A PHASE I ARCHAEOLOGICAL SURVEY FOR THE PROPOSED DES MOINES RECREATIONAL RIVER AND GREENBELT, BOTANICAL CENTER RIVERFRONT PARK, RIVERFRONT GARDEN PROJECT, DES MOINES, IOWA

CONTRACT NO. DACW25-92-M-1022

PREPARED FOR:

U.S. ARMY CORPS OF ENGINEERS,
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

PREPARED BY:

LEAH D. ROGERS, PRINCIPAL INVESTIGATOR
217 NW 5th Street
Mount Vernon, Iowa 52314

JANUARY 1993

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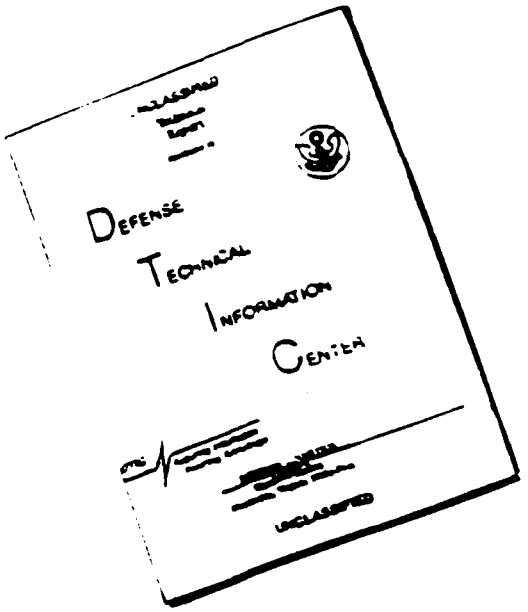

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ABSTRACT

This project represents the results of a Phase I archaeological survey for the proposed Riverfront Garden Project of the Des Moines Botanical Center Riverfront Park expansion. Archival and field investigation resulted in the identification of one previously unrecorded archaeological site which was designated as site 13PK534 by this investigation. This site represents remains associated with the former Iowa Pipe and Tile Company plant which operated at this location and its environs from 1881-c. 1957. Subsurface testing at the project location revealed a mixed, dense deposit of debris and rubble associated with this plant but no intact structural features. Archival and oral historical data indicated that the project vicinity had been previously impacted by demolition of the plant buildings and borrowing and bulldozing associated with the late 1950s construction of nearby Interstate 235. As a result of these many impacts, the integrity of the site deposit within the proposed construction area has been compromised making the site ineligible for nomination to the National Register of Historic Places. However, there is some potential for buried, intact remains of this site outside of the project area that should be evaluated if future construction projects involve those areas. Based on the results of this investigation, additional cultural resources investigations within the proposed project area are not warranted and project clearance is recommended.

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CHAPTER I. INTRODUCTION

This report presents the results of a Phase I archaeological investigation of the proposed Riverfront Garden Project of the Des Moines Recreational River and Greenbelt, Botanical Center Riverfront Park in the City of Des Moines, Polk County, Iowa (Figure 1). This project is also known as the Phase III construction area of the Botanical Center Riverfront Park Project. The investigation was conducted for the U.S. Army Corps of Engineers, Rock Island District, Rock Island, Illinois.

The purpose of this investigation was to examine the proposed project area in order to locate and determine the significance of cultural resources within that area. Cultural resources include historical, archaeological, and architectural properties. The work was conducted to provide federal and state reviewing agencies with documentation of the project's potential impact on these resources. The Principal Investigator is solely responsible for the content and accuracy of this report with respect to site location, description, assessment, and recommendations.

The fieldwork was conducted by Principal Investigator, Leah D. Rogers, and Project Assistant, G. Clark Rogers, in October 1992. The report is authored by the Principal Investigator.

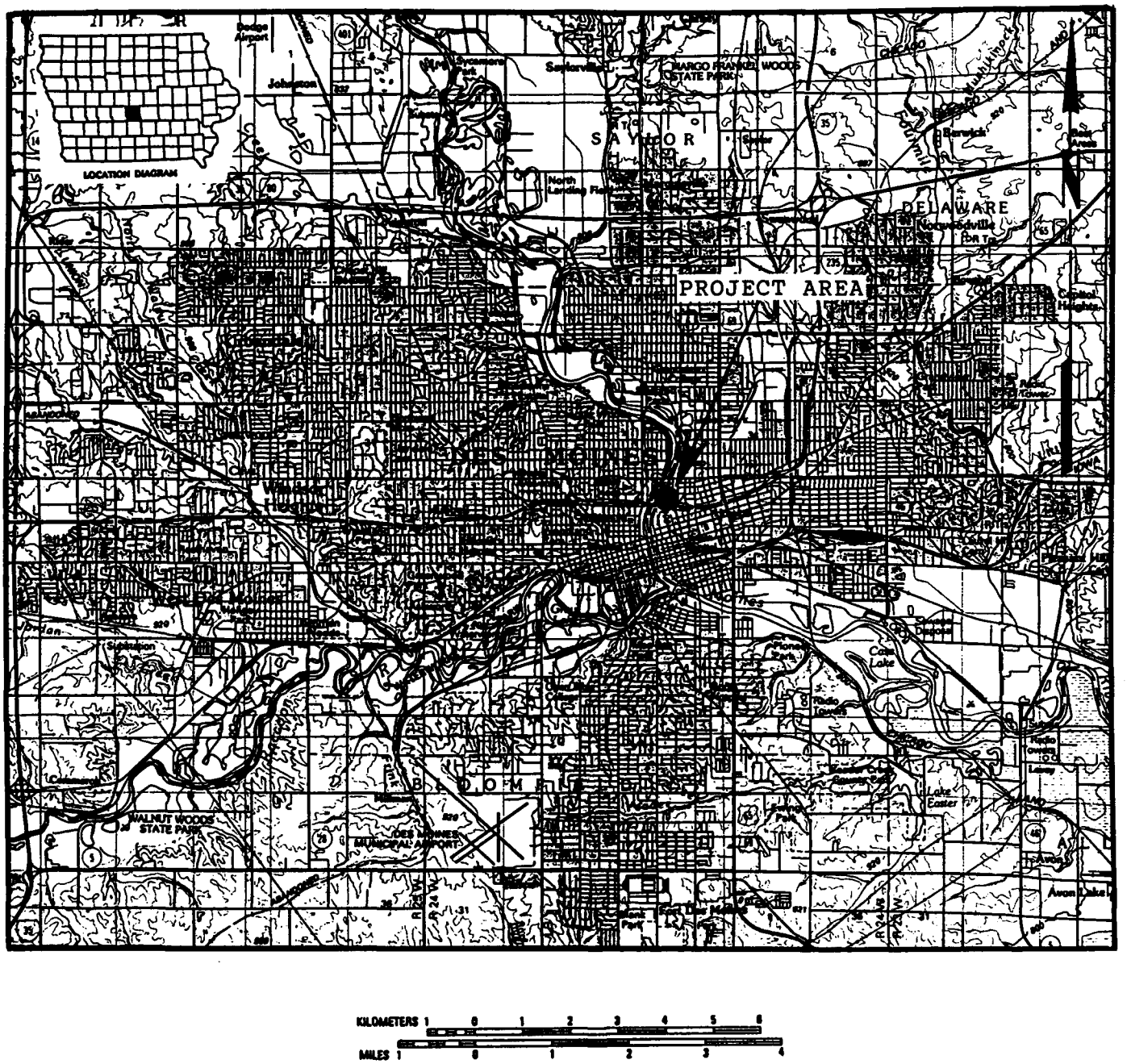

Figure 1. Project Location.
Source: USGS Polk County Topographic Map, 1986
Scale: 1:100,000

CHAPTER II. PROJECT DESCRIPTION

The Botanical Center Riverfront Park Project Phase III construction area is located on 1.945 acres of land owned by the City of Des Moines within the NW1/4, SW1/4, NW1/4 of Section 3, Township 78N, Range 24W (Figures 1 and 2). The project parcel is a landscaped urban area adjoining the Botanical Center along the Des Moines River between River Miles 202.88 and 202.90 and immediately north of Interstate 235 (also known as the Des Moines Freeway).

The proposed construction project is the third phase in the expansion of the Des Moines Botanical Center. The first phase involved the construction of a riverfront promenade and was completed in June of 1992. The second phase is the construction of a maple grove garden to be completed in November 1992. The third and final phase involves the construction of a riverfront garden which is the focus of the present cultural resources investigation. While each of the three phases are independent projects, the completed whole will comprise one landscaped riverfront garden which will cover the Des Moines river wall and extend out from a staging area over the river channel (Figure 3).

