing inland cities located on major waterways (Ward 1971:34).

Despite the importance of cotton for New Orleans' commerce, areas further upriver, which were continuing to provide grain, corn, pork, and pork products, were

the agriculturally richest areas of the city's hinterland. Locally produced sugar, although important, was of lesser economic value than either cotton or products from the upper Mississippi Valley (Lewis 1976:15).

Many Irish immigrants in the pre-Civil War era established residences in New Orleans. The number of Irish immigrants arriving in the 1830s and 1840s was great enough to change the racial makeup of the city from predominantly Black to predominantly white (Goldfield 1982:55). Germans were the other immigrant group whose numbers helped change the racial and ethnic composition of the city during the decades prior to the Civil War. They began arriving after 1815, and by 1850 over 54,000 German immigrants had been counted at the Port of New Orleans. Although New Orleans was only a port of entry for many of these Germans, by the mid 1830s, 7000 German-born immigrants were residing in the city (Nau 1958:4).

Throughout the decades prior to the Civil War, New Orleans' commercial export economy continued to expand. From 1840 to 1860, 83 percent of the cotton passing through New Orleans was shipped to foreign ports. During the 1850s the value of cotton receipts increased by 160 percent. The value of southern and western produce passing through the port increased from \$22 million in 1830 to \$185 million by 1860. The volume of trade has led to characterization of the 1850s as "the golden age of river commerce" (Goldfield 1982:56-57,87).

However, such growth figures, which were cherished by the city's boomers, masked the fact that New Orleans was entering a period of relative decline from which she would never recover. Newly built railroads were now carrying crops produced north of the cotton belt directly to eastern markets, thereby leaving the Mississippi River as a regional highway. During the 1850s, the proportion of flour transported by rail increased from three percent to 91 percent. In the years from 1846 to 1849, two times as much flour and eight times as much bacon were exported from New Orleans compared to the period from 1858 to 1861. Southerners' cherished hope of an economic and political alliance with the West was fading as that region became more closely linked to the Northeast and especially to New York City. It was the increase in cotton receipts alone that accounted for New Orleans' trade increase in the decade before the Civil War. Nevertheless, trade figures for 1856 to 1860 were impressive, as New Orleans

handled 28.4 percent of the United States' exports compared to New York City's 31 percent (Goldfield 1982:60,126).

Issues of slavery and the South's colonial economic status, combined with political intransigence and paranoia exhibited by most southern politicians, resulted in the outbreak of war in 1861. In New Orleans, merchants attempted to conduct business as usual. However, by the end of 1861 a Union naval blockade brought commerce to a near-complete halt. Surrender of New Orleans came relatively early in the war and was probably a relief for local businessmen. Trade resumed and the presence of federal soldiers injected United States currency into the local economy (Goldfield 1982:81).

The most far-reaching effect of the Civil War on New Orleans was the change in relations between African-Americans and whites. With the arrival of Federal troops in the area, large numbers of slaves began leaving plantations. They congregated at Union camps, at contraband camps, and at refugee colonies designated by Federal officers. By the summer of 1862, more than 10,000 refugee slaves were present in New Orleans. Many joined the Union Army to fight for freedom, while others were conscripted as laborers for the Union effort. But many were homeless and jobless, dependent on relief efforts for subsistence. Whites in the city were frightened and shocked. One hundred and fifty years of a legitimized slave/free dichotomy had left them unprepared for this upheaval in social relations (Blassingame 1973:25-47).

Because of her early surrender, New Orleans' port, commercial facilities, and residential neighborhoods were undamaged by the war. Plantations in southern Louisiana were generally less devastated than those elsewhere in the South. While large portions of Virginia and the Upland South lay wasted and in ruins, Louisiana's planters suffered primarily from the loss of their slave-holdings which had represented a high proportion of their pre-war wealth. This financial setback resulted in the sale and resale of large numbers of sugar plantations, but production of sugar augmented by rice quickly resumed with hired laborers. By the 1870s, the central factory system was replacing antebellum plantation-based refining methods (Sitterson 1953:258).

Cotton production in other parts of the South also resumed, now based on a tenant system of labor. By 1883, New Orleans' cotton receipts reached pre-War levels. One significant change occurred, however. Increased construction of east-west railroads resulted in increased use of these systems for transport. Only those planters for whom the Mississippi was more convenient than the new railroads were routing their cotton through New Orleans. The city's relative decline, in terms of both commerce and population, was accelerating. In 1860, the city's population was the sixth largest in the country, while in 1870 it was eighth and by 1900 had dropped to fifteenth (Goldfield 1982:86).

New Orleans in the Late Nineteenth and Early Twentieth Centuries

In 1896, the Board of Commissioners for the Port of New Orleans was established by law. That group, commonly referred to as the "Dock Board," undertook projects from 1900 to 1910 to rebuild and expand the city's port facilities. In 1879, completion of the South Pass jetties had removed sand bar obstacles to large ships at the mouth of the river. Concurrently, railroad construction, belated though it was, made New Orleans one of the southern hubs for overland transit of bulk goods. The Southern Pacific line linking New Orleans and California, and the Illinois-Central line linking New Orleans and Chicago, were two of the most important. Cotton remained important to the city's commercial life, while trade with Latin countries was increasing. Importation of coffee and bananas was the mainstay of the Central and South American trade (Lewis 1976:48-57).

The Great Depression of the 1930s slowed the pace of international trade, and thereby severely affected New Orleans. World War II stimulated some growth in the city's economy, particularly as a result of rapid expansion of the ship-building industry in the area. After the war, ongoing changes in the shipping industry such as the use of trucks, rail mergers, use of container ships, and completion of the St. Lawrence Seaway cut into the port's volume of business. However, by 1967, New Orleans was still largely dependent on the port. Only 14 percent of the work force was involved in manufacturing compared with a national average of 23 percent for cities with populations above 200,000 (Lewis 1976:67-68).

CHAPTER 5 REVIEW OF PREVIOUS FLOODWALL INVESTIGATIONS

Sternberg and Shenkel (1976) reported on a pedestrian reconnaissance of a floodwall corridor along the Mississippi River within part of the Vieux Carre. The only historic feature they observed on the surface consisted of paving blocks probably dated to 1898. They noted that it was nevertheless possible that subsurface features of potential cultural value might be encountered during construction. If this occurred, they recommended that "an appropriate course of action should be followed" (Sternberg and Shenkel 1976).

A different pedestrian reconnaissance of a floodwall corridor was conducted within an area between Nashville and Napoleon avenues. The corridor consisted of a railroad right-of-way. No historic features were observed on the surface. Recommendations noted that the total depth of the planned inspection trench would not extend below the depth of fill for the railroad embankment. The only further action recommended was that cultural resources be reported should they be unexpectedly uncovered (Shenkel 1977).

During archaeological monitoring of a trench between Thalia and Poydras Streets, artifacts were recovered from two areas that appeared to represent "old trash dumps." The floodwall corridor was within an area where the batture has been accreting rapidly since the eighteenth century. One of the "dumps" yielded nineteenth century artifacts, while the other yielded both eighteenth and nineteenth century materials. Shenkel (n.d.:7-8) noted that little time had been allowed for pre-excavation research focused on the floodwall corridor, and recommended that future projects provide for that research. Also, he recommended that the role, responsibility, and authority of the monitoring archaeologist be clarified (Shenkel n.d.).

After these recommendations were made, the New Orleans District contracted with William D. and Sally E. Reeves to provide an historical overview of several floodwall alignments. They were asked to determine what structures had existed within the proposed construction corridors, to examine changes in land use through time, and to assess the significance of buried cultural resources suspected to exist within the corridor. The resulting study included a narrative land use study and a geographical treatment of significant squares between Louisiana Avenue and the Industrial Canal. Two areas

(Thalia Street to Canal Street and Toulouse Street to Barracks Street) were excluded because floodwalls already existed there. Commercial structures and docking facilities were considered to be historically significant. Also, eighteenth century remains were predicted to be significant although it was considered that these were less likely to occur in most portions of the floodwall alignment (Reeves and Reeves 1983:1-4).

In 1985, Goodwin et al. (1985), presented a research design and a plan for archaeological data recovery for historic properties within four planned floodwall segments. The study area consisted of a linear corridor following the New Orleans Public Belt Railroad system on the east bank of the Mississippi River in New Orleans. The corridor was 3.11 miles (5.02 kilometers) in length. Sources utilized for the study were Reeves and Reeves' (1983) archival overview of the area as well as the Sanborn Insurance Maps dated 1876, 1895, and 1896, and the Braun maps dated 1877. A typology of historic structures that formerly stood in the corridor was developed (Goodwin et al. 1985:10).

The typology of historic structures recognized five major classes. These were residential, commercial, industrial, public, and military. Historic maps listed in the preceding paragraph and the study by Reeves and Reeves (1983) were used to place each structure that had stood in the corridor into one of the classes (Goodwin et al. 1985:30-66).

Because the floodwall corridor was adjacent to the Mississippi River, Goodwin et al. (1985) related structures that formerly stood there to the process of economic development of the Port of New Orleans. Important events, innovations, and processes (referred to as "themes") related to the port's development were (1) the expansion of commerce and industry which created an urban upper class and a need for a working class labor base; (2) the introduction of steam-powered river transport which stimulated growth of the port; (3) the development of steam-powered industrial technology which was applied in the processing of raw materials; and (4) the introduction of railroad transportation (Goodwin et al. 1985:67).

The themes were developed in order to identify potentially significant areas, blocks, or individual structures. That identification was the goal of the Goodwin et al. (1985) research design. It was intended

to allow the assessment of historic properties according to

...the manner in which they reflect the major historic processes of change. The significant classes of structures are those which best illustrate these processes, as they were reflected in historic patterns of land use along the riverfront (Goodwin et al. 1985:67).

As noted above, the Goodwin et al. (1985) research design initially presented a categorization of structures and areas according to five major classes. Also, four primary themes were proposed. However, in another portion of the research design these were applied in a somewhat different manner. The goal of this reconsideration was to allow the issue of potential National Register eligibility to be addressed (Goodwin et al. 1985:75).

In this context, types of properties were discussed in terms of "economic and technological trends related to commercial and industrial growth of port" or in terms of "demographic trends related to growth of port (sic)" (Goodwin et al. 1985:68, 71). Structures associated with economic and technological trends were (1) "shipping-related structures" which included wharves, docks, warehouses, cotton-presses, and facilities for ship-building and repair; (2) "railroad-related structures" which included depots and service buildings; and (3) "industry-related structures" which included mills, foundries, and a variety of other facilities (Goodwin et al. 1985:68-71). Structures associated with demographic trends were (1) "residential-related structures;" (2) "public and service facility-related structures" such as saloons and other entertainment areas, nuisance wharves, schools, and markets; (3) "brewery-related structures;" and (4) "military-related structures" which included the late-eighteenth century Fort St. Charles and the Montreuil Line dated to 1814-1815 (Goodwin et al. 1985:67-74).

The Goodwin et al. (1985) research design then addressed the issue of themes and their relationship to specific properties and areas. Thirteen city squares through which the floodwall alignment would pass were recognized as having been the location of structures considered to be significant in terms of the various historic themes. Construction monitoring was recommended for these squares (Goodwin et al. 1985:75-85).

In the discussion of specific properties, ice factories were recognized as historically significant. Two of these were located within the floodwall alignment. These were the Municipal Ice Manufacturing Company and Jacob Emmer's Ice Factory which appeared to be "equally important." The two ice house sites were expected to yield few artifacts, but it was predicted that structural remains that might be encountered would include "...foundations for freezing and water tanks, refrigeration units, and other accoutrements of the ice freezing complex." It was predicted that tools such as ice tongs might also be recovered (Goodwin et al. 1985:81, 106).

The actual monitoring plan consisted of having trained archaeologists present during the excavation of pre-construction trenches within the thirteen squares recognized as the former locations of significant historic properties. The archaeologists were to use the historic map and archival data in order to interpret the nature of artifact assemblages and structural features as these were uncovered. The extent and stratigraphy of significant in situ deposits would be recorded. Limited additional mechanical excavation would be undertaken only if necessary to ascertain the nature and condition of the remains. Project impacts to significant archaeological remains would also be assessed in the field. If deposits of "major" or "outstanding" significance were encountered, the archaeologists would be authorized to halt construction excavation until appropriate mitigative measures could be planned and undertaken. For excavation in areas outside of the thirteen targeted blocks, the plan recommended that construction crews be encouraged to report prehistoric remains, human skeletal remains, historic vessels, military equipment and fortifications, and refuse concentrations such as privies (Goodwin et al. 1985:86-93).

In 1986, areas within three alignments were monitored. Ten archaeological sites and sixteen isolated finds were reported within parts of the floodwall corridor (Goodwin et al. 1986:10, 12). At one of these, 16OR107, architectural debris and ceramics were recovered adjacent to the Inner Harbor Navigation Canal (Goodwin et al. 1986:90-91). The site is adjacent to or within the former location of the second Ursuline Convent (ca. 1820-1915), but the authors of the report did not associate the artifacts with the convent (below).

At 16OR104, a linear timber feature was uncovered. It was interpreted as a weight-bearing structure placed below a rail line. 16OR105 consisted of a brick and mortar feature associated with late-nineteenth-century artifacts. The feature was interpreted as part of the foundation of a warehouse (Goodwin et al. 1986:91, 99).

Other sites reported in 1986 included 16OR106 which was an unmortared brick surface two courses thick. 10OR98 and 16OR103 were refuse deposits. Three features were recorded at 16OR99. These consisted of two brick and mortar surfaces and two cedar timbers embedded in piling foundations. Granite paving blocks and slate slabs were associated with one of the brick surfaces. The site appeared to represent the location of a wharf. A pyramidal, unmortared brick and stone structure (16OR100) was interpreted as a cable-anchoring device. 16OR101 also represented a cable-anchoring device, but it consisted of loose bricks stacked on top of a layer of pine timbers. The final site, 16OR102, consisted of discontinuous segments of what appeared to be a surface made of unmortared brick. It was interpreted as the possible floor of a late-nineteenth century molasses warehouse (Goodwin et al. 1985:99, 102, 106, 111).

None of the sites reported as a result of this first monitoring exercise were considered significant. In an assessment of the utility of the research design under which monitoring was conducted, Goodwin et al. (1986:123) stated that it was difficult to relate the sites to any of the predicted significant structures. Perhaps for this reason, the report on monitoring did not discuss the sites in terms of the historic themes developed in the research design.

Goodwin et al. (1986:122) also stated that none of the trenches were excavated to sufficient depth to encounter early-nineteenth century deposits. However, an examination of ceramic counts from recorded sites (Goodwin et al. 1985:60-63) indicates that this interpretation may not be accurate (Yakubik, personal communication). Some ceramics from this period were recovered at 16OR102 which was interpreted as a late-nineteenth century floor and at 16OR107 which was interpreted as a late-nineteenth century lumber yard but may in fact represent the second Ursuline Convent (see Yakubik and Franks 1992). The possible misinterpretation of 16OR107 is probably the result of Reeves and Reeves (1983) failure to predict correctly the convent's location.

Goodwin et al. (1986:124) correctly pointed out that some of the trenches were wholly within raised railroad embankments. This also was the case when the trench monitored near St. Peter Street in the Vieux Carre was not excavated below the depth of the base of a railroad embankment (Jones and Franks 1991). In hindsight, it appears that one of the critical pieces of information for interpreting sites uncovered during floodwall monitoring, as well as for producing a useful synthesis of results, would have been the recordation of elevation data for features and artifacts encountered in terms of NGVD. However, Goodwin et al. (1986:124) did not make that recommendation. They did suggest that site formation and destruction processes should be considered during future monitoring efforts (Goodwin et al. 1986:124-125) but the manner in which this should be done was not discussed further.

The results of additional monitoring were reported by Poplin and Goodwin (1988). Six archaeological sites were reported. Each city square where remains were encountered was assigned a site number. 16OR109 encompassed several loci. The predicted significant resource here was remains of one of the 1814-1815 defense lines for New Orleans. However, few artifacts were recovered, and these were said to be dated to the late-nineteenth or early-twentieth century. Concentrations of brick fragments were also observed in the field (Poplin and Goodwin 1988:35-37, 65, 72-73).

16OR110 also consisted of several loci. The predicted significant resource was a seafood cannery dated to ca. 1877. A small number of sherds and glass, some of which probably were incorrectly dated (e.g. dates for ironstone provided in the report are 1813-1900), were recovered. The only feature was "a small structure fabricated from three 4-inch timbers." It was not associated with any artifacts, and was interpreted as a possible "footing or drain pipe" (Poplin and Goodwin 1988:37, 40, 73).

Nine loci were identified at 16OR111. The predicted resource here was a late-eighteenth to early-nineteenth century rum distillery. Features uncovered included brick piers, a creosoted plank, brick concentrations, and circular soil stains. Once again, incorrect dates were used for at least some of the artifacts (e.g. "shell-edged whiteware" dated between 1795 and 1840). No interpretation was provided for the archaeological remains, and no attempt was made to

associate the brick piers with structures shown on the Sanborn maps (Poplin and Goodwin 1988:40, 43, 66).

At 16OR112, one of the loci included a brick pier, a lens of brick approximately one meter in length, and a lens of glass sherds that was 14 m long. Diagnostic bottles were said to suggest a date range of 1845 to 1920. Because 92 dark green bottle fragments, three stoneware jug fragments, and five stoneware ale bottle fragments were recovered, the locus was said to represent an establishment that sold or distributed liquor. Several additional brick piers appeared to be associated with the Pacific Molasses Company and were therefore considered to be "modern." No artifacts were associated with these piers. Other loci consisted of a single course of mortar-covered brick and several artifact concentrations. The predicted significant resource at 16OR112 was Soule's foundry, dated ca. 1830. In the post-bellum period, a cotton press was present here. The relationship or lack thereof between artifacts or features and the foundry was not discussed (Poplin and Goodwin 1988: 46, 49, 67, 72-73, 13).

16OR113 consisted of five loci. One of these yielded sherds representing at least four ginger beer vessels. Another yielded a smaller amount of cultural material. A timber feature appeared to be "modern," associated with either a railway or a water line. One concentration of wine bottle fragments and a cement/aggregate piling, as well as a secondary refuse deposit, were also recorded. Predicted significant resources in this area were a sawmill and the Touro Alms House. Date ranges provided for these predicted resources were 1820-1860. Neither the features nor the artifacts appeared to relate to either (Poplin and Goodwin 1987:51, 53, 68, 72-74).

At 16OR114, late-nineteenth to mid-twentieth century artifacts were recovered from fill material at a depth of only about 60 cm below surface. These were clearly unrelated to the predicted significant resource which was a residential occupation beginning by 1790 (Poplin and Goodwin 1987:53, 68-69, 72-74).

In summary, the second floodwall monitoring effort (Poplin and Goodwin 1987), like the first (Goodwin et al. 1985), resulted in a negative correlation between archaeological deposits or features and predicted significant resources. To a large extent, this appears to be the result of elevation in terms of NGVD at present ground surface and elevation in terms of NGVD at

the trench floors. Also, the results of monitoring would have greater utility if an effort had been made to correlate structural features with buildings shown on the various historic maps. Other research in New Orleans has demonstrated that precise correlations are possible either with the use of computer-generated overlays (Yakubik and Franks 1992) or without (Castille et al. 1982, 1986; Goodwin and Yakubik 1982).

Harris et al. (1988) reported the results of additional floodwall monitoring during which two sites (16OR116 and 16OR117) were recorded. 16OR116 represented the Robin Street Nuisance Wharf. It was built in 1877 and was in use at least through 1885. Garbage was brought to the wharf here and loaded onto boats which carried the refuse out into the river where it was dumped. The City adopted new methods of garbage disposal which included an incinerator in about 1893. Presumably, use of the nuisance wharf ceased at about the same time (Harris et al. 1988:19, 22-23).

Because large numbers of artifacts were unearthed at 16OR116 and because inspection trenches were unstable and needed to be backfilled rapidly, only diagnostic artifacts were collected. No structural remains of the actual Robin Street Nuisance Wharf were encountered. Artifacts were derived from a highly organic midden stratum below a 70 cm deposit of Rangia. At the base of the midden stratum, cobbles were concentrated and below these was a stratum of sand (Harris et al. 1988:36-37).

Some of the manufacture dates used by Harris et al. (1988:47-49), like those used by Poplin and Goodwin (1987) for calculating Mean Ceramic Dates, were incorrect. Despite this problem, recovery of a number of sherds with makers' marks from a relatively tightly dated context in New Orleans (Harris et al. 1988:63-65) does provide data that could be useful in a comparative context. Twelve of these marks were identifiable. All were produced in the Staffordshire area of England. One of the sherds bearing the Davenport mark also bore the stamp of "Henderson & Gaines" which was a New Orleans importer. A sherd bearing both marks was also recovered during excavations at Algiers Point. Although several of the bottle sherds were embossed, fewer of the marks could be dated. Manufacturing techniques exhibited on the bottles were consistent with a mid- to late-nineteenth century date (Harris et al. 1988:66, 68, 72).

Because twenty percent of the ceramic sherds were porcelain, Harris et al. (1988:75-76) asserted that the

trash disposed at 16OR116 derived from households with high to medium economic status. However, their ceramic economic scale was based on that of Miller (1980) which is appropriate only for the earlier part of the nineteenth century. Late-nineteenth century porcelain is a particular problem when Miller's scale is used because it became much cheaper during this period. Also, ceramics from some late-nineteenth century proveniences in New Orleans indicate that lower income families may actually have had greater amounts of porcelain tablewares than higher income families (Yakubik and Franks 1992; Castille et al. 1986).

Other artifacts recovered at 16OR116 included clay smoking pipe fragments, shoe fragments, bottle corks, lamp chimney glass, and tin can fragments. Also, 69 animal bone specimens were recovered. Most were large and identifiable. All of the mammals were domestic species and included cow, pig, sheep/goat, and dog. Avian remains were chicken, goose (including wild goose), and duck (probably domestic). Cow bones predominated (62 percent of the entire assemblage), while pig bones were the second most common (representing only 12 percent of the assemblage). Most of the faunal remains exhibited evidence of sawing, and none were burned. Primarily cheaper cuts of meat were represented. The authors note that the sample may be somewhat biased because field conditions required rapid acquisition of artifacts so that smaller specimens were less likely to be collected (Harris et al. 1988:76-79, 85). Nevertheless, the sample could be valuable to future comparative studies of diet and butchering techniques in New Orleans in the late-nineteenth century.

Harris et al. (1988:86-87) recommended that 16OR116 be considered eligible for nomination to the National Register of Historic Places. The recommendation was an appropriate one because excavation at the site would provide important information about material culture in late-nineteenth century New Orleans. Also, a comparison of the material at this site with material recovered from privies and other contexts would provide information about refuse disposal practices during the same period. 16OR116, with the possible exception of 16OR107, is the single most important site recorded in the course of floodwall monitoring.

Harris et al. (1988) report one other archaeological site. This is 16OR117, which represents the predicted location of a late-nineteenth century ice

factory. The present report presents the results of additional monitoring at the site (Chapter 7).

In the Goodwin et al. (1985) research design for floodwall monitoring, ice factories were considered to be an historically significant property type. One such property predicted to lie within the floodwall alignment was the Municipal Ice Manufacturing Company located between St. James and Market Streets. It was expected to yield few artifacts, but it was predicted that structural remains that might be encountered would include "...foundations for freezing and water tanks, refrigeration units, and other accoutrements of the ice freezing complex." It was predicted that tools such as ice tongs might also be recovered (Goodwin et al. 1985:81, 106).

In the course of earlier monitoring efforts, site number 16OR117 was assigned to an area in the St. James to Market Street block (Harris et al. 1988:40) near the ice house. The reported description of the site states that:

[the location is] between wall line stations 30 + 72.79 and 30 + 82.69. One whole bottle dating from the 19th century was recovered from a stratum of dark gray (2.5Y 4/0) clay. The trench alignment was capped with large slabs of concrete which were removed by the backhoe prior to excavation. Subsequent excavation demonstrated successive lenses of fill overlaying the sterile gray batture clay.

In addition to the bottle, the site consisted of the remains of a massive structural feature. During excavation of the inspection trench, the backhoe uncovered and removed two large, horizontal beams. Both contained large spikes along the upper surface. The spikes extended into a series (approximately six) of vertical posts located immediately beneath the beams. The posts... continued to a depth of approximately seven feet below surface. The function of this structure is not clear; however, its general configuration suggests that it may be the remains of a wharf. Brick rubble was also present. No ceramic, faunal, or metal artifacts were observed in association with this site. This paucity of remains makes determination of the exact function of the site difficult. It is

possible that additional remains associated with this site exist downriver from wall line station 30 + 82.69, the limit of the present work area (Harris et al. 1988:40).

In their conclusions, Harris et al. (1988:88) again state that the structural feature recorded was "...probably related to the use of the riverfront area as a wharf during the late nineteenth to early twentieth century." They note that there was "no clear-cut correlation" between features or artifacts recovered at 16OR117 and the predicted Municipal Ice Manufacturing Company's facility.

No explanation is provided by Harris et al. (1988) for why the remains of a late-nineteenth or early-twentieth century wharf would be found within an area that was on the land side of the levee during the purported period of use. The authors do note that a substantial amount of fill has been deposited in the area and that this appears to be associated with the railroad embankment (Harris et al. 1988:88). Unfortunately, the depth below surface of the top of the timber feature was not provided in the report of monitoring. Also, the location of the inspection trench relative to the location of the former ice house facility was not shown.

CHAPTER 6
HISTORY OF THE PROJECT AREA
by Benjamin Maygarden

The city square bounded by St. James, South Peters, Market, and Water Streets, designated Square 34A in the original subdivision plan of 1868 (H.C. Dibble, 18 April 1868, NONA) (Figure 2), is a product of batture accretion during the first half of the nineteenth century. A ca. 1808 map (Figure 3) shows the location of the levee in 1726, 1756, and 1805. In all three years, the area of what would become Square 34A is riverward of the levee.

Pillie's map dated 1830 (Figure 4) shows that even at that date the area that would become Square 34A was within the Mississippi River channel. Because the land there developed at such a late date, a legal conflict over title to the square developed in the 1850s. The conflict was complicated by previous subdivisions of the plantation property that fronted on the Mississippi River at this location.

The relevant tract of land behind the future square was granted by Governor Bienville to the Jesuits, who sold it to Thomas Saulet in the 1760s. A subsequent series of subdivisions by successive owners occurred behind the river frontage in question during the remainder of the eighteenth century. By the time of his death in 1805, Jean Baptiste de Marigny had consolidated a tract with 13 arpents 4 toise frontage extending approximately from present-day Nuns Street to Race Street (Reeves and Reeves 1983:Figure 7).

Jean Baptiste de Marigny left his extensive holdings to his brother, Bernard de Marigny, and his sister, Marie Celeste de Marigny, the wife of Jacques Francois Enoul Livaudais, Jr. On September 11, 1806, Livaudais acquired his late brother-in-law's rights to the plantation (Wilson and Lemann 1979:22-23). On April 11, 1807, Livaudais had his property surveyed, and divided it into two equal portions. He then sold the lower half, including the plantation house and its dependencies, to Pierre Robin de Logny on May 12, 1807, for a consideration of 70,000 piasters (P. Pedesclaux, 12 May 1807, NONA). A ca. 1808 map (Figure 3) shows the configuration of Livaudais' and Robin's holdings.

New Orleans' population was growing rapidly in this period, and new suburbs (faubourgs) were being created both above and below the old city, which itself occupied

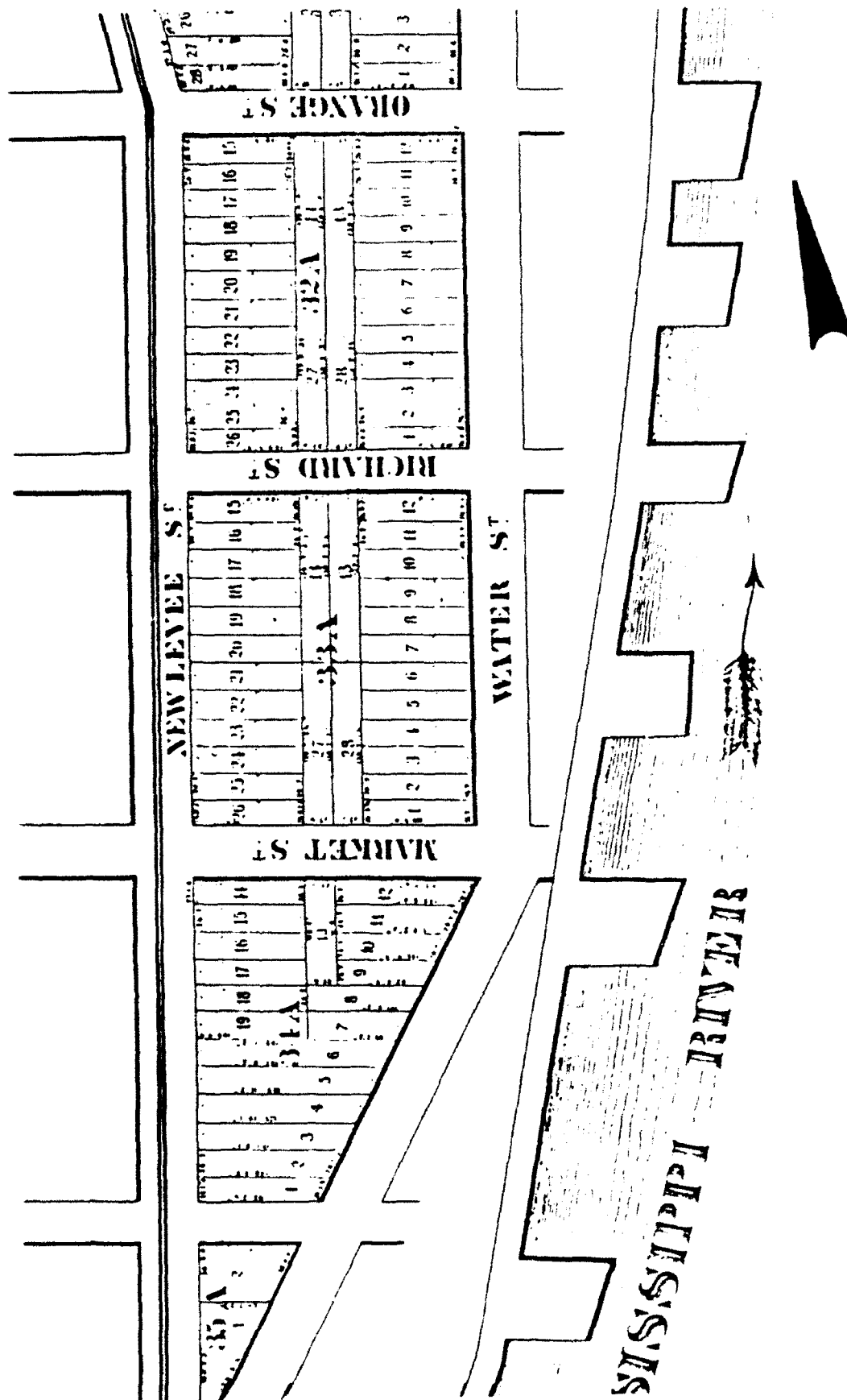


Figure 2. Plan for the subdivision of the Livaudais batture for auction sale in 1868 (H.C. Dibble, 18 April 1868, NONA).