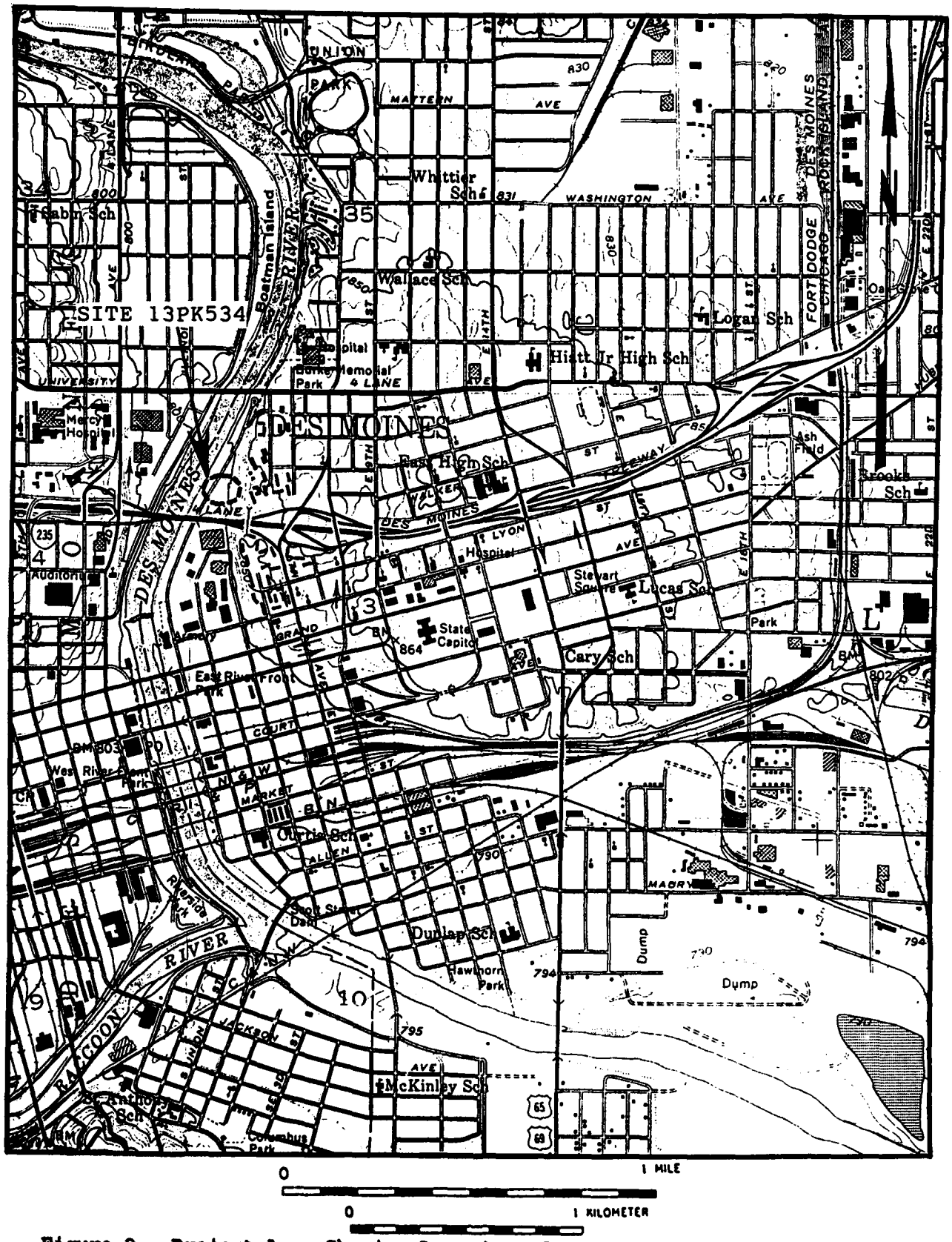

Figure 2. Project Area Showing Location of Site 13PK534.
Source: USGS Des Moines SE, 1956 (photorevised 1967, 1971 and 1976), 7.5' series quad map
Scale: 1:24,000

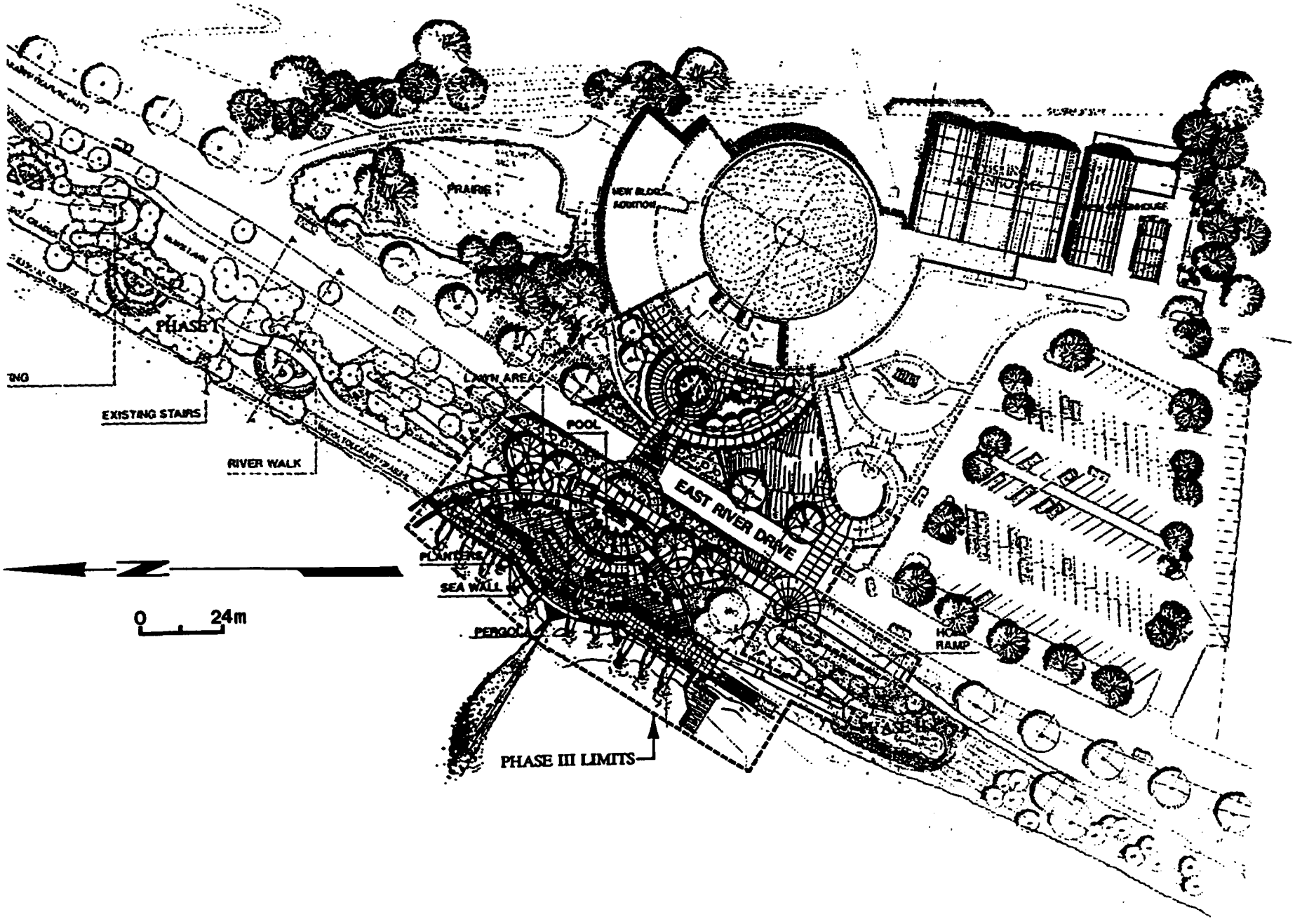

Figure 3. Expansion Projects Plan Map.

CHAPTER III. DESCRIPTION OF THE PROJECT AREA

The proposed project area is situated near the southern edge of the landform region known as the Des Moines Lobe (Prior 1991:31). This region was formed by deposition from a lobe of the Laurentide Ice Sheet which surged into northcentral Iowa during the latter part of the Wisconsinan stage of the Pleistocene Epoch. The initial advance of the Des Moines Lobe ice sheet into Iowa began approximately 14,000 years before present (B.P.) and had almost entirely receded from the state by approximately 13,000 years B.P. (Bettis 1990; Hallberg et al. 1990). The advance halted at what is now the City of Des Moines and is marked by the Bemis end moraine. Since the final retreat of this ice sheet, weathering and erosion have modified the landscape to some degree, but compared with other regions in Iowa, the topography and landforms "still retain the distinct imprints of recent glacial occupation" (Prior 1991:47). Furthermore, this region lacks the loess mantle which is characteristic of other regions because the final surge of glacial ice occurred during and after the period of greatest loess deposition in the state (Ibid.).

The topography of the Des Moines Lobe region is characterized by flat to slightly irregular terrain, with bands of rough, knobby terrain and relatively poor drainage. Bogs, swales, depressions, glacial lakes, marshes, and sluggish streams are typical of this poor drainage system. Glacial till underlies nearly the entire region with cobbles and boulders scattered as surface erratics over the landscape. The few rivers which drain this region have excavated deep valleys and have extensive sand and gravel terraces. The largest of these rivers is the Des Moines River which flows generally down the axis of the Des Moines Lobe region. This steep-sided, narrow river valley was formed through rapid excavation by swift, glacial meltwater. Some uneroded outwash deposit remnants are evidenced by terraces along the valley sides and are often quarried for commercial sand and gravel production (Prior 1991:36-47).

The project area is situated along the east bank of the Des Moines River approximately 1.25 mi north of the confluence with the Raccoon River (see Figures 1 and 2). Within the project area, the terrain on the west side of River Drive slopes steeply down to a level, artificial terrace which abuts a gradual slope down to the river's edge (Plates 1-4). That edge is capped by a sloping cement river wall which retards bank erosion. The project area on the east side of River Drive inclines gradually towards the Botanical Center (Plates 5-8). An area along the west edge of the Center has been artificially bermed and landscaped (see Plate 8). The majority of the project area is currently covered by a maintained grass lawn, with areas of planted trees and flower beds.

The general soils of the project area are nearly level soils formed from outwash and alluvium. While the specific soils at the project location have not been mapped, the general soils found in similar landscape positions in the region include Colo, Waukegan, Dickinson, and Dorchester soils (McCracken 1960). Archival research revealed that there was a substantial fireclay deposit at the project location and its environs. This clay deposit was largely extracted by a pipe and tile factory that operated at this location for over 70 years. Further disturbance occurred when the surface soils of the project area were borrowed for use in the construction of Interstate 235 in the late 1950s (Rosen, personal communication 1992).

Plate 1. Bermed Sidewalk on West Side of River Drive, View to the North-Northeast. Field Date: October 8, 1992

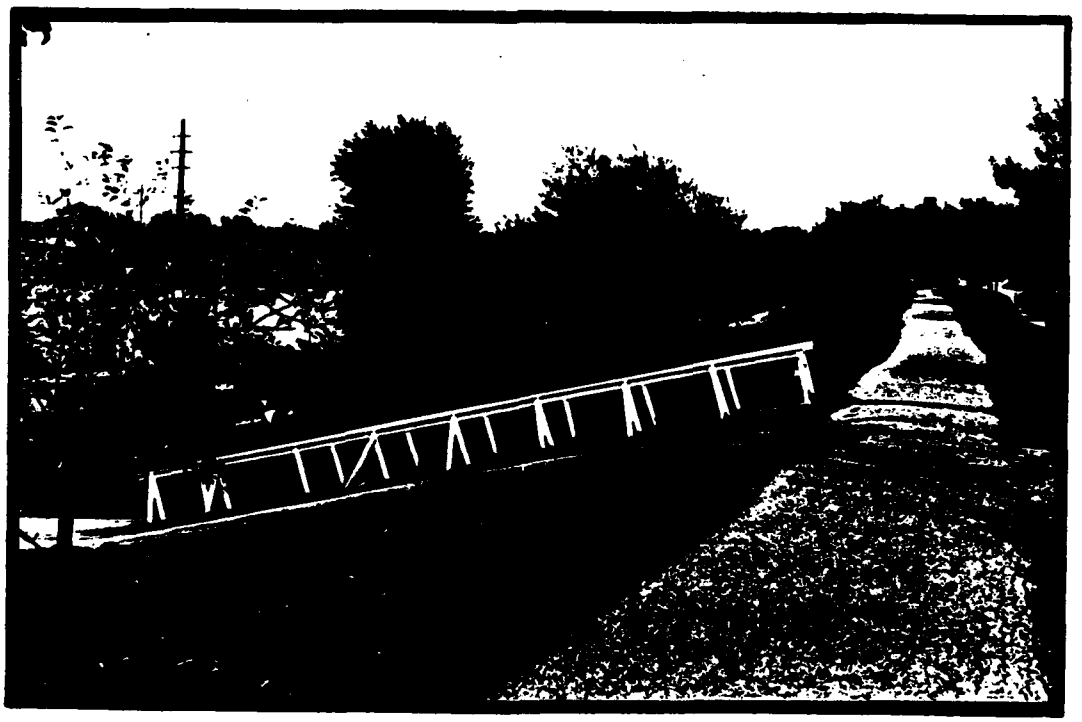

Plate 2. Project Area on West Side of River Drive, View to the North. Field Date: October 8, 1992