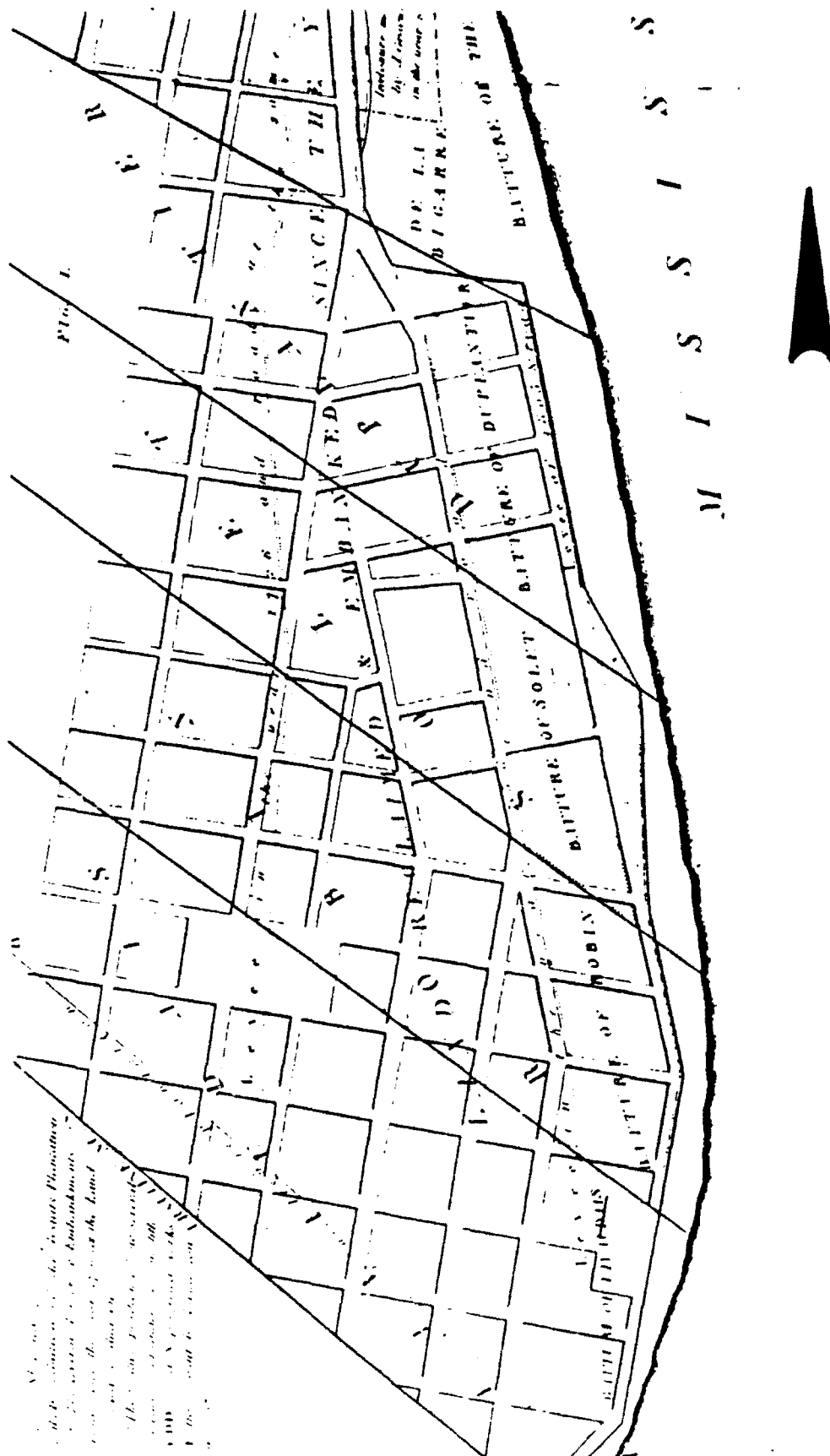


Figure 3. Map dated ca. 1808 taken from Wilson and Lemann (1971).

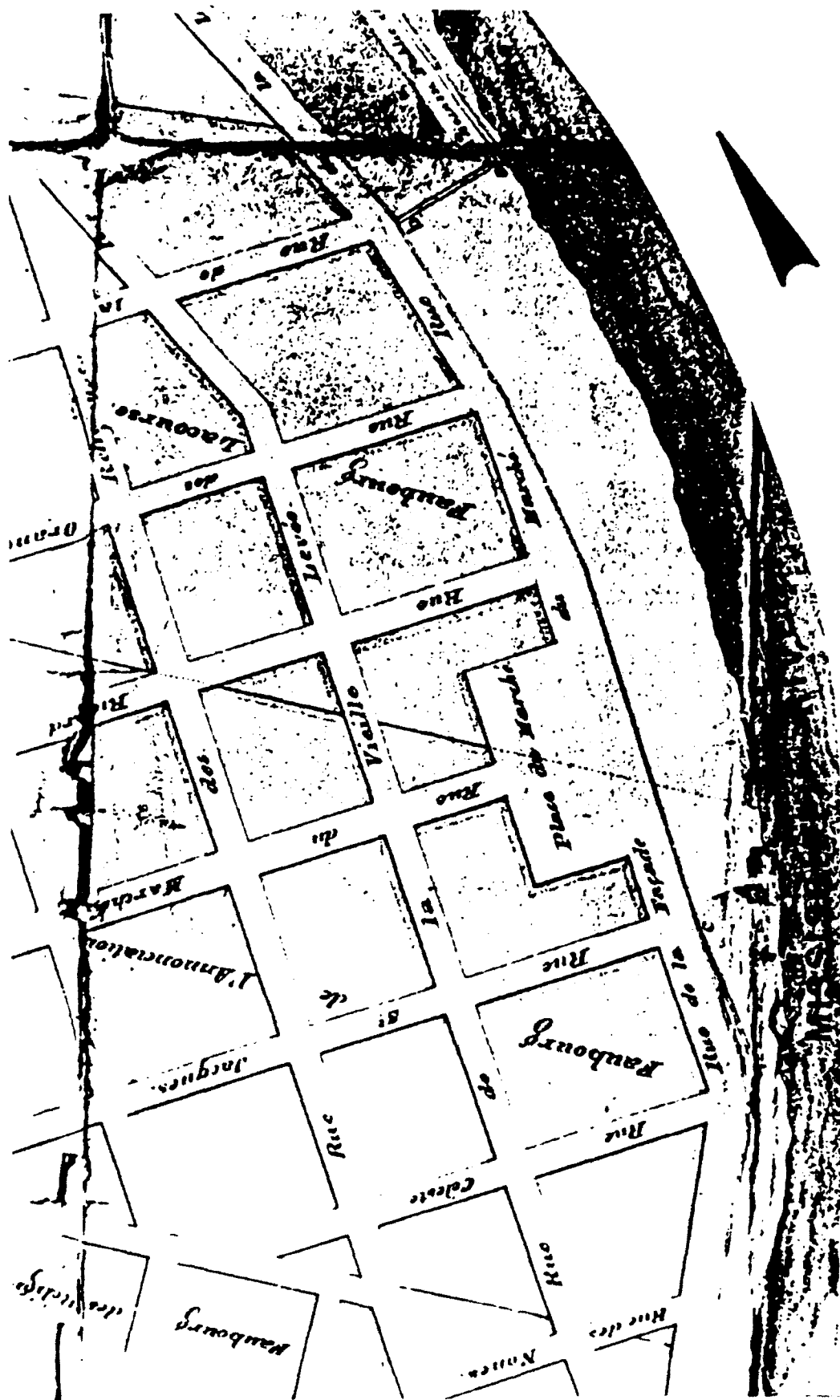


Figure 4. Detail of Plan of Public and Levee by J. Pillie', dated 5 August 1830. This plan shows Faubourg Lacourse, Faubourg Annunciation, and Faubourg Religieuse at the upriver end. Notice that in 1830 the levee did not extend across these upriver Faubourgs, leaving an undeveloped batture (Supreme Court Collection, UNO).

the area now referred to as the Vieux Carre. Livaudais and de Logny had intentions to subdivide their properties for development. They had the surveyor Barthelemy Lafon prepare a plan of subdivision for their two tracts. The plan was issued on May 14, 1807, as a "Prospectus of the Faubourg Annunciation and Faubourg de la Course." Lafon correlated the streets of the new faubourgs with those of the downriver Faubourgs de Lord and Saulet to provide a common plan. He also placed a number of public squares at the dividing line between Livaudais' and de Logny's properties. One of these public squares, the Place du Marche, was situated at the foot of Market Street and fronted on New Levee (later South Peters) Street. It was situated landward of the area that would later become Square 34A (Reeves and Reeves 1983:73). In fact, the dividing line between the Faubourgs Annunciation and La Course bisects the site of Square 34A since the line runs parallel to Felicity Street and not Market Street (Wilson and Lemann 1979:Map following 112).

Bitter public controversy had erupted over attempts at private development of the batture of Faubourg Ste. Marie, and Livaudais and de Logny seemingly wanted to avoid similar difficulties. Therefore in their 1807 prospectus for Faubourgs Annunciation and La Course, Livaudais and de Logny abandoned their riverfronts to public use. The riverfront at this time was at New Levee Street. However, by the time of the 1830 "Plan of the Public Road and Levee" by H. Pilie (Figure 4), it can be seen that the batture was developing significantly from the angle of the levee at the foot of Celeste Street downriver to the Front Street levee extension in the Faubourg Saulet.

As elsewhere, the undeveloped batture at Faubourgs Annunciation and La Course was utilized by all manner of river traffic for the storage, loading, and unloading of cargo, coal, and the like. The Gibson Directory of 1838 (Reeves and Reeves 1983:Figure 45) shows that a wharf had been constructed at the foot of Market Street. Two decades later the D'Hemecourt Block survey of New Orleans shows additional wharves at the foot of St. James Street and in front of Square 34A across Water Street, which by that time had been extended upriver from the Faubourg de Lord and Saulet (Reeves and Reeves 1983:Figure 6).

The heirs of J.F.E. Livaudais and P.R. de Logny came to feel that the commercial development of the Faubourgs Annunciation and La Course was being slowed by

the lack of development on the batture. The heirs of Livaudais and de Logny petitioned the Louisiana State Legislature for permission to seek a settlement with the City of New Orleans to reassume ownership of the batture. Accordingly, the Legislature passed an act in 1855 whereby residents could claim batture land no longer needed by the public. However, New Orleans also put up a claim to the Annunciation-de Logny batture, based on the City's sale of a piece of the batture in 1854. The Livaudais-de Logny batture suit kept numerous lawyers busy until after the Civil War, when the City of New Orleans and the Livaudais and de Logny heirs at last reached a settlement. The land was to be surveyed and sold at public auction and the proceeds divided among the parties to the suit (Reeves and Reeves 1983:49).

A series of public auctions of the batture property began in February 1868 and continued until July of that year when the last of the 102 lots created were finally sold. Lot Nos. 7-13 of Square 34A were purchased on February 25, 1868, by James McCloskey, who, with his partners A.P. Mason and N.J. Bigley, were dealers in coal as McCloskey, Bigley, and Co. with offices at 166 Gravier St. McCloskey paid \$5,425.00, or \$775.00 each, for the seven lots (H.C. Dibble, 18 April 1868, NONA; Gardner 1869:325).

McCloskey evidently did not comply with the Court's terms of sale, since less than two weeks later the Court ordered that lot Nos. 7-13 be resold. McCloskey's partner, Nicholas J. Bigley, then purchased the lots at auction on July 25, 1868, for the reduced price of \$3,990.00, or \$570.00 each (H.C. Dibble, 1 August 1868, NONA). Bigley, who was from Pittsburgh, and McCloskey used the lots as a coal yard. The lots provided convenient access to the nearby wharves where the partners probably docked their company's tugboat "Nellie" and a number of coal barges. The firm sold coal at retail and wholesale, and their business included sales to steam vessels on the river. By a City ordinance of 1866 the wharves in Section 3 of the First District were reserved for sea-going vessels (Reeves and Reeves 1983:116), and these may have been significant customers of McCloskey, Mason, and Co.

On June 17, 1873, McCloskey, Bigley, and Co., as the partnership was now named, sold their entire stock in trade including lot Nos. 7-13 of square 34A to another coal dealer, Willis G. Wilmot of Boyd, Wilmot and Co., whose offices were located at 166 Poydras Street (Southern Publishing Company 1873:579). An inventory

schedule was included with the act of sale (Table 1). The act of sale also conveyed the moveable property from McCloskey, Bigley, and Co.'s office at 166 Gravier, valued at \$803.00. The total price paid by Wilmot for the sum of assets and "good will in trade" of McCloskey, Bigley, and Co. included the right to sell coal at retail or wholesale or to steam vessels for a period of three years (P.C. Cuvellier 17 June 1873, NONA).

McCloskey, Bigley, and Co.'s coal yard had not attained an impressive condition. There were evidently three structures on lot Nos. 7-13 at the time of the 1873 inventory: a stable, an office, and a "tool house" which may have been no more than a shed. Based on their value, neither the office nor the stable were very substantial buildings. The stable was worth less than two of the mules housed within it. Interestingly, no stock of coal is listed in the inventory, although the barges may have contained an amount of coal. The seven lots of ground themselves were valued at only slightly more than their 1868 auction price.

By 1883, a railroad line had been constructed along Water Street, as is shown on the Braun map of that year (Figure 5). Despite the expectation that the former batture of Faubourgs Annunciation and La Course would be fertile ground for commercial development, there were few large commercial structures on the batture until the 1890s. Within a few blocks along the batture from Square 34A were coal yards, the stave piling grounds of cooperages, and municipal utility facilities. Commercial development continued on the landward side of New Levee Street (or South Peters Street) with cotton presses, tobacco warehouses, industrial and manufacturing enterprises (particularly cooperages), a brewery, and residences, but there is no indication that the value of batture lots grew with the adjacent development.

When Wilmot sold lot Nos. 7-13 in 1881 to the prominent New Orleans coal merchant William G. Coyle, their price had declined to only \$2,000.00 (N.B. Trist, 5 February 1881, NONA). Coyle, with offices at 33 Corondelet Street, maintained another coal yard at the corner of Julia and Water Streets (Soards 1881:813). "Braun's Atlas of the City of New Orleans" for 1883 (Figure 5) and the Sanborn Map dated 1885 show that the W.G. Coyle and Co. Coal Yard had built a long brick stable building on lot No. 13. The yard was surrounded on two sides by the Bobet Brothers cooperage stave piling ground. The Sanborn map also shows a wooden

Table 1. Inventory of Items Conveyed with Lot Nos. 7-13 of Square 34A in 1873 (P.C. Cuvellier 17 June 1873, NONA).

Item	Value
1 Clip	\$.50
1 Hose	9.00
1 Platform for [Cart ?]	200.00
1 Pick	2.00
Oil cans	2.50
Tool house	20.00
[Brd ?] measure	8.00
1 Lot lines	200.00
6 Second hand barrows	27.00
41 [Coal ?] barrows	205.00
40 [?] Plank	50.00
1 Axe	1.50

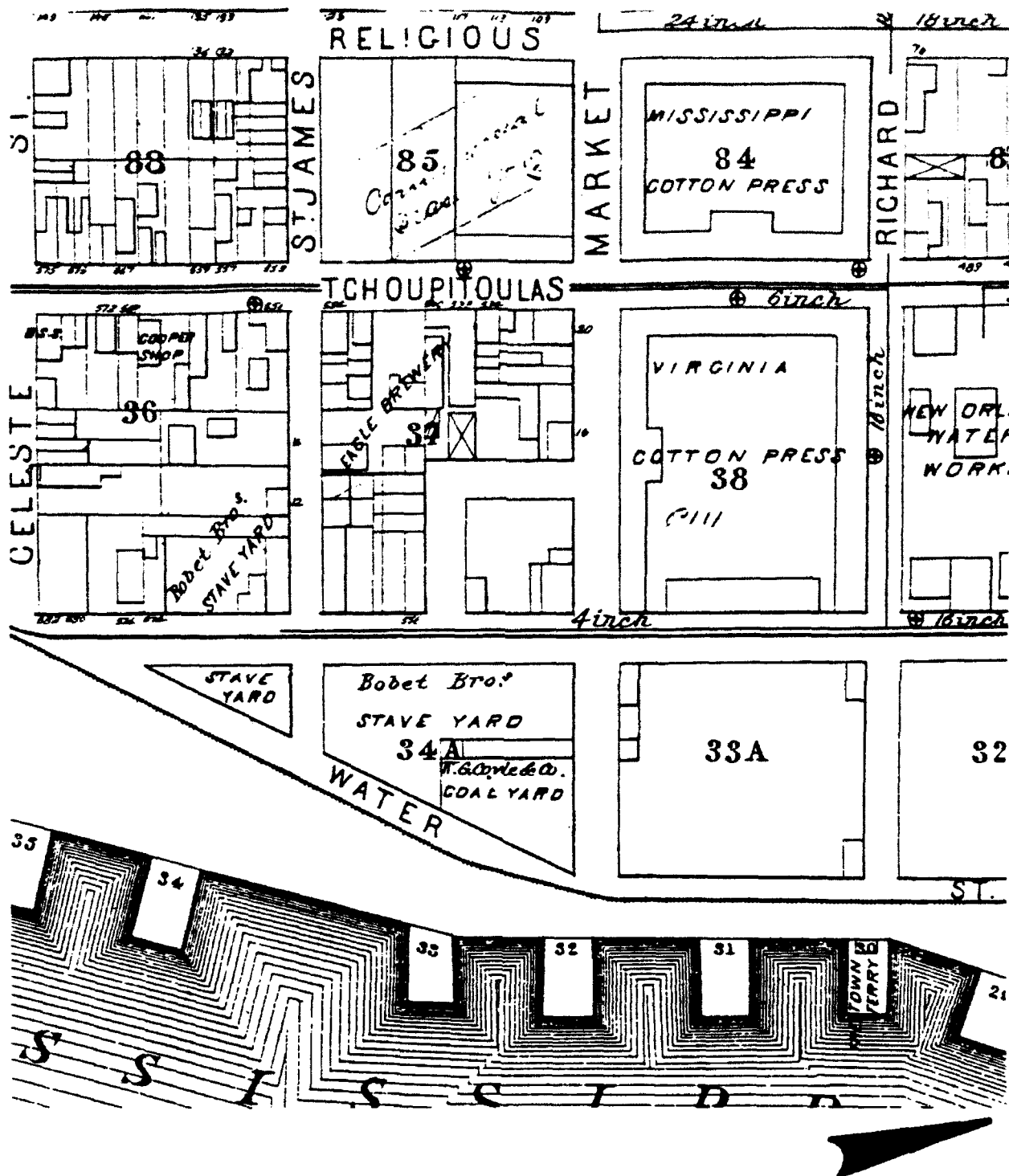


Figure 5. Excerpt from "Braun's Atlas of the City of New Orleans" (1883).

wagon shed on lot No. 7 (Figure 6). There is no indication of any structures along the Water Street edge or at the corner of Water and Market streets, where the floodwall alignment crosses the site of the coal yard.

On March 26, 1891 lots No. 7-13 were purchased by Judah Hart of New York, a relative of a New Orleans jewelry and loan merchant. Hart paid \$12,500 for the lots, a 625% increase over their 1881 sale price. This leap in price may be indicative of a general increase in the value of property available for speculative development, but the later history of the site does not reinforce the idea that the lots were particularly valuable as real estate. Hart's intention was to build an ice factory.

Ice manufacturing in New Orleans was very much a growth industry during this period. Ice was only introduced to the city in about 1826. It was imported from New England until 1868, and was considered a luxury item (Rightor 1900:522). Louisiana and Texas pioneered ice manufacturing in the South, and by 1889 Louisiana had eighteen ice factories. Most of these were probably located in New Orleans. By the 1870s, a single hotel, ice cream parlor, or saloon in New Orleans' subtropical climate might use from 1300 to 3500 pounds of ice daily. Residential demand was no doubt sizeable also (Jones 1984:154,159).

Hart proceeded to build an ice factory on the lots at a cost of \$350,000.00 (Rightor 1900:523). He sold it to the Municipal Ice Company on January 30, 1892 for \$475,000.00. Hart mortgaged the property to the Municipal Ice Manufacturing Company for \$250,000.00 (J.C. Wenck, 30 January 1892, NONA).

The ice factory consisted of two brick buildings. The larger building contained a 50 ton (capacity) Blymyer Ice Machine "complete" and three additional 50 ton machines made by the Southern Ice Machine Co. of Chattanooga, Tennessee, along with their constituent cooling condensers, cooling tanks, ammonia pumps, and ice freezing tanks (J.C. Wenck, 30 January 1892, NONA). The total production capacity was 200 tons of ice in 24 hours. This building was connected to the electric light plant across Market Street by a steam pipe. A railroad siding separated the larger building from a smaller structure containing four boilers. From the Sanborn map of 1895 it appears that the boiler building may have encroached on the public right of way along Water Street, perhaps as much as 20 feet at the upriver corner

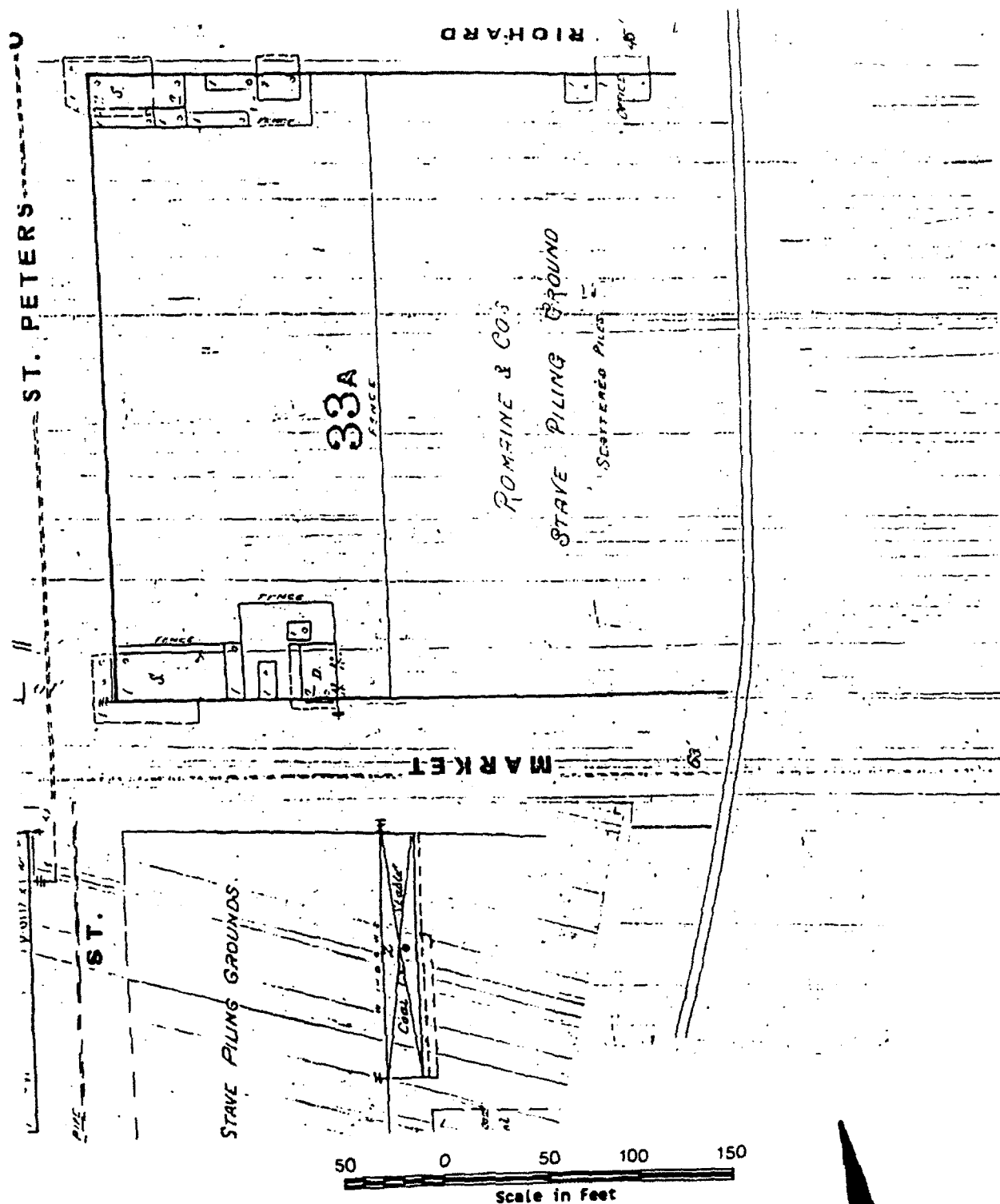


Figure 6. Excerpt from the 1885 Sanborn Map showing the brick stable on the south side of Market Street.

of the boiler building (Figure 7). The fenced yard of the ice factory appears to be an even more blatant encroachment onto Water Street. The floodwall alignment passes through the site of the boiler building, although by 1909 the building had been reduced in size. By that date, newer railway tracks had filled the right of way to the boundaries of the 1868 subdivision of square 34A (Figure 8).

The number of ice factories in Louisiana doubled in the 1890s (Jones 1984:159). Evidently the Municipal Ice Manufacturing Co. ran into difficulties about the same time. However, it is not known whether this was due to increased competition. The company defaulted subsequent to adjudication, and the factory was sold on January 18, 1899, to the Crescent City Ice Co. for a mere \$55,000.00 (F.J. Puig, 18 January 1899, NONA). The factory had apparently not been in operation since at least 1895. The Crescent City Ice Co. was the product of a northern syndicate that tried to create a monopoly on ice production in New Orleans (Reeves and Reeves 1983:158). The Crescent City Ice Company sold the factory to the Crescent Ice Company less than eight months later as part of a package deal that included the Hygeia Ice Co., the Consumers Ice Plant, the Southern Ice Plant, and the Distilled Water Co. Ice Plant for a sum total of \$880,000 (N.J. Puig, 2 September 1899, NONA).

There is no indication that the ice factory again became operative, and the site was sold on July 10, 1905, to Mortimer Norton Buckner of New York for \$50,000. The machinery, tanks, coils, and other moveable property remaining in the factory buildings were not included (N.J. Puig, 10 July 1905, NONA). Eleven days later Buckner sold lot Nos. 7-13 to the New Orleans Railway and Light Co. for \$50,000.00 (N.J. Puig, 10 July 1905, NONA). By the time the 1909 Sanborn map was prepared, the stripped factory buildings were only partially occupied by storage materials (Figure 8). The boiler building had been reduced in size, eliminating the apparent encroachment onto Water Street. However, the smaller building still intersected the floodwall alignment at the corner of Water and Market streets. Subsequently the buildings were razed, and the site is now a substation of New Orleans Public Service Incorporated (Figure 9).

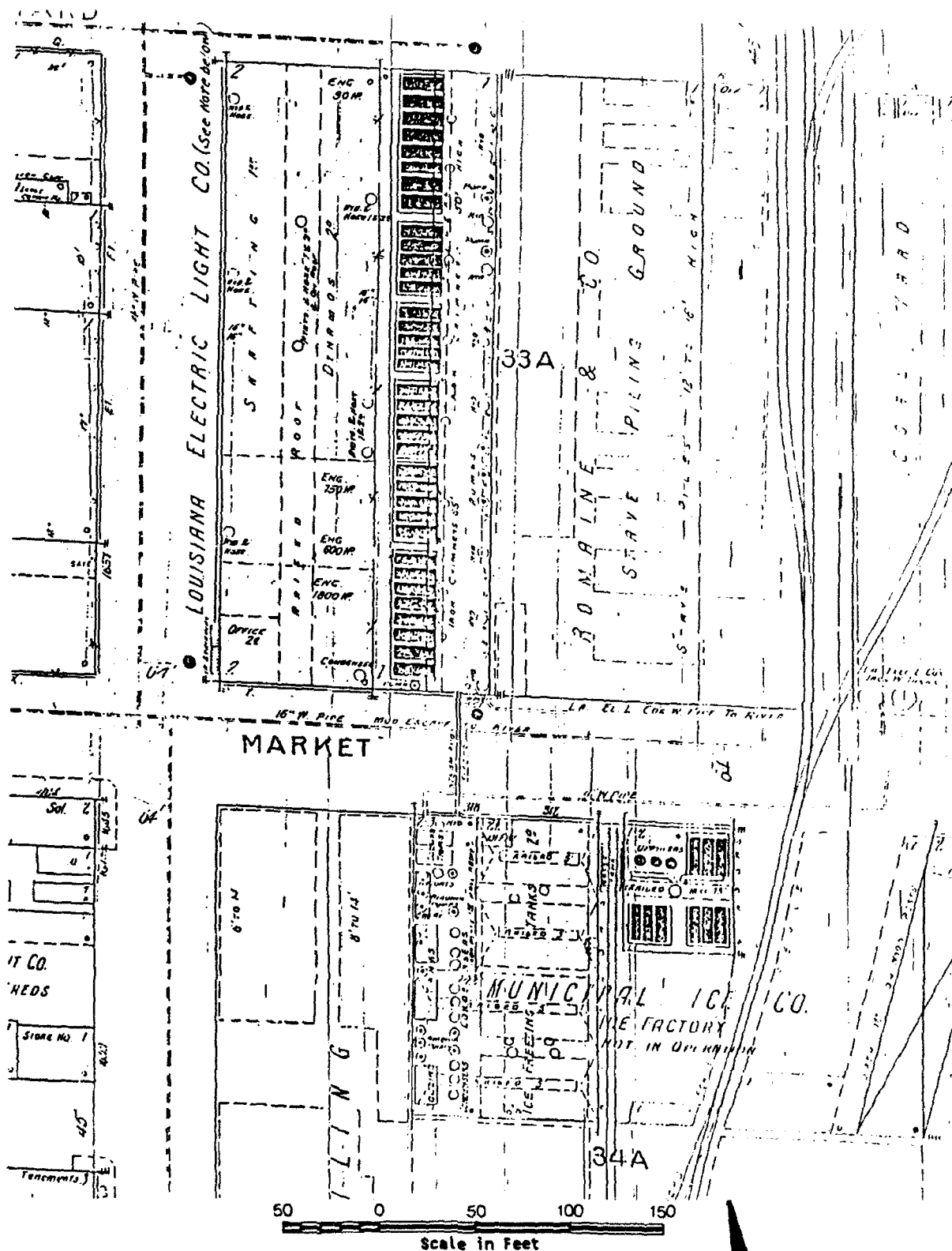


Figure 7. Excerpt from the 1895 Sanborn Map showing the Municipal Ice Company facility in Square 34A.