Plate 3. Artificial Terrace on East Bank of River, View to the South-Southwest. Field Date: October 8, 1992

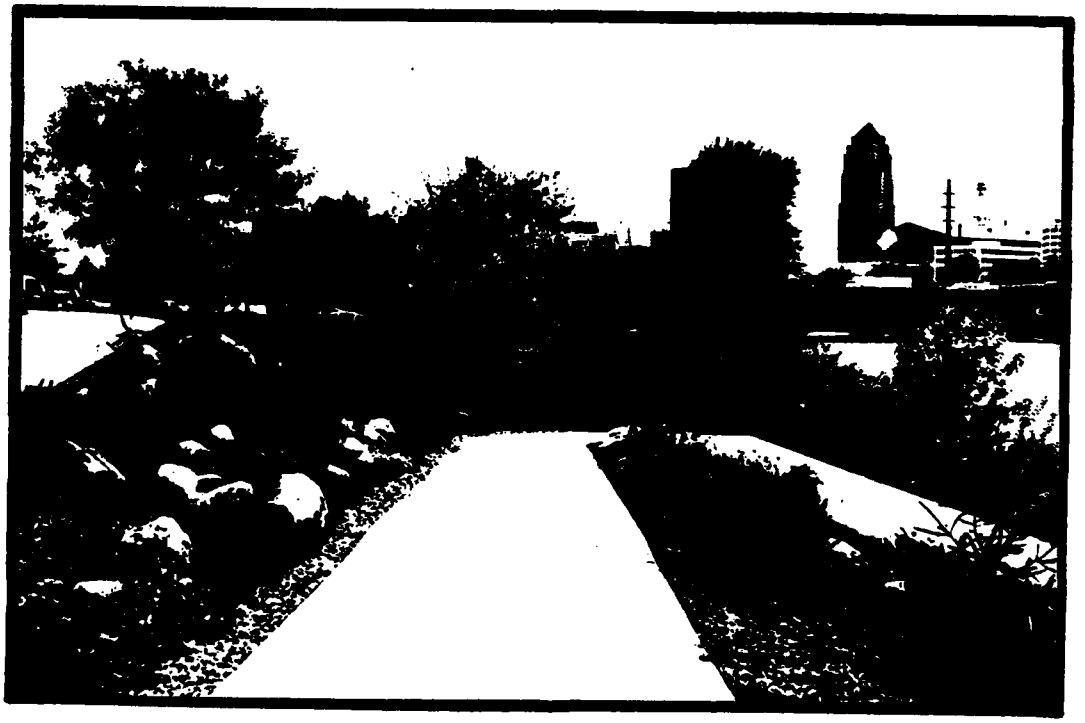

Plate 4. Project Area on West Side of River Drive as seen from the Phase I Construction Area, Riverfront Promenade, View to the South-Southwest. Field Date: October 8, 1992

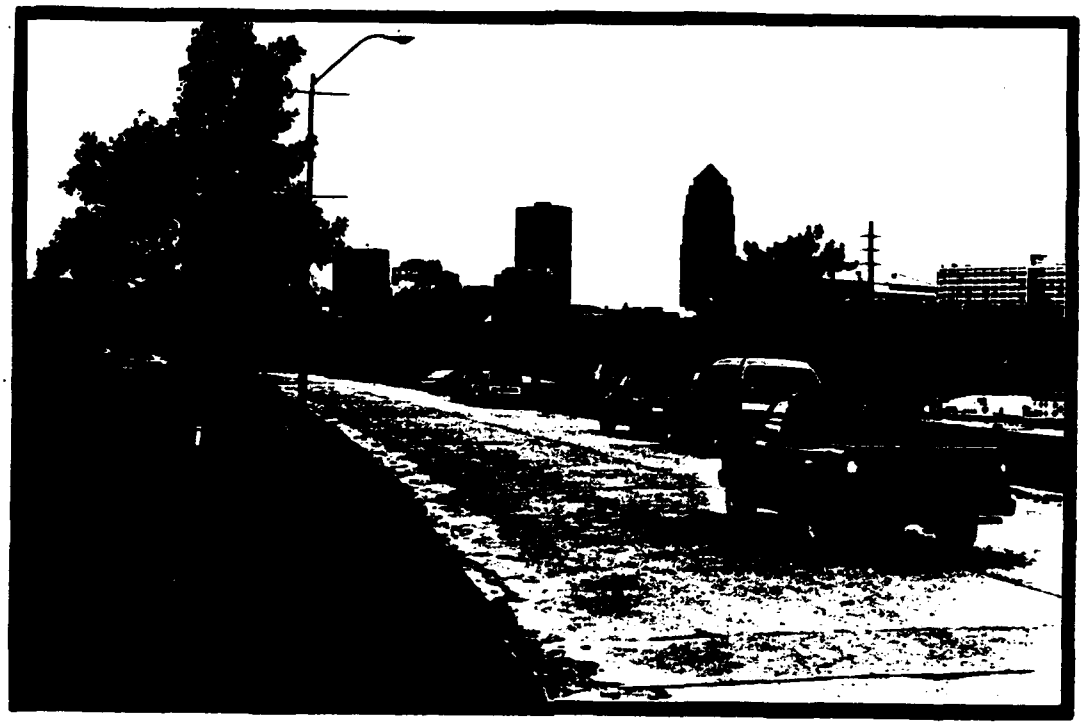

Plate 5. River Drive, View to the South-Southwest.
Field Date: October 8, 1992

Plate 6. Project Area on East Side of River Drive, View to the South.
Field Date: October 8, 1992

Plate 7. Project Area on East Side of River Drive, View to the Northeast. Field Date: October 8, 1992

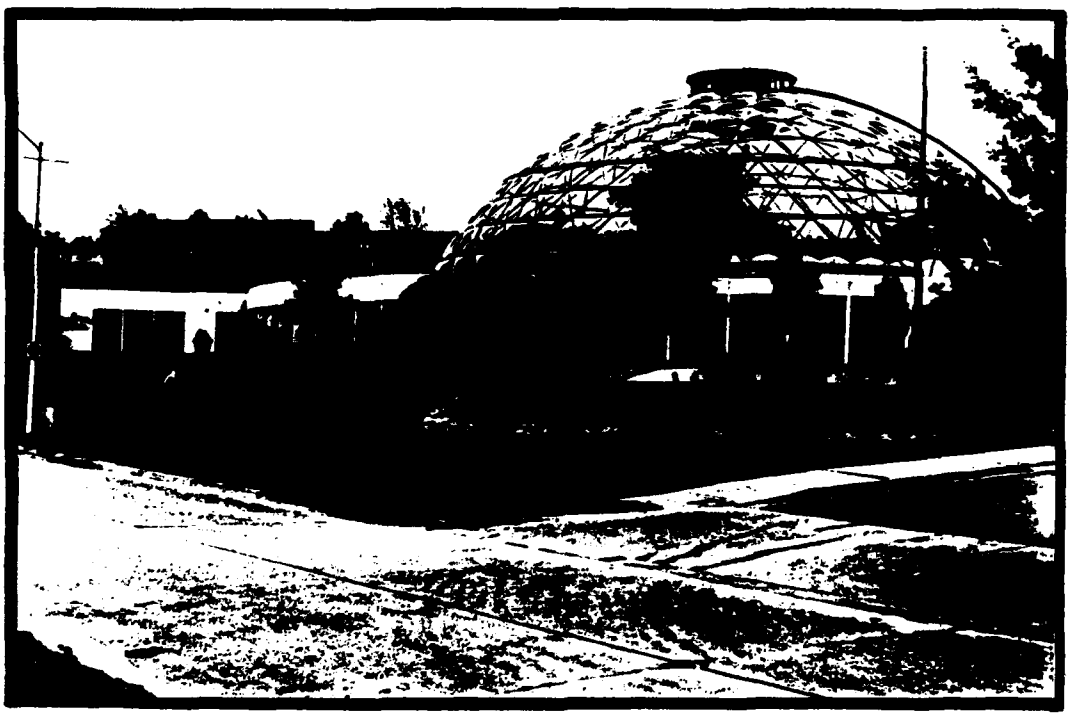

Plate 8. Botanical Center, View to the Northeast. Field Date: October 8, 1992

CHAPTER IV. METHODS

Prior to the initiation of the fieldwork, a comprehensive review was undertaken of all pertinent archaeological and historical literature and state records. This review included an examination of the archaeological site records on file at the Office of the State Archaeologist in Iowa City and the historic city maps, fire insurance maps, city directories, and county history books on file at the State Historical Society of Iowa Library and Archives in Des Moines.

The field study was conducted on October 7 and 8, 1992, in coordination with Matt Rosen, Director of the Des Moines Botanical Center, and Ron De Groot, Des Moines City Engineer. The fieldwork involved the examination of a large trench excavated in the area of the Phase II construction project currently in progress along the riverbank and systematic shovel testing over the area of the proposed Phase III construction area (see Figure 3). The shovel tests were excavated to varying depths depending upon the nature of the subsurface deposits encountered. Excavated soils were carefully troweled and examined for cultural material. Screening of the excavated soils was largely prohibited by the high clay content of the deposits at the project location. All excavations were backfilled upon completion and the natural contours of the ground surface restored. In addition to the above field activities, the exposed surface of the bank along the edge of the river wall was examined for cultural material.

Artifacts were analyzed by the Principal Investigator utilizing appropriate methods and references for historic artifact identification. All materials recovered during this investigation will be curated at the Office of the State Archaeologist, University of Iowa, Iowa City.

Site significance was evaluated according to the criteria and integrity considerations of the National Register of Historic Places (NRHP) as set forth by the Department of the Interior, Washington, D.C.

CHAPTER V. RESULTS OF THE INVESTIGATION

Background Research

A records search conducted at the Office of the State Archaeologist in Iowa City revealed that there are no previously recorded sites or National Register properties within the boundaries of the project area. Further, there are no recorded sites within a one mile radius of this area.

Previous archaeological investigations in the project vicinity have included the following: the Phase I-II archaeological and historical investigations for the CBD Loop Arterial Project in the City of Des Moines and conducted by Brice, Petrides and Associates in the early to mid-1980s (Brice, Petrides and Associates, Inc. 1985; Henning et al. 1982); the Phase I archaeological investigation of the Federal Parking Garage Site within the vicinity of Fort Des Moines II (site 13PK61) in 1989 in the City of Des Moines (Winham and Ruple 1989); and the Phase II archaeological and geomorphological investigation for the Des Moines Greenbelt/Amphitheater project (Ross et al. 1991). The latter is the closest of these previous investigations to the Botanical Center Phase III construction area and is located approximately 0.5 mi to the south-southwest on the east bank of the Des Moines River. That investigation encountered a late Holocene terrace buried by historical filling episodes but no significant historic properties.

The historic development of the project vicinity began in 1843 with the establishment of Fort Des Moines II by a detachment of U.S. Dragoons at the fork of the Raccoon and Des Moines rivers. This fort was built to facilitate the removal of the Sauk and Mesquakie from the central Des Moines River Valley according to the provisions of the Treaty of 1842. Upon removal of the Sauk and Mesquakie from the treaty cession area in 1845, the fort was abandoned by the military. Within a year, Euro-American settlers had platted the Town of Fort Des Moines around the abandoned fort buildings. The town was located on the west side of the river approximately 0.75 mi southwest of the Botanical Center project location. In 1849 the town of "Demoine" or "East Fort Des Moines" was laid out on the east side of the river opposite the original town. In 1856 the towns of Fort Des Moines and Demoine incorporated to form the City of Des Moines. Because of its position at the confluence of the Raccoon and Des Moines rivers and the rich resources that this area offered, the urban development of the City of Des Moines was soon underway. In 1855 Des Moines was designated as the state capitol (Ross et al. 1991:5-6).

An examination of the available maps of the City of Des Moines dating from 1854-1880s revealed that the Phase III construction area was platted as Dean's Subdivision of Outlots by the late 1850s (Figures 4-6). While the project area is actually located just off of the 1854 map of Fort Des Moines shown in Figure 4, this map does suggest that the project area was then unplatted and probably undeveloped. The 1856 map (see Figure 5) shows the project area generally platted but undeveloped, with a steam sawmill and gristmill to the southwest and W.T. Smith's residence to the east. Figure 6 shows the project area c. 1857 and indicates that the project area was by then subdivided into lots, with the "Road to Fort Dodge" paralleling the east bank of the river. By 1874 the Des Moines and Minnesota Railroad ran parallel to the east bank of the river and largely following the course of the road to Fort Dodge, or East Fourth Street as it was then designated (Figure 7).

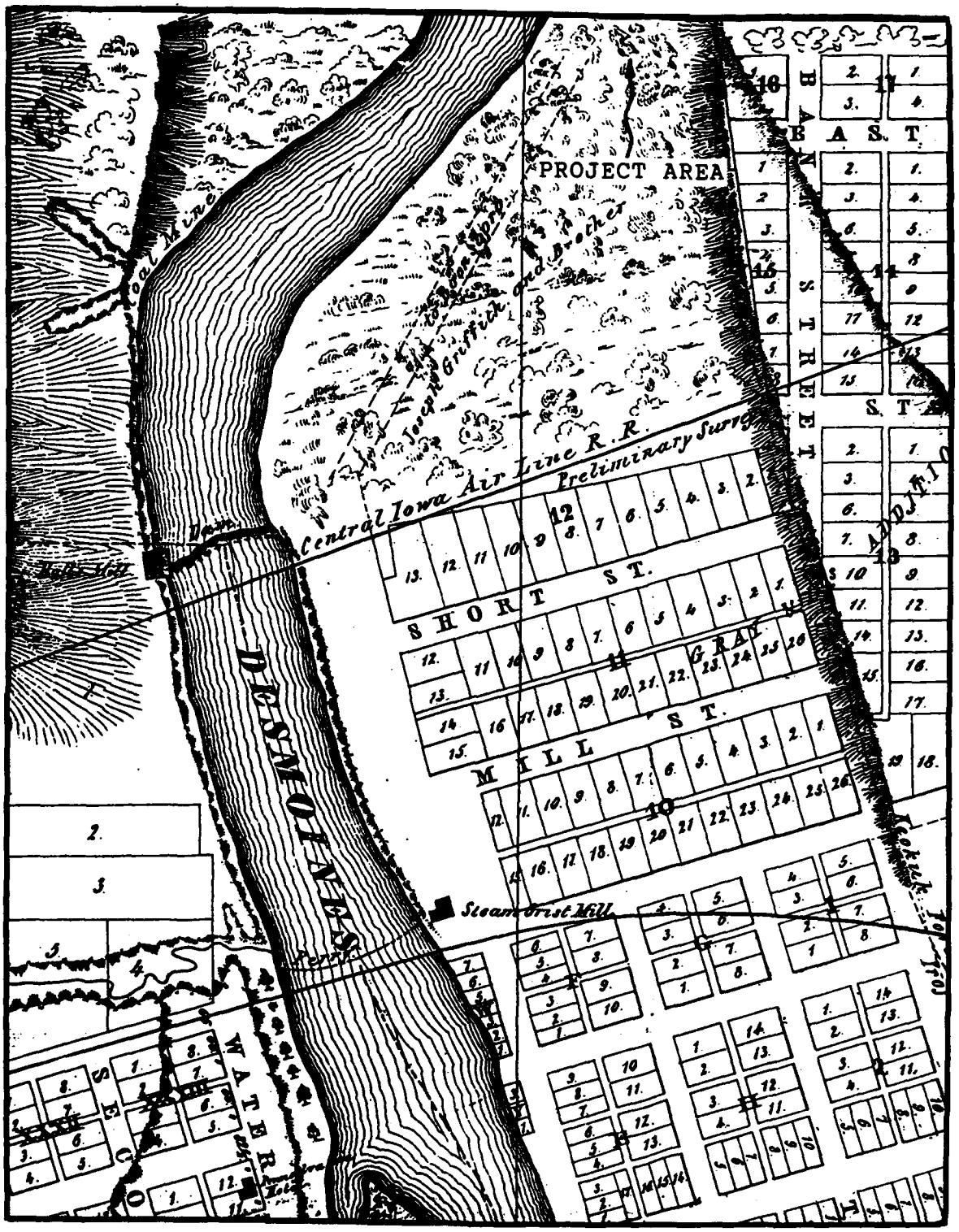

Figure 4. Map of Fort Des Moines and Its Environs in 1854 (from Millar 1854).

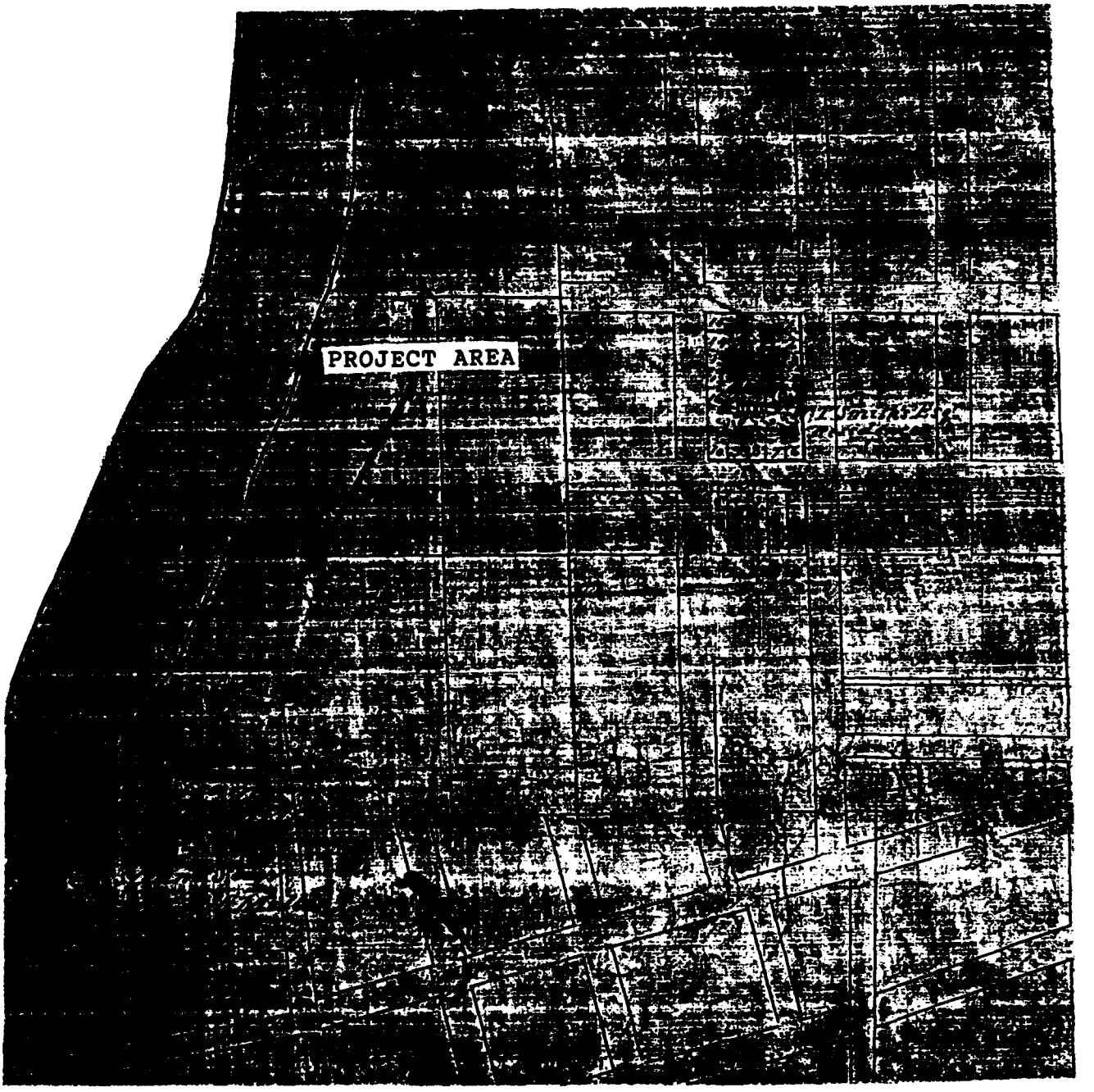

Figure 5. Map of Brooks and Co's Addition to DeMoine City in 1856 (from Millar 1856).