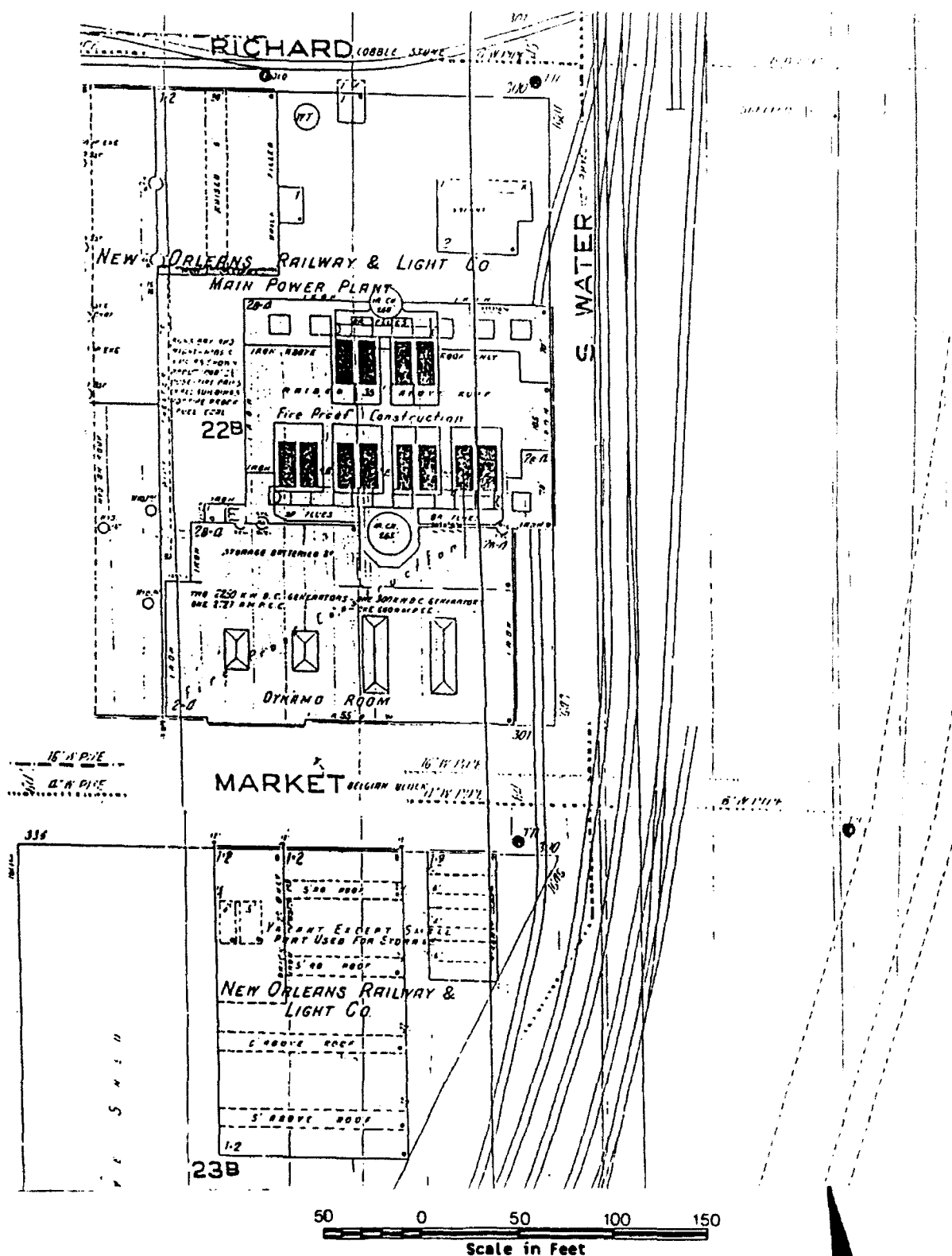
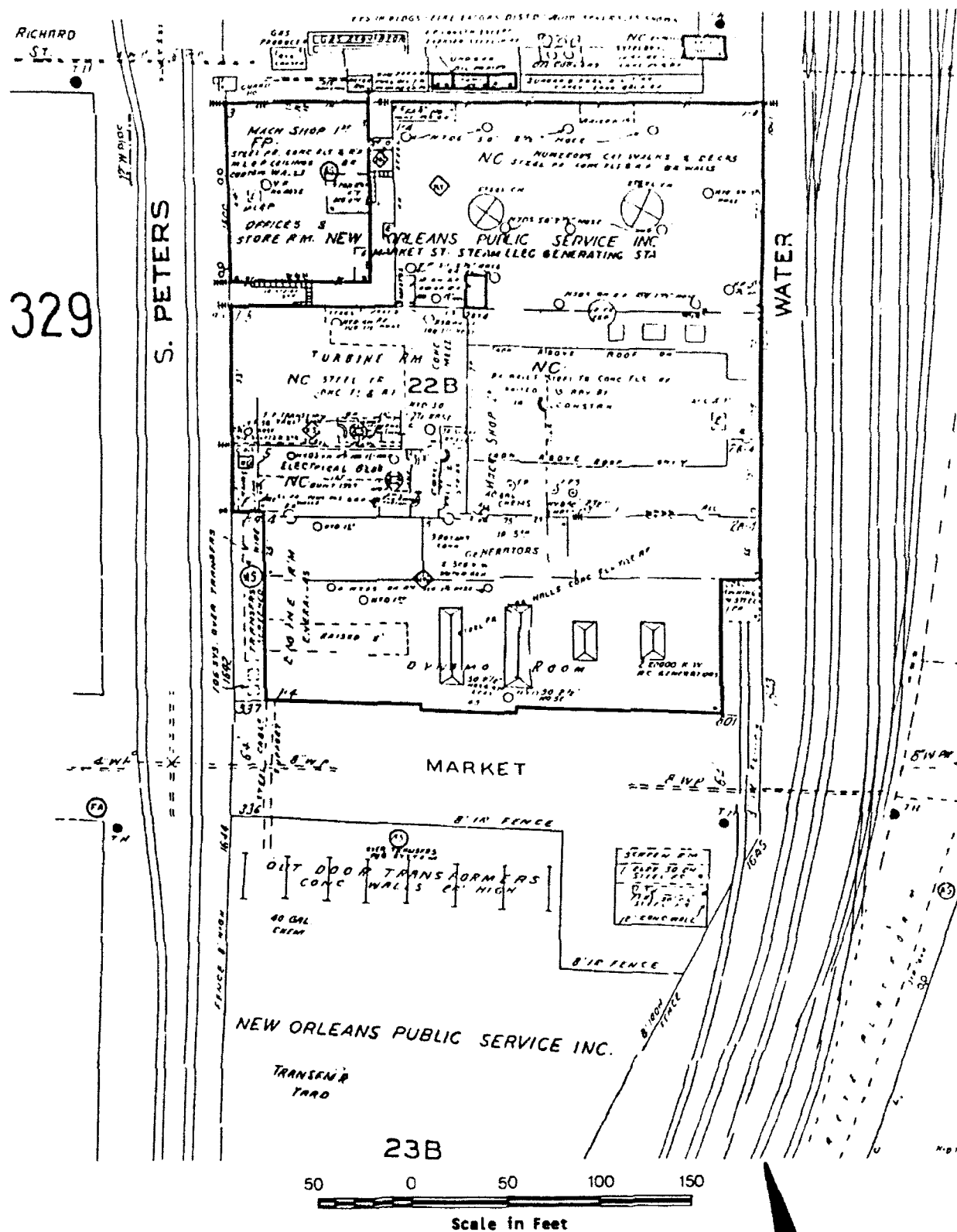


Figure 8. Excerpt from the 1909 Sanborn Map showing the railway tracks and the New Orleans Railway & Light Company facility.



CHAPTER 7

RESULTS OF MONITORING

This chapter describes the archaeological fieldwork conducted during the excavation of the pre-construction inspection trench for the "Jackson Avenue to Thalia Street Floodwall, Phase Three Component." The floodwall here runs along the former alignment of South Water Street, parallel to and adjacent to the riverside railroad corridor.

The location of this final floodwall segment is shown in Figure 10. It extends downriver 485 feet (approximately 150 m) from Station 30 + 13.8' W/L which is a short distance upriver from Market Street, to Station 34 + 99.21' W/L which is along the line of Richard Street (Figure 10). Between Market Street and Richard Street the floodwall alignment follows a course which is approximately parallel to the riverward side of a large NOPSI (New Orleans Public Service, Inc.) building. The building is the Market Street Steam Electric Station. The 1909 and current Sanborn maps refer to the city square within which this structure is located as 22B, but on the 1885 and 1895 versions it was referred to as 33A. Upriver from Market Street, the alignment runs riverward of the truncated city square occupied by smaller NOPSI structures and transformers.

The floodwall will not impact any of the standing structures within the fenced NOPSI property. There is no documentary evidence for any structures earlier than the electrical generating station in the Market Street/Richard Street square. An icehouse operated during the early 1890s in the adjacent upriver square from St. James Street to Market Street (Chapter 6). This truncated city block is depicted as Square 23B on the 1909 and current Sanborn maps, but was referred to as 34A at dates earlier than 1909. Its riverward side was apparently truncated during one or more street setbacks in the twentieth century. The portion of the floodwall segment adjacent to this square is the only area that was considered to be a likely venue for historic structural remains. A pre-construction inspection trench excavated during 1987 for the Jackson Avenue to Thalia Street Floodwall, Phase One Component extended downriver beyond the end of the segment at Station 30 + 13.8' W/L to a bend in the floodwall alignment at Station 30 + 82.69' W/L. Components of a timber framework were exposed in the inspection trench between Stations 30 + 72.79' and 30 + 82.69'. Those remains were designated the St. James Street Site and

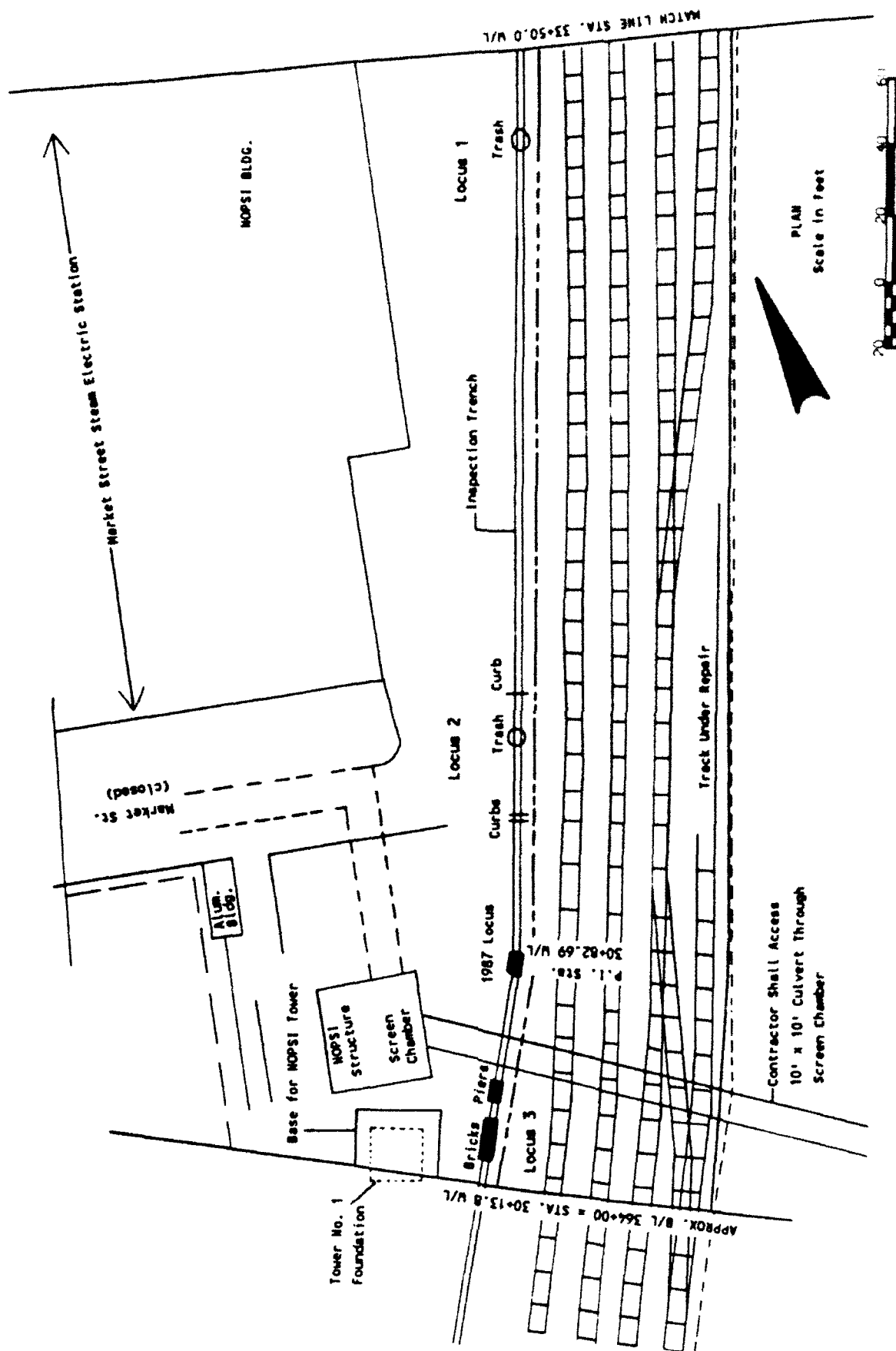


Figure 10. Upriver portion of Jackson Ave. to Thalia St. floodwall, Phase III, showing 16OR117 1987 and 1991 loci.

assigned the state number 16OR117 (Harris et al. 1988:40). The description of the timber framework is quoted in full in Chapter 5 of this report. Its location is depicted on Figure 10 as the "1987 Locus."

The upriver portion of the 1991 monitoring coverage thus overlapped with the area monitored in 1987. Historic materials and structural remains were observed both upriver and downriver of the locale reported in 1987. All of these loci have been treated as part of 16OR117. The new loci are designated 1 through 3, in order upriver (north to south).