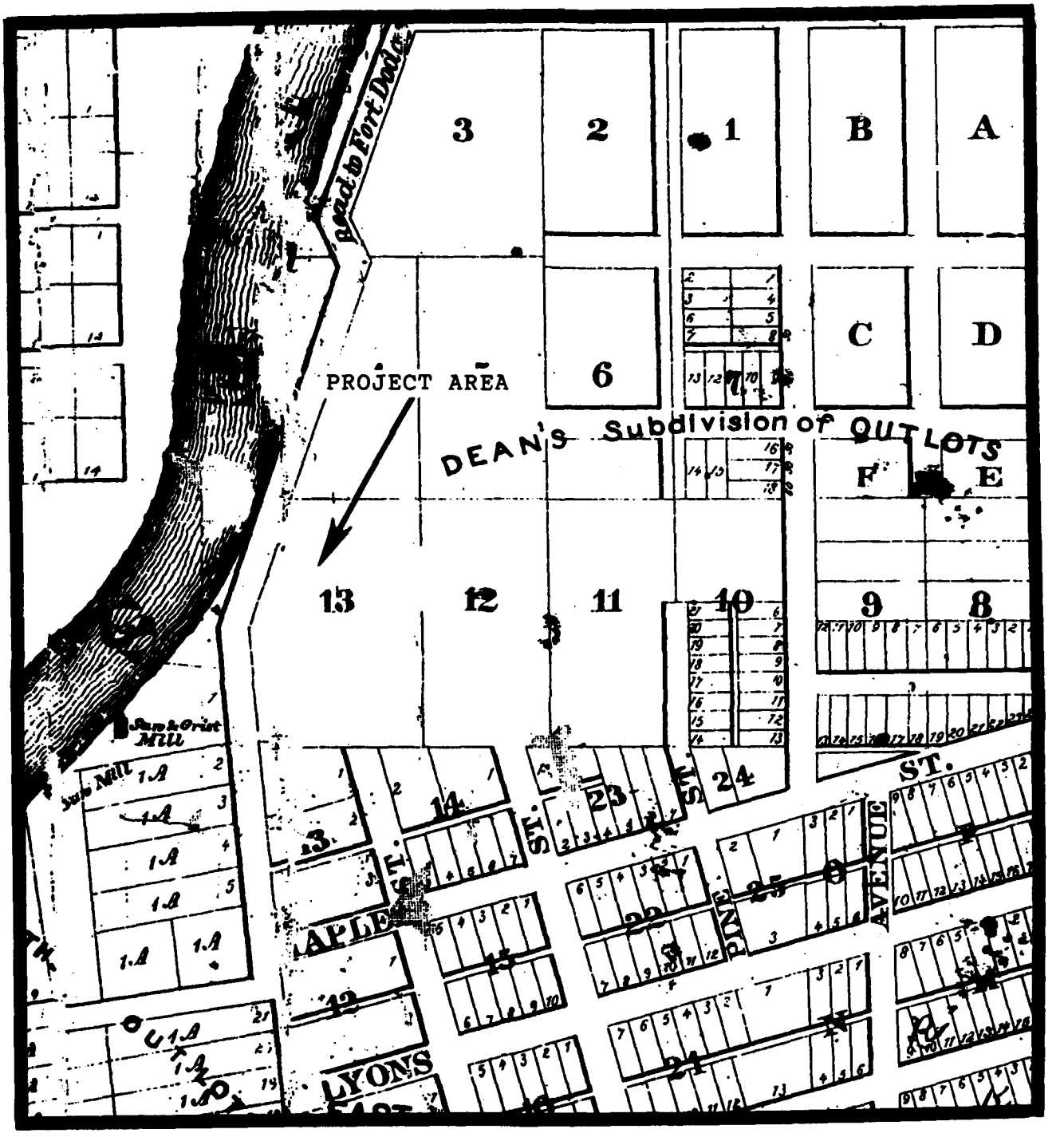

Figure 6. Map of Des Moines c. 1857 (from Bausman and Co. c. 1857).

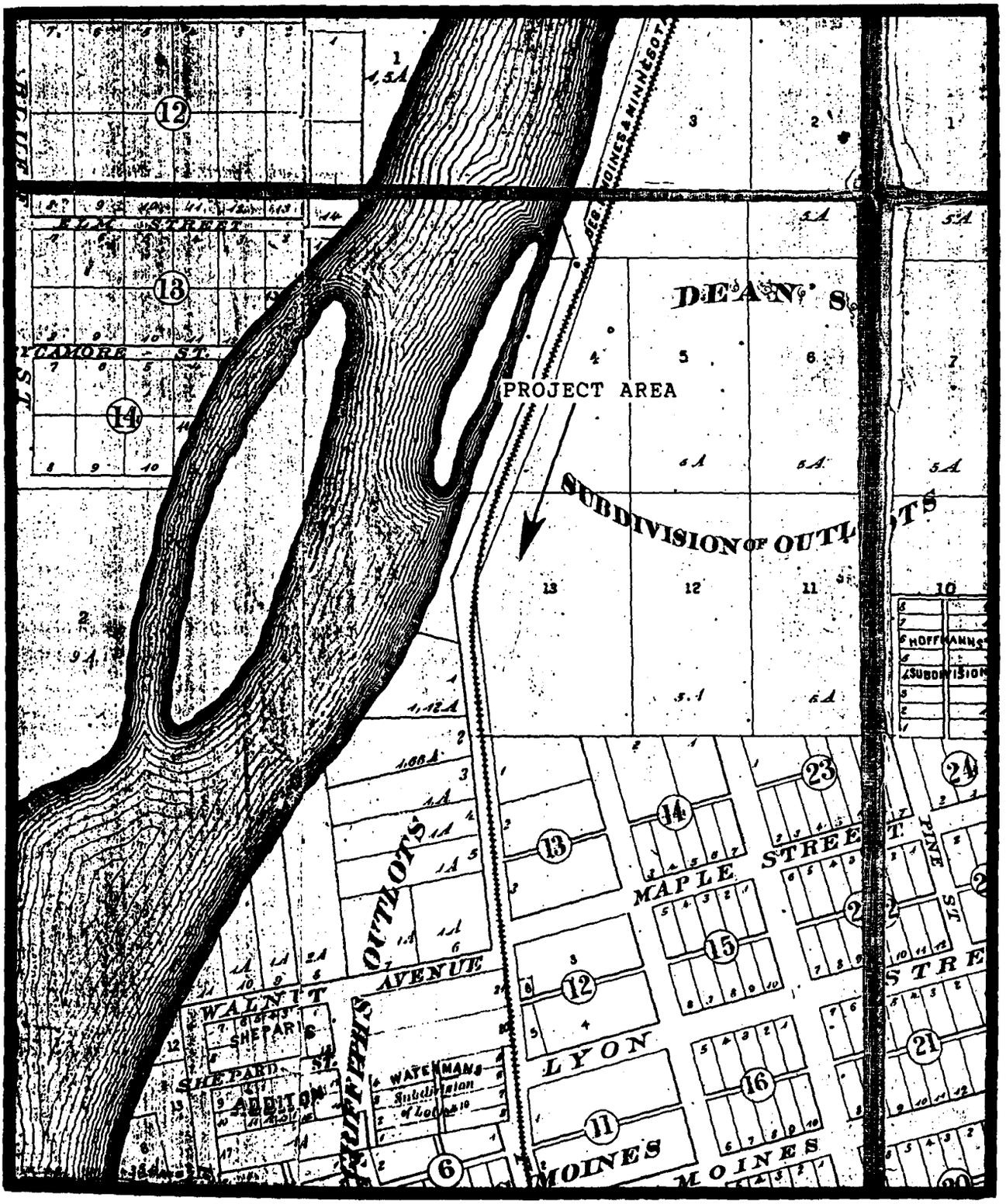

Figure 7. Map of the City of Des Moines in 1874 (from Pelton 1874).

Aside from the early Fort Dodge road and the subsequent railroad across the project location, the first known historical development of this property occurred in 1881 when the Iowa Pipe and Tileworks Company was established with A.Y. Rawson as manager (Clarke Publishing Company 1911:143-4). His sons C.A. and H.A. Rawson and grandson T.A. Rawson subsequently served in various positions in the company including terms as manager, secretary-treasurer, vice-president, and president. Initially, the company specialized in sewer pipe and drainage tile manufacture but later expanded to include the production of paving and building brick, flue linings, and wall coping (Figure 8). By the late 1880s it was known as the Iowa Pipe and Tile Company (Bushnell 1889-90).

An 1880s map of the City of Des Moines (Figure 9) shows the large rectangular Iowa Pipe and Tileworks building along the east side of the railroad tracks. The 1884 fire insurance map shows the operation having a total of eight kilns, four at each end of the long building (Figure 10). A well and an office building were detached from the main building to the west and southwest, respectively. The clay pits were located to the east of the main building, with the double railroad tracks to the west. This same building was still standing in 1891 (Figure 11) but had been expanded on the east side by the addition of a dry house, clay crusher, and four kilns. The historic photograph shown in Figure 12 was taken before 1893 when the company was still known as the Iowa Pipe and Tileworks. This photograph shows that on the west side of the main building, within the present project area, there was an extensive storage yard for finished products. According to the 1884 and 1891 insurance maps (see Figures 10 and 11), the Des Moines River was closer to the plant than it was shown on later maps. A 1909 map of the tile plant location even shows a dotted line labeled "Old Shore Line" at the approximate location of the riverbank in the 1884-1891 fire insurance maps, with the actual riverbank further to the west (Anonymous 1909). Therefore, by the late 1890s-early 1900s the riverbank had moved further to the west allowing for an even larger storage yard (Figure 13). In Figure 13 the extensive storage grounds on the west side of the building and tracks and the clay pit excavations to the east are clearly shown. This configuration is further supported by the 1907 Des Moines River Improvement map (Figure 14) which shows a sizable tile yard to the west of both the railroad tracks and the brick and tile plant. The scale on this map and that of the fire insurance map indicates that the main building is located over 300 ft from the riverbank. At present, the Des Moines Botanical Center building is approximately 240 ft from the river's edge. This would place the main building of the brick and tile plant at, or further to the east than, the Botanical Center.

The 1901 fire insurance map further shows that the original pipe and tileworks building had been replaced by another structure which had ten brick-arched, down-draft kilns on the west, south, and east sides (see Figure 13). Figure 15 is an illustration of the structure and function of a typical down-draft kiln similar to those at this plant. The 1901 fire insurance map (see Figure 13) also notes that a small wing on the north side of the main building was the "ruins of fire" suggesting that the original building had burned down. Figure 16 is a historic photograph of the later replacement building and was taken c. 1900. The extensive storage yards on the west side within the project area are dramatically visible in this photograph. By that time, the company was manufacturing sewer pipe, culvert pipe, drain tile, paving brick, building brick, flue linings, and wall coping (see Figure 8).

By 1920 the pipe and tile operation had added two more down-draft kilns and expanded the main building (Figure 17). The storage yard was still to the west of the main building and a small rectangular building of

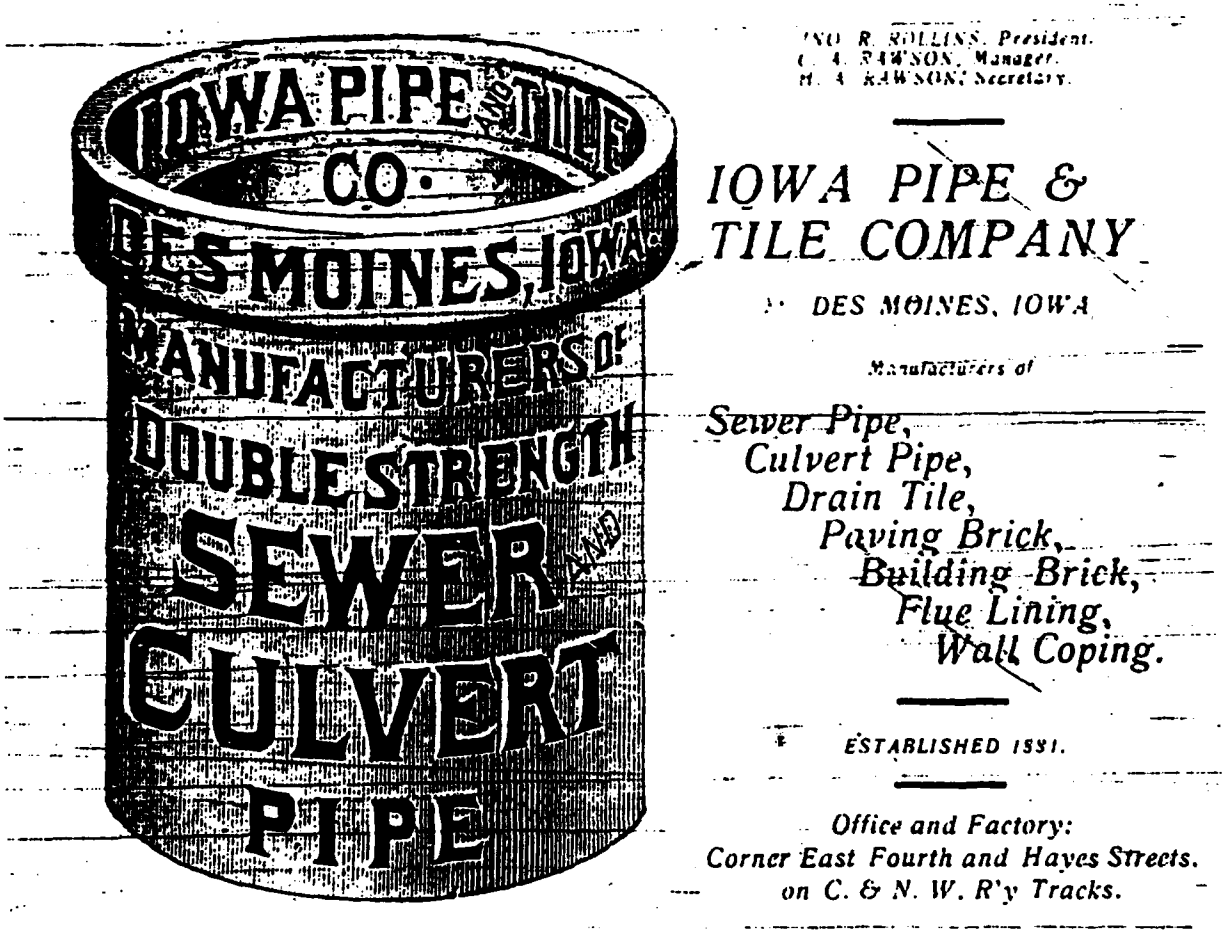

Figure 8. 1902 Advertisement for the Iowa Pipe and Tile Company (from Polk and Company 1902).

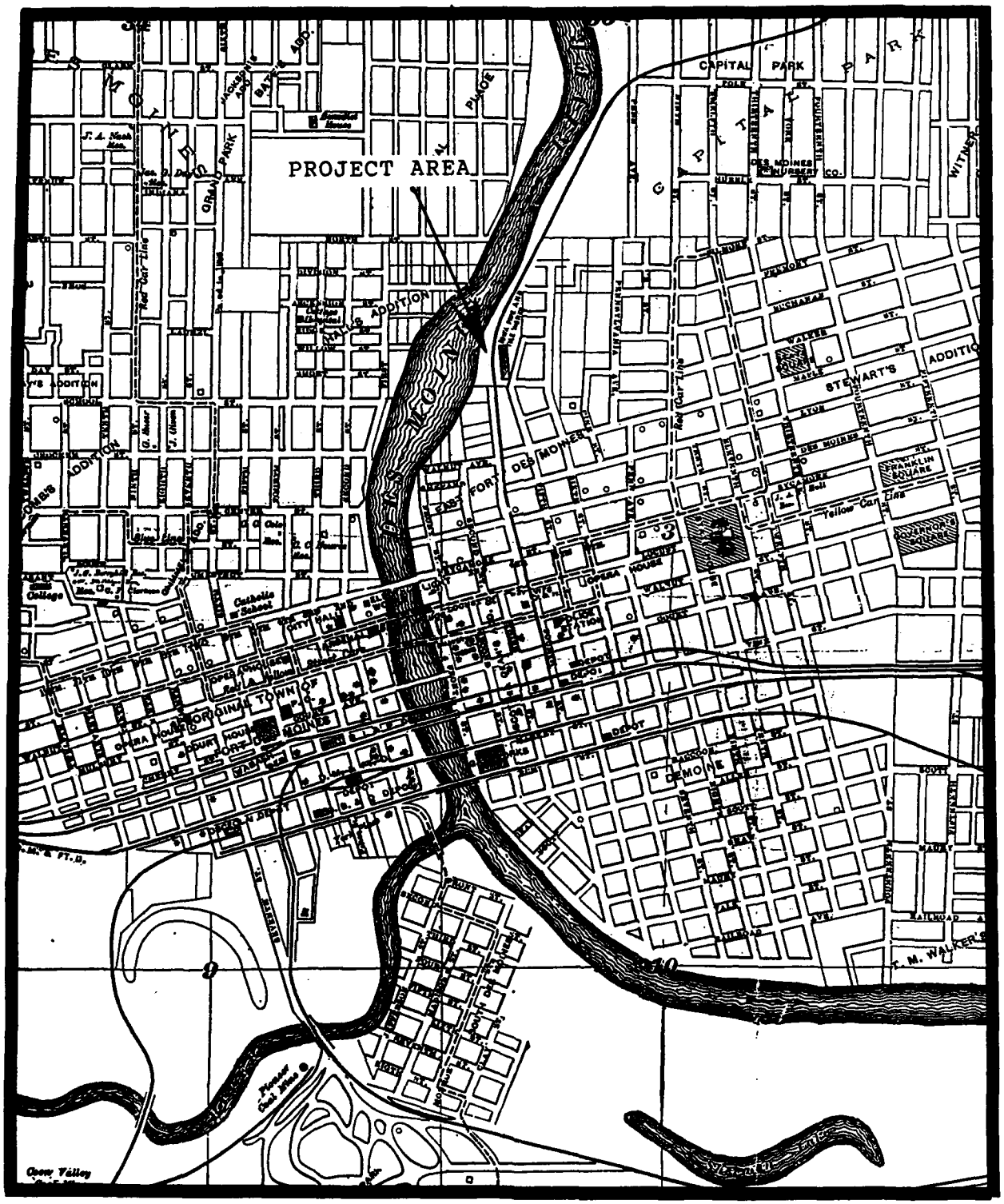

Figure 9. Map of the City of Des Moines and Environs in the 1880s (from Anonymous 1880s).

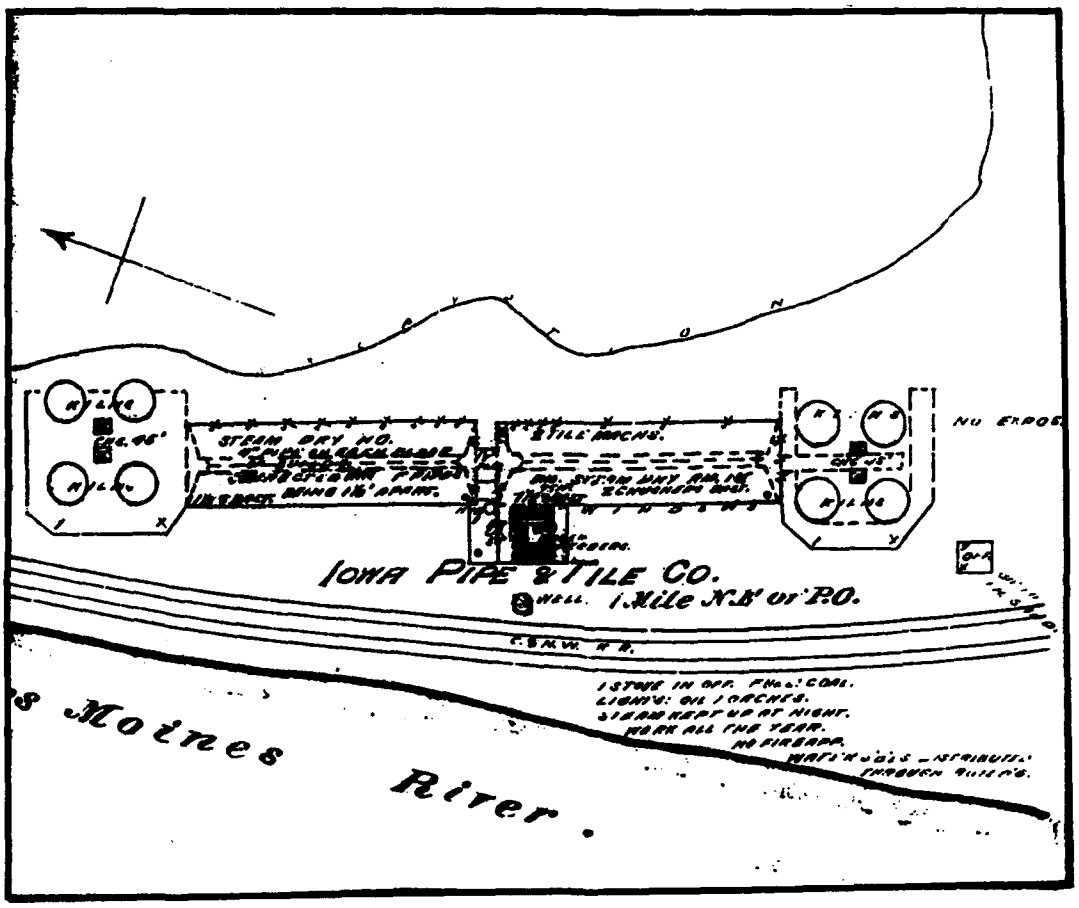

Figure 10. 1884 Fire Insurance Map Showing Location of the Iowa Pipe and Tile Company (from Sanborn Map and Publishing Company 1884).