Kenneth R. Jones and Craig Hanson of Earth Search, Inc., performed archaeological monitoring of the excavation of the 1991 inspection trench. They remained at the work site throughout the course of the excavation. The trench excavation began on Tuesday, August 13, at the downriver (north) end of the floodwall segment. During August 13 and 14, the construction crew encountered multiple modern buried obstructions - water lines, electrical cables, and timber mats. These were removed by the crew. On August 13, several isolated bricks were recovered behind the center of the brick NOPSI building. Some of the bricks were stamped with the maker's mark "SALMEN," while others were stamped with the maker's mark "EVENS & HOWARD ST. LOUIS." One brick of each type was collected. These bricks may be directly associated with the building, as some of the facade brick on the rear of the structure has fallen off. Parts of the building date to the 1890s. Bricks with the "Evens & Howard" mark were also recovered from the quarters area of Beka Plantation (16OR90) where they appear to be associated with post-bellum renovations to some of the plantation residences (Yakubik and Franks 1991). There were no artifacts or subsurface features in association with these bricks at 16OR117.

A small pocket of trash was encountered at a depth of 1.6 m, .5 m downriver from a barrier of vertical beams made of long leaf yellow-heart pine. The timber barrier enclosed a water line. This trash pocket is 55 m upriver from the Richard Street end of the floodwall, and 5 m landward of the nearest rail in the railroad corridor. This location is situated approximately at 33 + 20' W/L. The mixture of material in the trash pocket and its position adjacent to a modern construction feature suggested that it is disturbed, perhaps redeposited. This pocket of trash has been designated Locus 1 of 16OR117 (Figure 10).

The majority of artifacts collected from Locus 1 (Table 2) consisted of nondiagnostic bottle glass fragments. One glass sherd appeared to be a fragment of a culinary bottle neck. Other artifacts included two sherds of a single ironstone plate, a pipestem fragment, a bone, and a bakelite comb fragment. The most unusual item was a piece of carved bone that appeared to be a fan stick. The presence of the bakelite comb fragment and the clear bottle glass sherds suggest a late-nineteenth/early twentieth century date for this deposit of trash.

On August 14, the construction crew exposed a line of vertical limestone (?) slabs, possibly the downriver curb of Market Street (Figure 10), at Station 31 + 57' W/L. The alignment of this street (now closed) was along the upriver side of the NOPSI generating station. A stone block surface (depth .5 m) lies upriver from the stone curbing. The 1909 Sanborn map of the area (Figure 8) indicates that Market Street was here paved with Belgian Blocks. The "cobblestone" surface extends upriver approximately 7 m, to Station 31 + 34' W/L. Concrete slabs (6 inches thick) overlie the cobblestone blocks. The cobblestone surface terminates along its riverward side at a 6-inch thick concrete slab into which wooden railroad ties have been set. This is a support base for a railroad siding or spur track. The spur track slab extends upriver from Station 31 + 55' W/L to Station 31 + 38' W/L. The top of this concrete slab is 40 cm below ground surface.

Another pocket of trash was exposed below the spur track slab, approximately 100-120 cm below the top of the slab or 140-160 cm below ground surface. The trash pocket is 1.4 m (approximately 5 feet) downriver from the upriver end of the spur track slab, at Station 31 + 43' W/L. The pocket is located near the center line of Market Street. This pocket has been designated Locus 2 of 16OR117 (Figure 10).

Ceramics collected from Locus 2 consisted of mid-to-late-nineteenth century types (Table 3). Tablewares such as ironstones and porcelains predominated in the collection, but utilitarian yellowware and stoneware were also represented. Bowls and plates were equally represented in the ceramic collection (five each), and fragments of a cup and of a saucer were also found.

Nondiagnostic glass sherds were collected at Locus 2, but fragments of a wine bottle, a tumbler base, and two bottle bases were also found. One of these bases

Table 2. Artifacts From Trash Pocket Designated
Locus 1.

Ceramic

2 Classic ironstone (1 plate)

Glass

2 Brown glass

7 Clear glass

1 Clear culinary bottle neck

3 Olive glass

Miscellaneous

1 Bone

1 Bakelite comb fragment

1 Kaolin pipestem (undecorated)

1 Bone fan stick

Table 3. Artifacts from Trash Pocket Designated
Locus 2.

Ceramics

- 2 Annular whiteware (1 bowl)
- 9 Classic ironstone (2 bowls, 1 plate, 1 cup)
- 8 Ironstone (1 crock, 1 saucer, 1 plate)
- 1 Banded ironstone (1 plate)
- 3 Yellowware (1 bowl)
- 1 Brown salt-glazed stoneware, Albany slipped
interior (1 crock)
- 2 Porcelain (1 plate)
- 1 Pink-tinted porcelain (1 plate)
- 1 Polychrome hand-painted porcelain (1 bowl)

Glass

- 1 Brown glass
- 1 Brown bottle base, embossed "ELLENVILLE (GL)ASS
WORKS"
- 1 Clear tumbler base
- 1 Clear bottle base
- 2 Olive glass
- 2 Olive wine bottle kickup
- 1 Olive wine bottle lip, tooled
- 6 Pane glass

Metal

- 6 Amorphous metal
- 8 Square nails
- 1 Wire spike
- 2 Slag

Miscellaneous

- 1 Shoe sole
- 10 Bone
- 3 Sawed bone
- 1 Oyster shell
- 1 Coal
- 1 Brick fragment
- 1 Rock

was embossed "ELLENVILLE (GL)ASS WORKS" in a circle on the base. The Ellenville Glass Company operated in New York between 1836 and ca. 1900. This particular mark was utilized by the company in the period ca. 1880 to 1890 (Toulouse 1971:179). Because glass was discarded at a more rapid rate than ceramics, it is likely that all of the trash was deposited here during the 1880-1890 period.

Other items collected from Locus 2 consisted of architectural debris (brick fragments, square nails, a spike, and pane glass), coal, slag, stone, and oyster shell. Thirteen bone fragments were collected, and three of these exhibited evidence of saw marks. Finally, the sole of a shoe was found.

The possible upriver curb of Market Street (Figure 10), a line of vertical stone slabs at Station 31 + 22' W/L, is 35 feet from the parallel course of curbstones flanking Market Street. The top of the upriver line of stone slabs is 80 cm below ground surface, while the bottom is 138 cm below ground surface. The stone slabs are approximately 10 cm thick. Immediately upriver from the latter line of "curbstones" (Figure 11) is a parallel cast iron pipe (10-inch diameter?). Parallel to this pipe is another line of upright stone slabs at approximately Station 31 + 20' W/L. The outside edges of these two lines of stones are 70 cm apart. Here the vertical slabs of stone apparently form a protective box or culvert for the cast iron water pipe (Figure 11).

An additional line of upright stone slabs (Figure 11), perpendicular to the above alignments, extends upriver 3.25 m (10' 8") from the upriver side of the "box structure" to the edge of a shattered fragment by a 4-inch steel pipe crossing the line of stones at Station 31 + 09' W/L. The three intact slabs are 84, 94, and 106 cm in length; the fourth slab is broken. The top of this line of vertical stone slabs is 75 cm below ground surface. An area of concrete, 10 cm higher than the top of the stone alignment, lies on the landward side of the stone slabs. The street paving and curbstones (or culvert liners) in the vicinity of Market and Water Streets were recorded, but not assigned a feature number.

An area of fragmentary brick about 1.5 m in length was exposed, just upriver from the 4-inch steel pipe. The brick was observed solely on the landward side of the trench, approximately between W/L Stations 31 + 00' and 31 + 05'. It was at a depth of 84 to 104 cm below

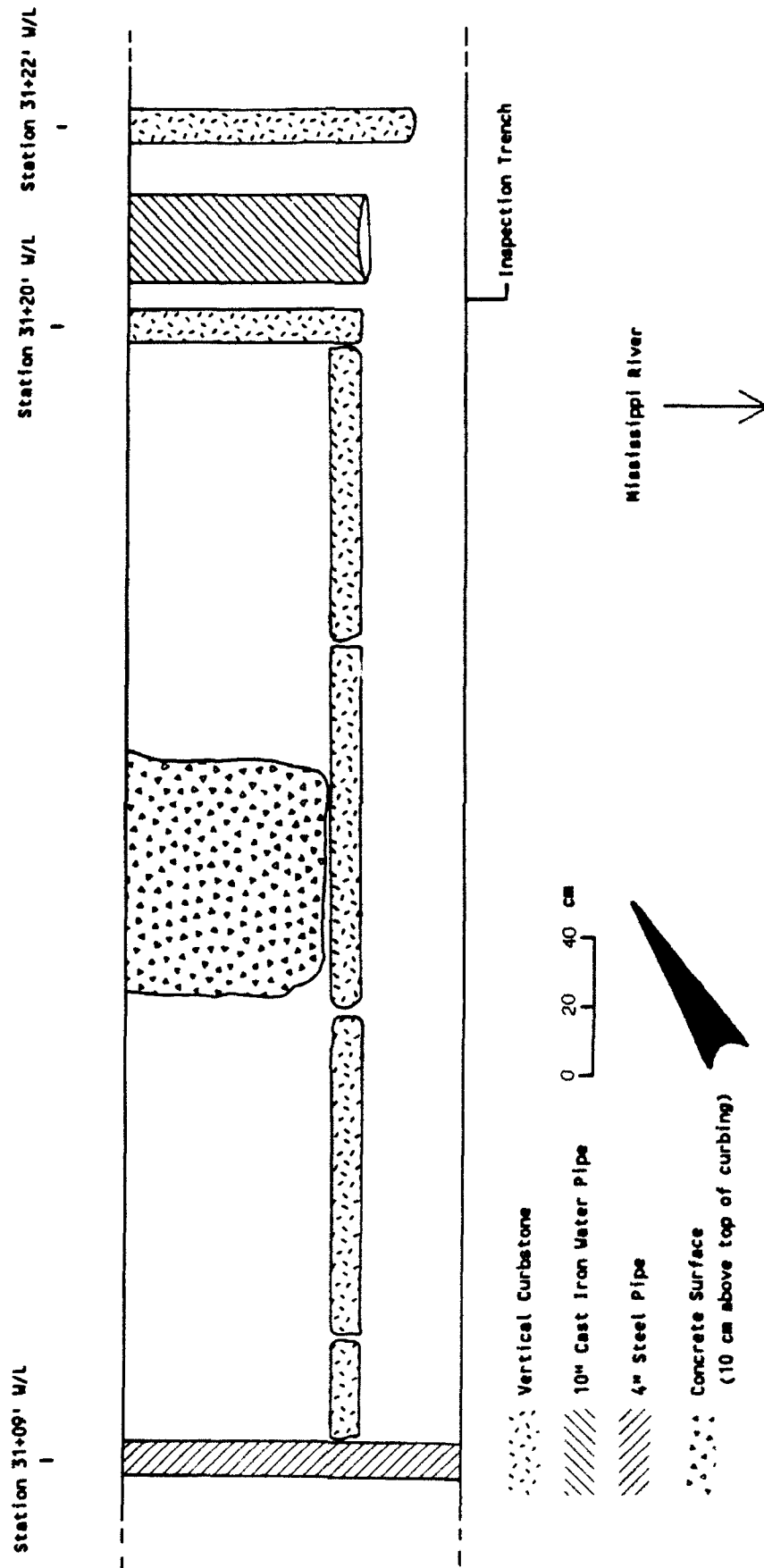


Figure 11. Plan of curbing between Station 31+09' W/L and 31+22' W/L.

the modern ground surface. It was 20 cm thick, and may correspond with laid brick courses. Alternatively, because the brick was so completely shattered, it may represent a layer of rubble.

A short distance upriver, at approximately Station 30 + 98' W/L, was a 12-inch square wood beam running perpendicular to the trench. The beam rests on two upright wood pilings. The top of the beam was at 82 cm below surface, and the tops of the pilings upon which it rested were at a depth of 120 cm below ground surface. Figure 12 is a photograph of the tops of the pilings. Upriver from the beam, a steel pipe was exposed at a depth of about 1.5 m. The pipe ran along the line of the trench.

Farther upriver, opposite the downriver end of the NOPSI screen chamber structure, was an additional 12-inch wood beam which was oriented perpendicular to the trench. Like the beam described in the preceding paragraph, this one also rested on two wood pilings. The top of the beam was about 39 cm (3 ft) below surface, and the tops of the pilings were about 70 cm (4 ft) below surface. No crossbracing of any kind was attached to the pilings.

Opposite the center of the NOPSI chamber structure, the excavation exposed two large steel I-beams running parallel to the trench. These probably form a protective bulkhead or weight-bearing structure above the buried concrete box culvert leading to the NOPSI structure. Modern steel sheet pilings perpendicular to the trench are present on the landward side of the I-beams. The top of the sheet piling is approximately 3 ft deep. Excavation ceased for the day after exposure of these modern obstructions.

On August 15, the construction crew exposed the top of a brick stratum 2.4 m (7' 10") to 6.4 m (21') downriver from the end of the existing floodwall between St. James and Market Streets. This stratum extends downriver from Station 30 + 21.6' W/L to Station 30 + 34.8' W/L. The brick lies riverward of the base of a modern NOPSI transmission line tower. The uppermost soil stratum (Stratum I) here is sandy silt (10YR 4/4, dark yellowish brown) with a large amount of crushed stone (railroad bed ballast) near the top (Figure 13). The amount of crushed stone decreases with increasing depth. The top of a gritty soil stratum (5YR 6/8, reddish yellow) is 48 cm below ground surface (Stratum II, Figure 13). The top of a crumbled or crushed brick



Figure 12. Top of pilings at Station 30+98' W/L.

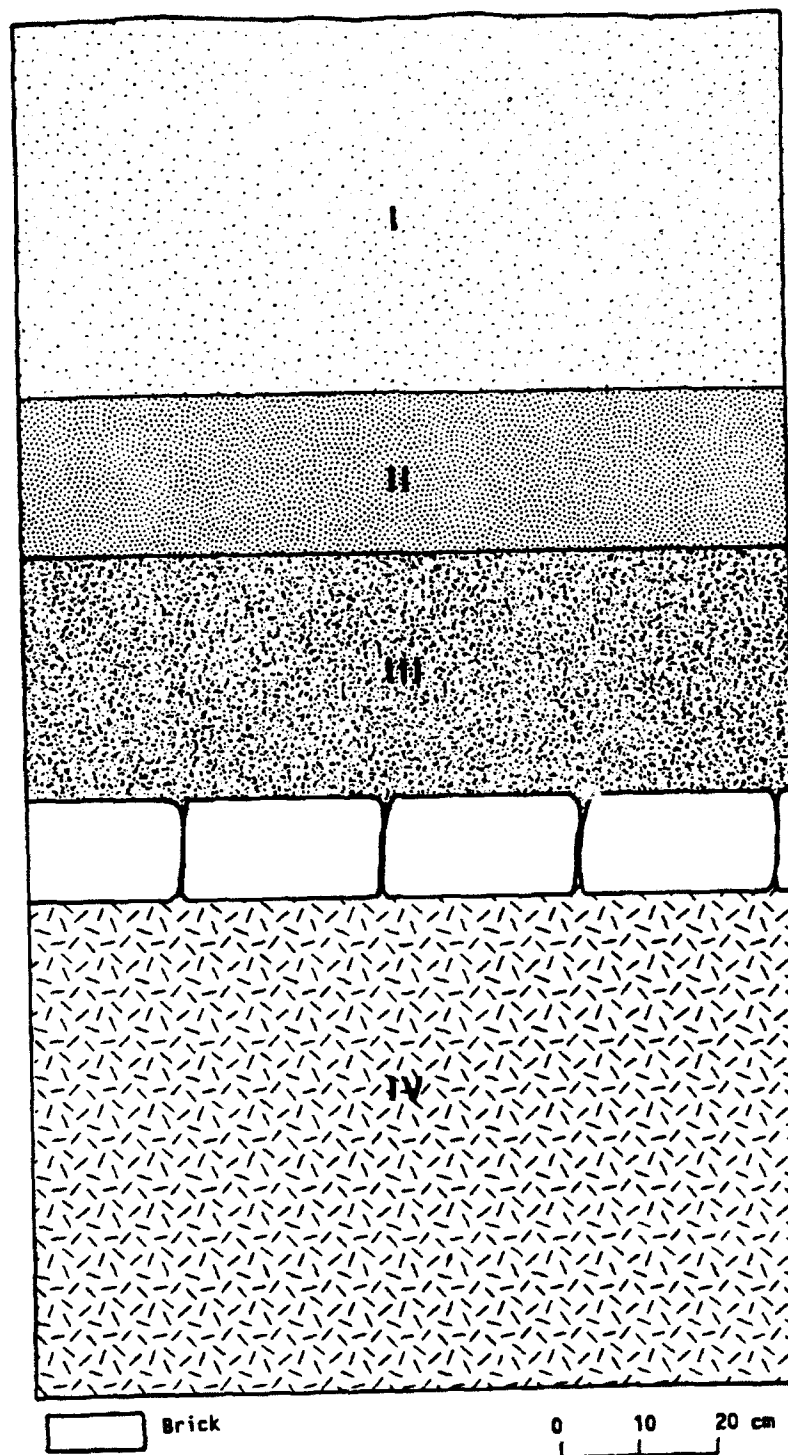


Figure 13. West wall profile of inspection trench from 4 m to 5 m downriver from Station 30+13.8' W/L.

KEY TO FIGURE 13

Stratum I	10YR 4/4 sandy silt
Stratum II	5YR 6/8 gritty soil
Stratum III	5YR 4/4 crushed brick
Stratum IV	10YR 5/2 clay

stratum (5YR 4/4, reddish brown) is 70 cm below ground surface (Stratum III, Figure 13). A single course of horizontally laid brick (5YR 5/8 yellowish red) is at depth 103 to 115 cm (Figure 13). This course of brick rests on a 10YR 5/2 (grayish brown) clay (Stratum IV, Figure 13). The location of this feature is denoted as "Bricks" on Figure 10.

Two single-course square brick structures, probably the bases for small support piers for machinery or a demolished building, are located in the trench downriver from the bricks described in the preceding paragraph. The area where these are located is denoted as "Piers" on Figure 10. The tops of these small brick piers are exposed at a depth of 88 cm. The two piers are aligned approximately east-west. They are shown in plan view in Figure 14.

Pier No. 1 extends into the northwestern (landward) wall of the trench. Pier No. 2 is largely exposed in the floor of the trench, but the southeastern corner of the pier extends into the southeastern (riverward) wall of the trench. Pier Nos. 1 and 2 are located 7.2 to 7.8 m downriver from Station 30 + 13.8' W/L, approximately between Stations 30 + 36' W/L and 30 + 38' W/L. Pier No. 2 is almost fully exposed. It consists of six bricks (4.5" x 9") in a rectangle approximately 13.5" east-west by 18" north-south.

The construction crew exposed another pier at a lesser depth in the trench between 8.45 and 9.3 m downriver from Station 30 + 13.8' W/L, approximately between Stations 30 + 40' W/L and 30 + 43' W/L. The top of this pier (Pier No. 3, shown in plan view in Figure 14) was at a depth of 70 cm, the same depth as the crushed brick stratum further upriver in the trench. At the time of initial excavation, only three courses of brick were exposed. The uppermost course (Course 1) was represented only by several bricks or brick fragments in the center of the pier. The incomplete preservation of this course apparently was due to structural damage prior to excavation of the floodwall inspection trench. The course below this one (Course 2) was also incomplete, but represents a centrally placed rectangle of brick measuring approximately 30 cm east-west and 60 cm north-south. The third course (Course 3) was a square that was almost completely exposed in the center of the trench, approximately 80 x 80 cm (Figure 14).

After photographing and drawing a plan of Pier Nos. 1, 2, and 3 (the floor of the inspection trench being

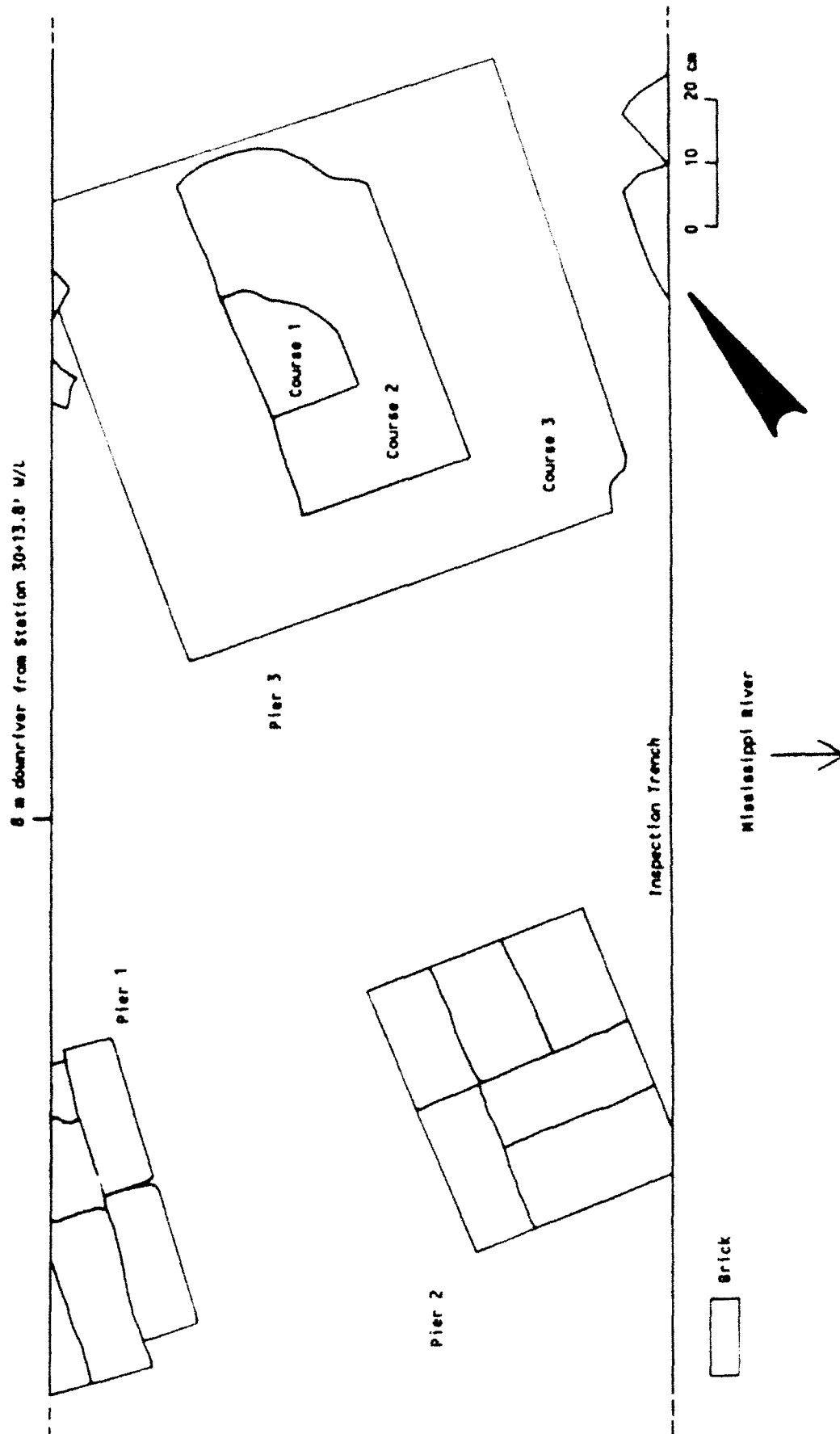


Figure 14. Plan of trench from 7 m to 9.5 m downriver from Station 30+13.8' W/L, showing piers.

approximately 1 m below ground surface), the construction crew resumed excavation. Deeper excavation revealed that all three piers rest on a far more massive stepped brick footing. Pier Nos. 1 and 2 constitute the highest of six courses of brick near the upriver end of this stepped footing which appears to represent a foundation (Figure 15). The bricks at this end of the structure are laid on 2-inch thick pine planking. The top of this wood is 153 cm below ground surface.

A buried curbstone which formed the edge of Pier No. 3 was exposed at a depth of 98 cm at the upriver end of this pier. The upright stone slab is embedded within the masonry structure. Two additional courses of brick were located on the downriver side of the stone. The top of the highest course of brick (Course 1 of Pier No. 3) was 83 cm below ground surface. The eight courses of brick downstream from the stone slabs rest on a thicker pine plank "mat" which consisted of three levels of cross-laid pine planking. Each plank was two inches thick.

The brick stepped footing ends abruptly at Station 30 + 43' W/L, at the upriver end of buried steel I-beams, each 22 feet long and running parallel to the inspection trench. These beams lie above the 10' x 10' culvert leading from the river to the NOPSI screen chamber. All evidence of earlier material at this location was destroyed by construction of the culvert or the subsequent placement of the I-beams above the culvert.

Pier Nos. 1, 2, and 3 may be bases for machine mounts associated with the operation of the ice house formerly standing on the upriver side of Market Street. The entire brick foundation, partially destroyed prior to the trench excavation, constitutes Locus 3 of Site 16OR117 (Figure 10). No maker's marks were observed on the bricks, and no other material was recovered in association with the brick foundation.

Excavation of the floodwall inspection trench, except for removal of modern construction obstacles, was completed on August 15. Field monitoring at the floodwall work area ended on that date. All artifacts recovered were transported to the laboratory for cleaning, processing, and analysis. Results of analysis were included in this chapter. The artifacts will be permanently curated at the Louisiana Division of Archaeology in Baton Rouge.



Figure 15. South end of stepped brick footing.

CHAPTER 8 DISCUSSION AND NRHP EVALUATION

The only historically documented structure within the Jackson Avenue to Thalia Street Floodwall, Phase Three Component, was the Municipal Ice Company's ice factory constructed in the early 1890's (Chapter 6). The Floodwalls monitoring plan (Goodwin et al. 1985) predicted the possible presence in this locale of brick foundations or other structural remains of the ice house itself, and the occurrence of such associated industrial hardware as ice tongs.

A massive stepped-brick foundation was exposed during excavation in 1991. This is the first structural component to be exposed during the excavation of the pre-construction inspection trenches that can be unquestionably identified as a documented building listed in the original monitoring plan. In the Canal to Toulouse, Phase Two Component extensive laid brick surfaces were exposed which were "perhaps associated with the molasses and sugar warehouses which occupied the property in the late nineteenth century" (Goodwin, et al. 1986:111), but the precise relationship of those brick surfaces (16OR102) to the historic warehouses is not clear.

The brick foundation exposed at the site of the ice house may have served as a building support or as a support for the upriver set of boilers within the boiler room. The fragmented brick surface noted within the trench upriver from the foundation may correspond to the floor of the boiler room, but the exposure is too limited to show its relationship to the foundation. No other material exposed in the inspection trench can be clearly related to the ice house on any other historic structure. Neither the Braun map of 1883 (Figure 5) nor the Sanborn map of 1885 (Figure 6) shows any structure on the later site of the ice house boiler room.

The dimensions of the ice house boiler room as shown in the 1895 Sanborn map (Figure 7) are approximately 64' perpendicular to Market street and 56' parallel to Market street. The 1909 Sanborn map (Figure 8) shows that the sides of the boiler room parallel to Market street had been shortened to about 36'. The new railroad spur track serving the NOPSI generating plant in 1909 curved across the former upriver corner of the boiler room and then ran approximately along the room's former river side wall alignment into the NOPSI siding downriver from Market street. Approximately 20' was

removed from the river side of the boiler room between 1895 and 1909, probably for the construction of the NOPSI railroad siding. The delineation of the city square's river side in 1909, particularly its line tangent to the upriver corners of the ice house's freezing tank room and boiler room (reduced in size), suggests that either the original ice house boiler room encroached on the right of way along Water street or that the river side of the square was set back between 1895 and 1909.

The floodwall alignment passes riverward of the stable and wagon shed at Coyle's coalyard shown on the 1885 Sanborn map (Figure 16). The floodwall passes through the upriver corner of the original boiler room shown on the 1895 Sanborn map (Figure 17), but does not impact the reduced boiler room structure displayed on the 1909 Sanborn map (Figure 18). The now-dismantled NOPSI railroad siding, shown on the 1909 and contemporary Sanborn maps (Figure 19), was not impacted by the floodwall alignment.

The floodwall alignment lies immediately riverward of the projected line of Front Street on Gibson's Directory map of 1838 (Figure 20). The street was not completed along that route; at that date long wharfs (#25 at the foot of Orange Street, #26 at the foot of Richard Street, and #27 at the foot of Market Street) extended from the narrow strip of batture land by New Levee (South Peters) Street to the edge of the navigable channel. These wharfs were located opposite the Place du Marche' or Market Square between St. James and Richard Streets. The floodwall alignment crosses the site of the access ramp to wharf #27 and terminates along the line of the access ramp to wharf #26. It is not clear if the ramps would have been formed by earth embankments or raised wooden structures in this area of gently sloping riverbank on the accreting batture. No artifacts or structural debris were recorded in 1991 that could be clearly associated with those historic structures.