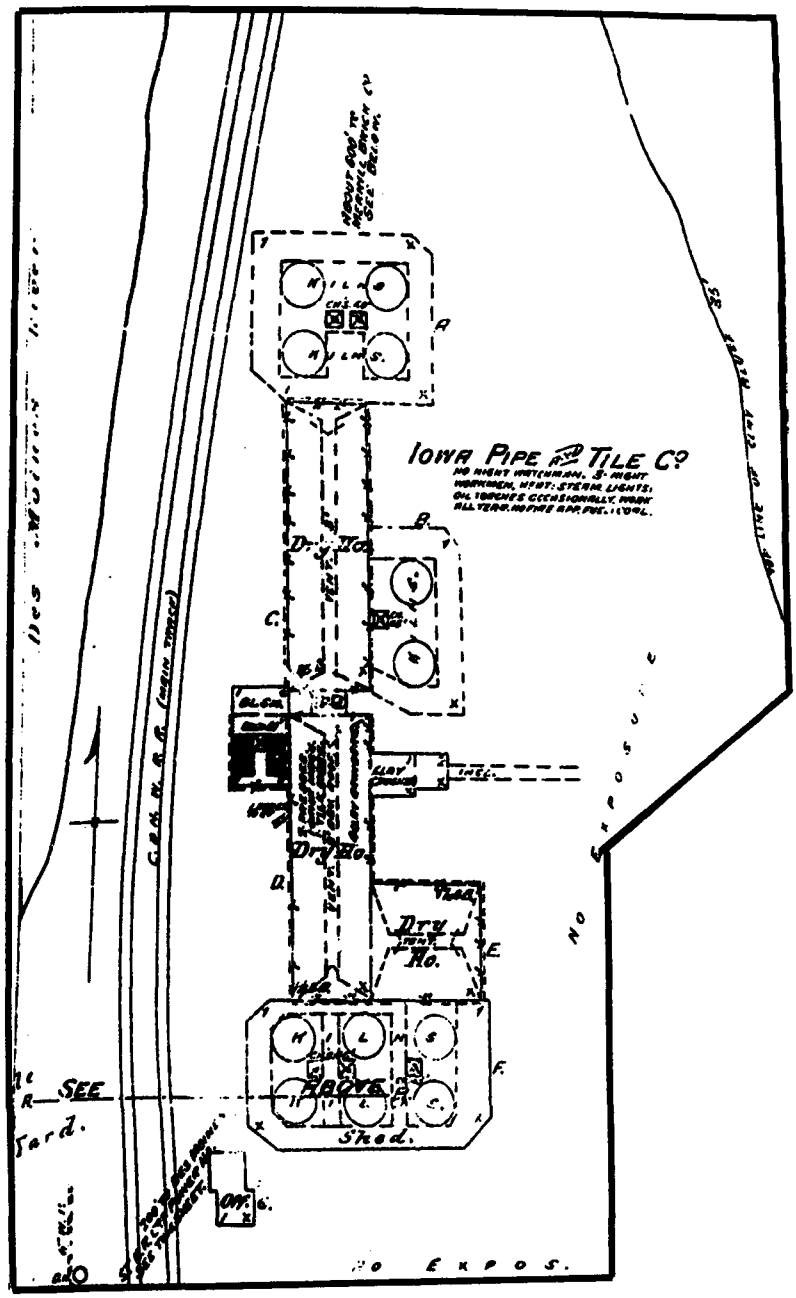

Figure 11. 1891 Fire Insurance Map Showing Location of the Iowa Pipe and Tile Company (from Sanborn Map and Publishing Company 1891).

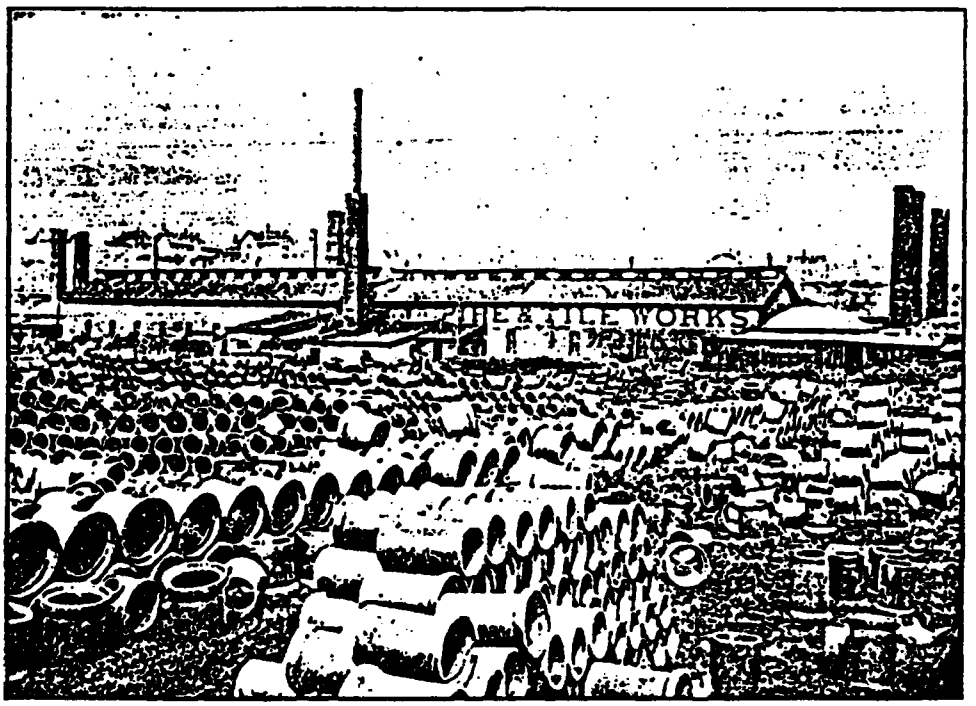

Figure 12. Historic Photograph of the Iowa Pipe and Tileworks c. 1893, View to the East-Northeast (from Commercial Exchange 1893).

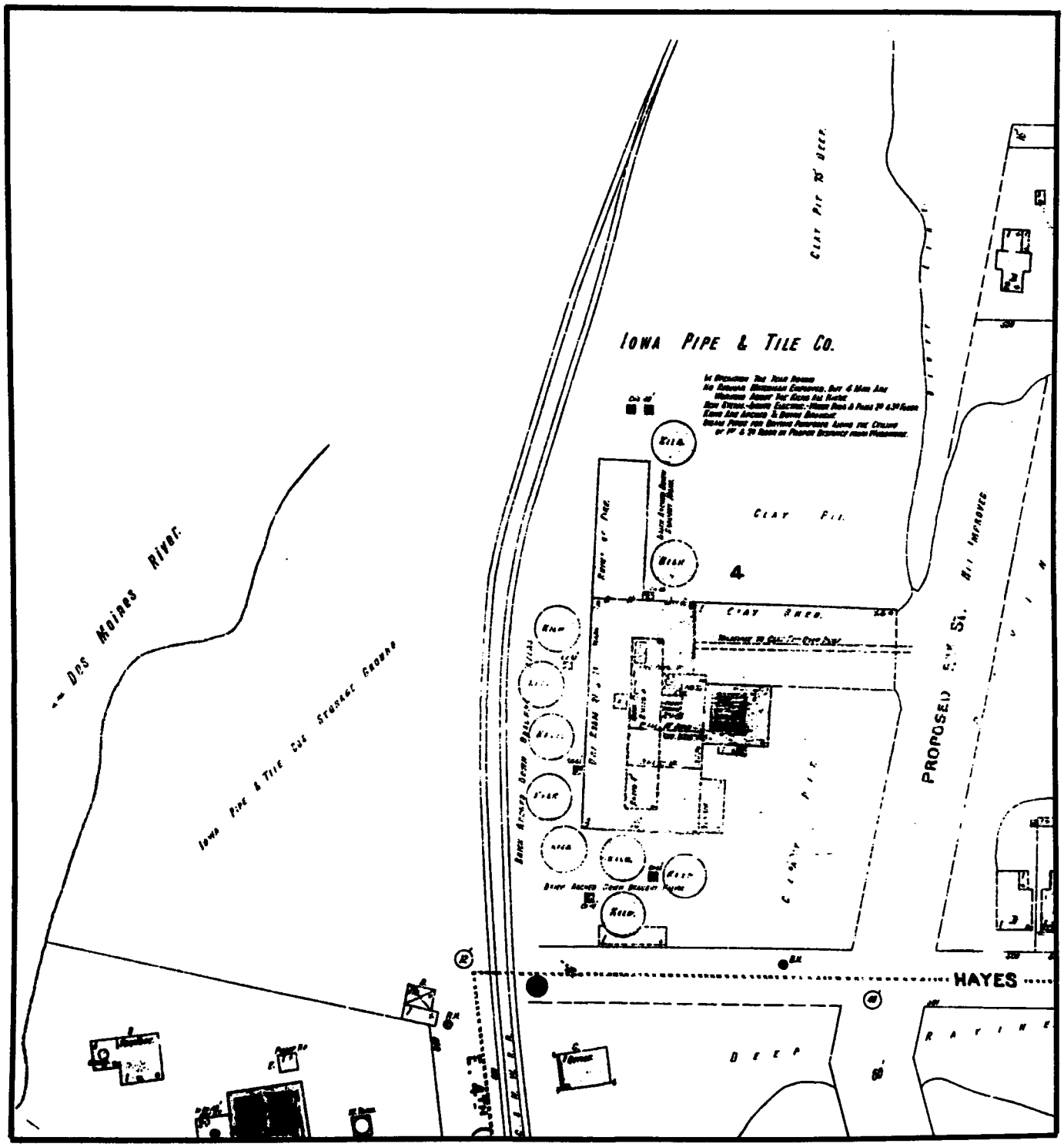

Figure 13. 1901 Fire Insurance Map Showing Location of the Iowa Pipe and Tile Company (from Sanborn-Perris Map Company 1901).