The wood beams and pilings observed downriver from the modern concrete box culvert to the NOPSI screen chamber structure do not form part of a historic structure. The squared beams were at the same depth (approximately 3' below present ground surface) as modern steel I-beams. The I-beams, which run approximately along the line of the dismantled NOPSI spur track, probably form a weight-bearing protective structure above the buried culvert. The wood beams were

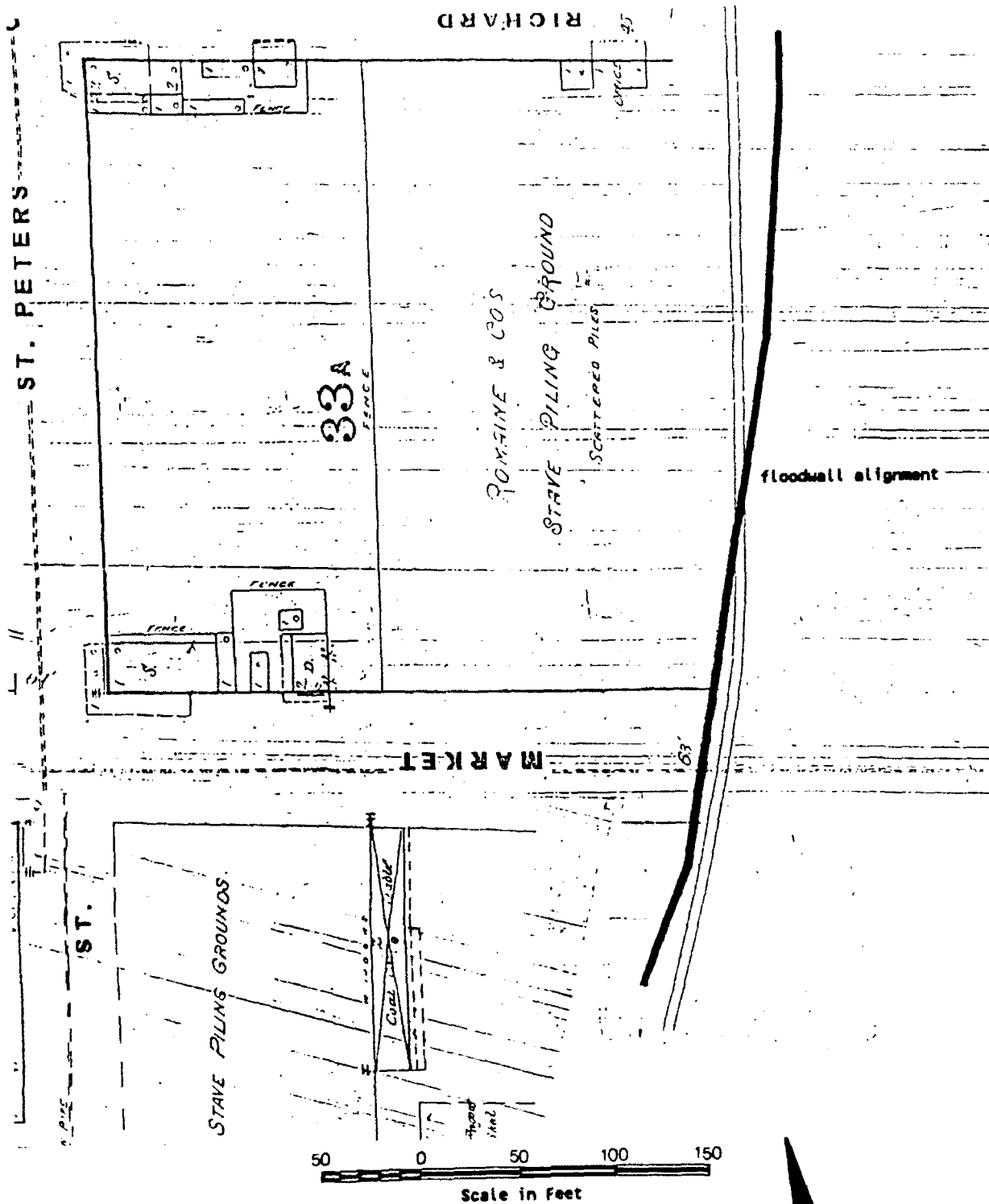


Figure 16. Excerpt of the 1885 Sanborn Map showing floodwall alignment.

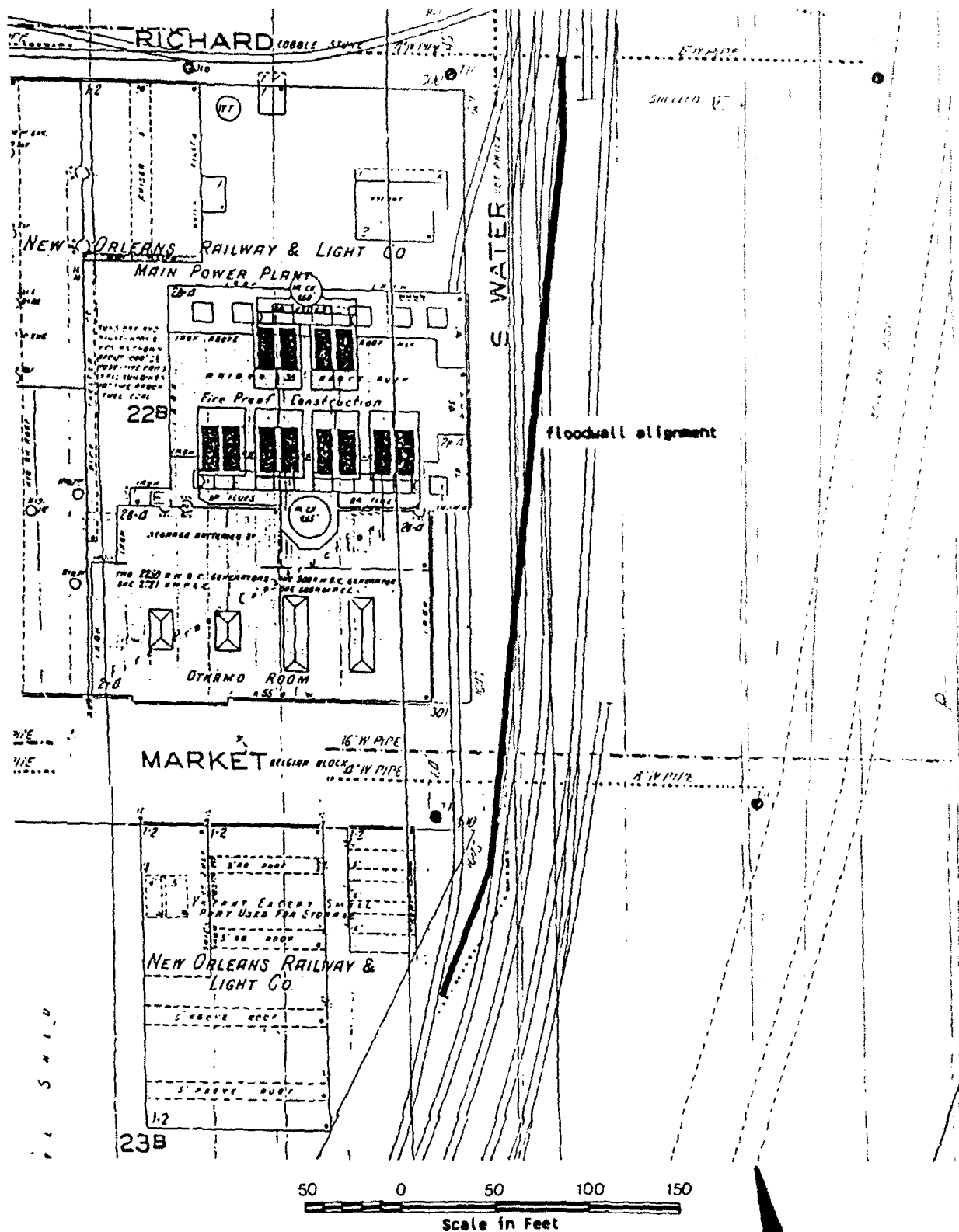


Figure 18. Excerpt of the 1909 Sanborn Map showing floodwall alignment

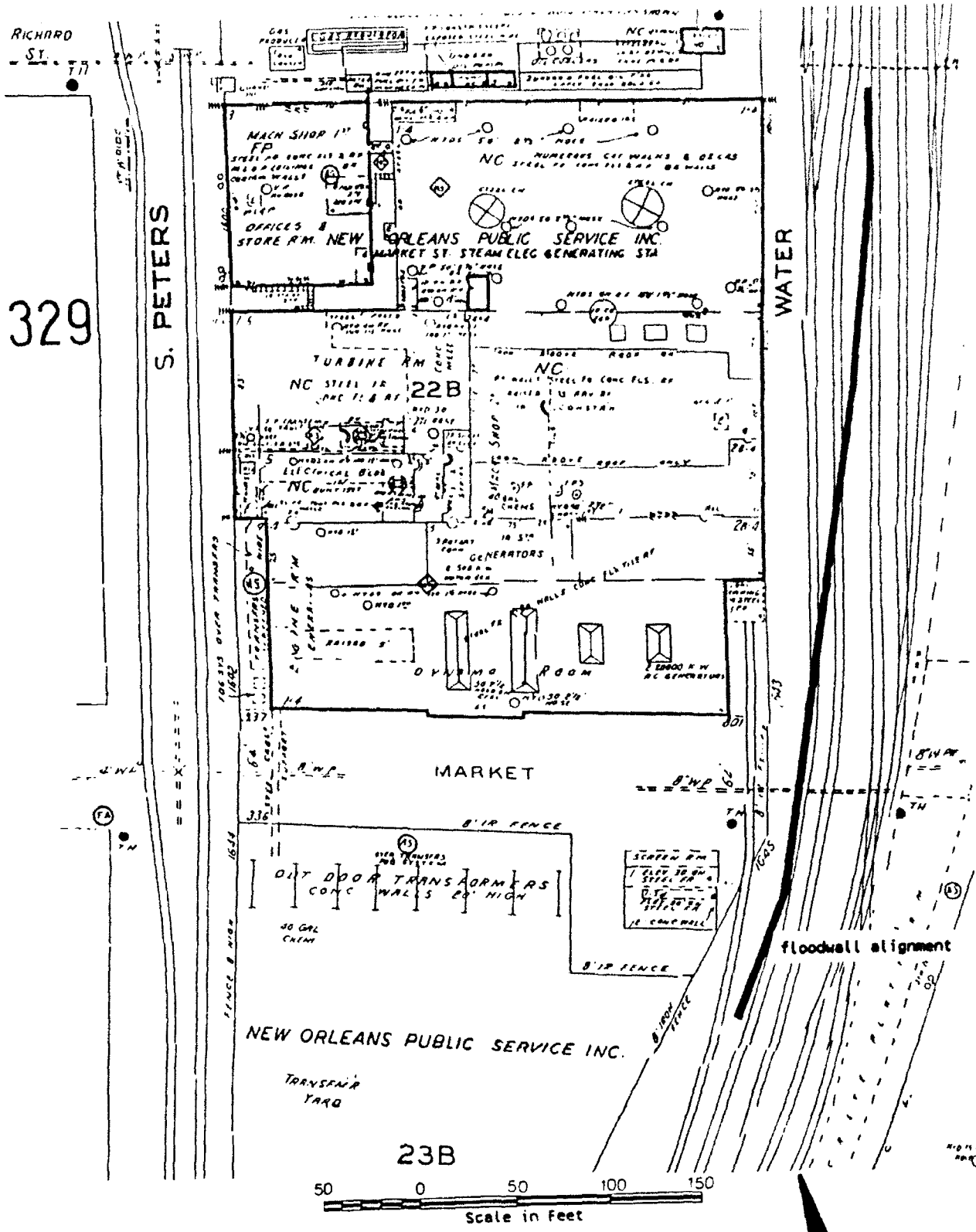


Figure 19. Excerpt of the current Sanborn Map showing floodwall alignment.

attached to their supporting vertical posts only by spikes, without any cross-bracing or structural reinforcement. This unsupported construction technique is inadequate for wharfs or levee revetments and is not found in historic plans in New Orleans (see Reeves and Reeves 1983: Figures 33-37). The timbers likewise are too widely spaced to form a weight-bearing structure like site 16OR104. That historic feature, apparently a weight-bearing framework within the riverside railroad corridor, was formed by "multiple tiers of sawed pine timbers" providing enhanced soil stability for the raised railroad embankment (Goodwin et al. 1986:91).

The shallow depth of the timbers downriver from the box culvert, and their proximity to that modern structure, suggest that they were placed subsequent to the construction of the culvert. Furthermore, the horizontal wood beams could only have been placed after the laying of the modern steel pipe parallel to the floodwall alignment, below the timber at a depth of about 5'. The steel I-beams above the box culvert served as a protective weight-bearing structure below the now-dismantled spur track. The wood beams and piles designated as 16OR117 during the 1987 fieldwork probably formed a bracing framework supplementing the I-beams. Contrary to the original investigators' interpretation that "site 16OR117 represents the remains of a late nineteenth to early twentieth century structure" (Harris et al. 1988:87), the timber framework is doubtless contemporary with the steel sheetpiling and I-beams emplaced above the NOPSI culvert. These modern industrial structures are not of archeological interest.

The isolated bottle recovered in 1987, like the trash pockets exposed in 1991, may reflect trash disposal on the batture. The area transected by the floodwall alignment was occupied by the riverfront railroad corridor by 1883. The artifacts should date from the mid- to-late-nineteenth century if they represent trash disposal at the river's edge, but their original depositional context is unclear. The previous investigators concluded that "subsurface structural remains probably were related to the use of the riverfront area as a wharf during the late nineteenth to early twentieth century" (Harris et al. 1988:88). As that interpretation of the buried timber framework is no longer tenable, the historic artifacts recovered during fieldwork in 1987 and 1991 cannot be automatically associated with the wharfs.

The presence of in situ physical remains of the Municipal Ice Company's ice house confirms the utility of pre-construction identification of documented structures within the project impact area. Neither the masonry foundation nor the miscellaneous artifacts in the vicinity of the ice house are so distinctive that they would in themselves indicate the function of the impacted structure. The broad similarity of many of the historic subsurface building remains and artifact assemblages recovered in floodwall monitoring suggest that the archeological record alone will only sporadically identify activity areas or specific buildings in an urban setting like that of New Orleans. The uncertainty is due in part to the nature of the excavation regime, wherein a narrow trench exposes only a small portion of historic structures. The salvaging of building components and hardware, including specialized industrial equipment, can eliminate much of the distinctive assemblage which would characterize an active facility. In situ structural remains may be obscured by multiple stages of construction and repair or by the alterations caused by excavation and infilling subsequent to a building's destruction. For these reasons, precise correlations between planned project areas and historic maps and plans are necessary to identify any but the largest historic structures.

The limited amount of material recovered during floodwall construction in New Orleans also reflects the relatively shallow depth of the pre-construction inspection trenches. In extensive areas of the floodwall alignment, particularly downriver from Canal Street, the bottom of the excavated trench was above the historic ground surface due to the elevation of the raised railroad embankment which the floodwall alignment followed. The careful comparison of surface elevation data prior to fieldwork would have shown that only railroad-related features could be expected in those segments of the inspection trench. The exposure of brick foundations of the ice factory at 16OR117 was due to the comparatively slight elevation of the corridor in the Jackson Ave. to Thalia Street, Phase 3 component of the floodwall. In future projects the relevant ground surface elevations should be examined prior to excavation in order to assess the probability of encountering buried cultural remains.

The structural remains and miscellaneous trash pockets which constitute site 16OR117 do not possess archeological significance because of their lack of further research potential as well as their lack of

integrity. According to criteria established for the evaluation of archaeological sites, both of these qualities should be present for 16OR117 to be considered eligible or potentially eligible for inclusion on the National Register of Historic Places (National Park Service 1982:28-33, 41-43). The NOPSI screen chamber structure and associated structures, all of which represent substantial construction, occupy the center of the ice house's location. The ice house's subsurface remains therefore are severely disturbed. No wharfs or other historic structures were encountered during excavation. As explained above, the timber framework originally described as a wharf or related structure and reported to the state as site 16OR117 in 1987 was in fact a modern feature. The historic artifacts collected during fieldwork reported in this volume cannot be directly associated with documented structures in the project area. In summary, additional archaeological excavations at this site would not further our understanding of activity when the locale was associated with either maritime shipping or industrial production. Prior to that, the site was either within the Mississippi River channel or was unutilized batture.

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