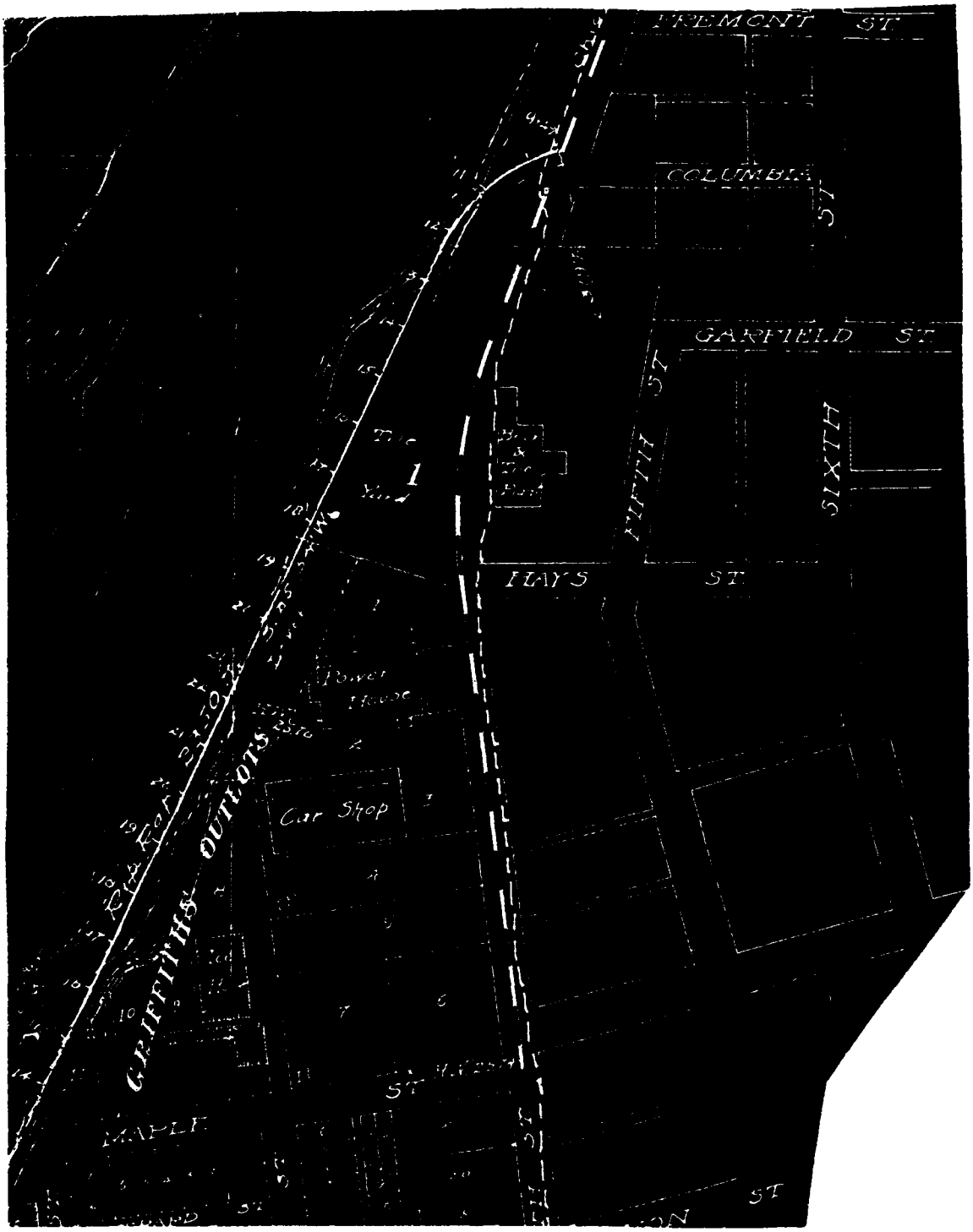

Figure 14. Map of the Des Moines River Improvement in 1907 Showing Location of the Iowa Pipe and Tile Company (from City Engineers Office 1907).

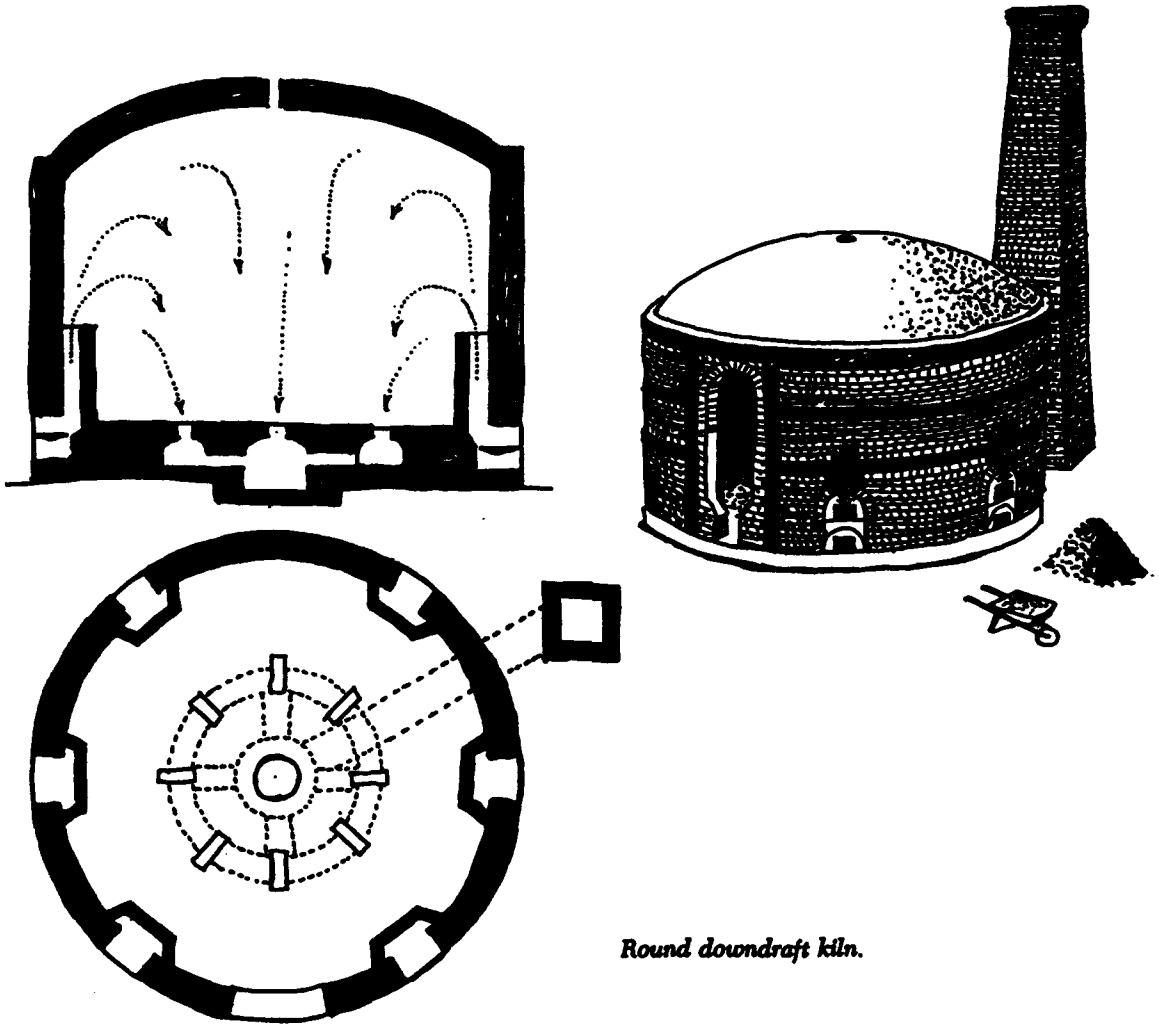

Figure 15. Illustration of Down-Draft Kiln (from Rhodes 1968:49).

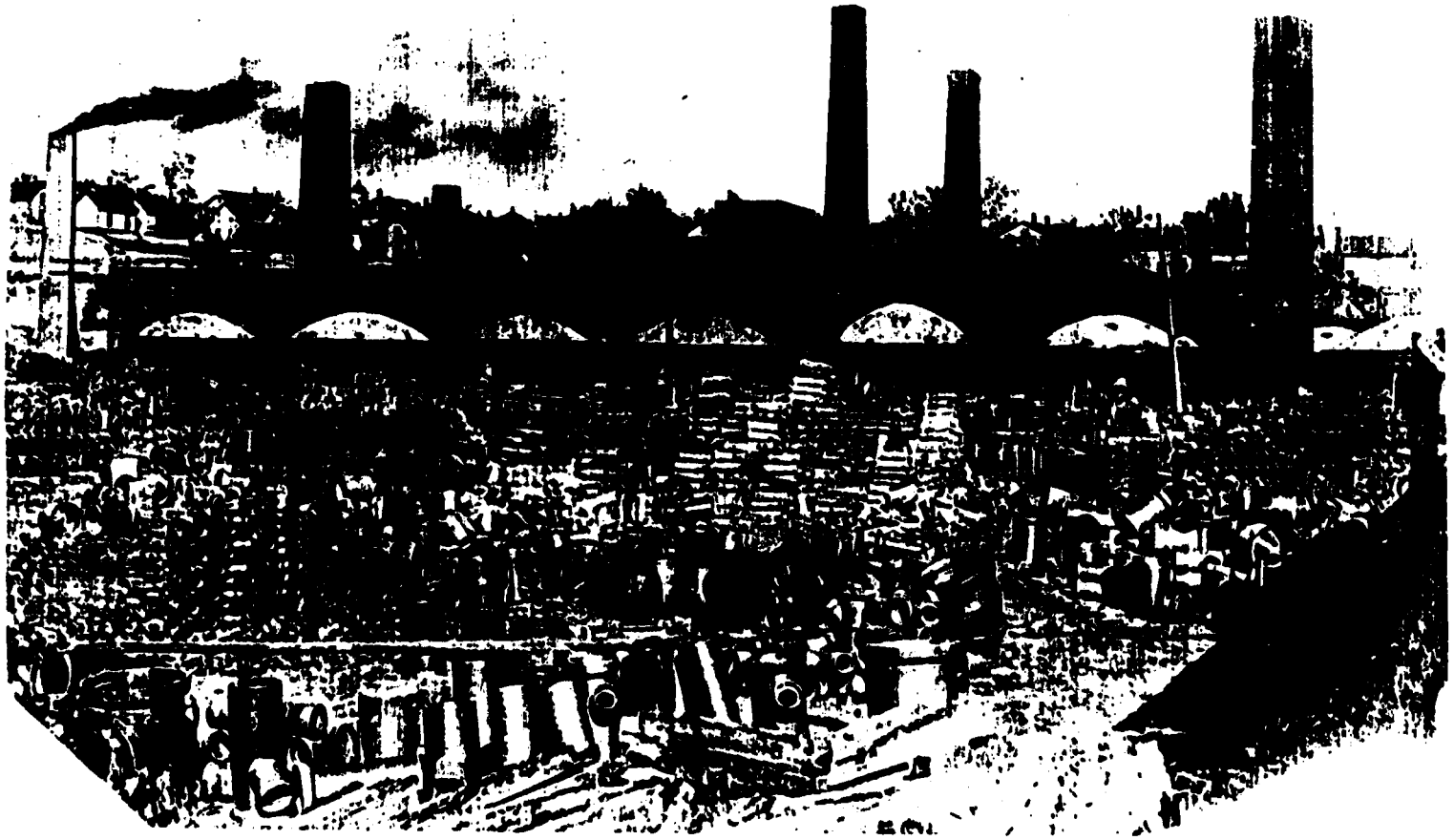

Figure 16. Historic Photograph of the Iowa Pipe and Tile Company c. 1900 (from Dahl 1978:83; Original in State Archives).

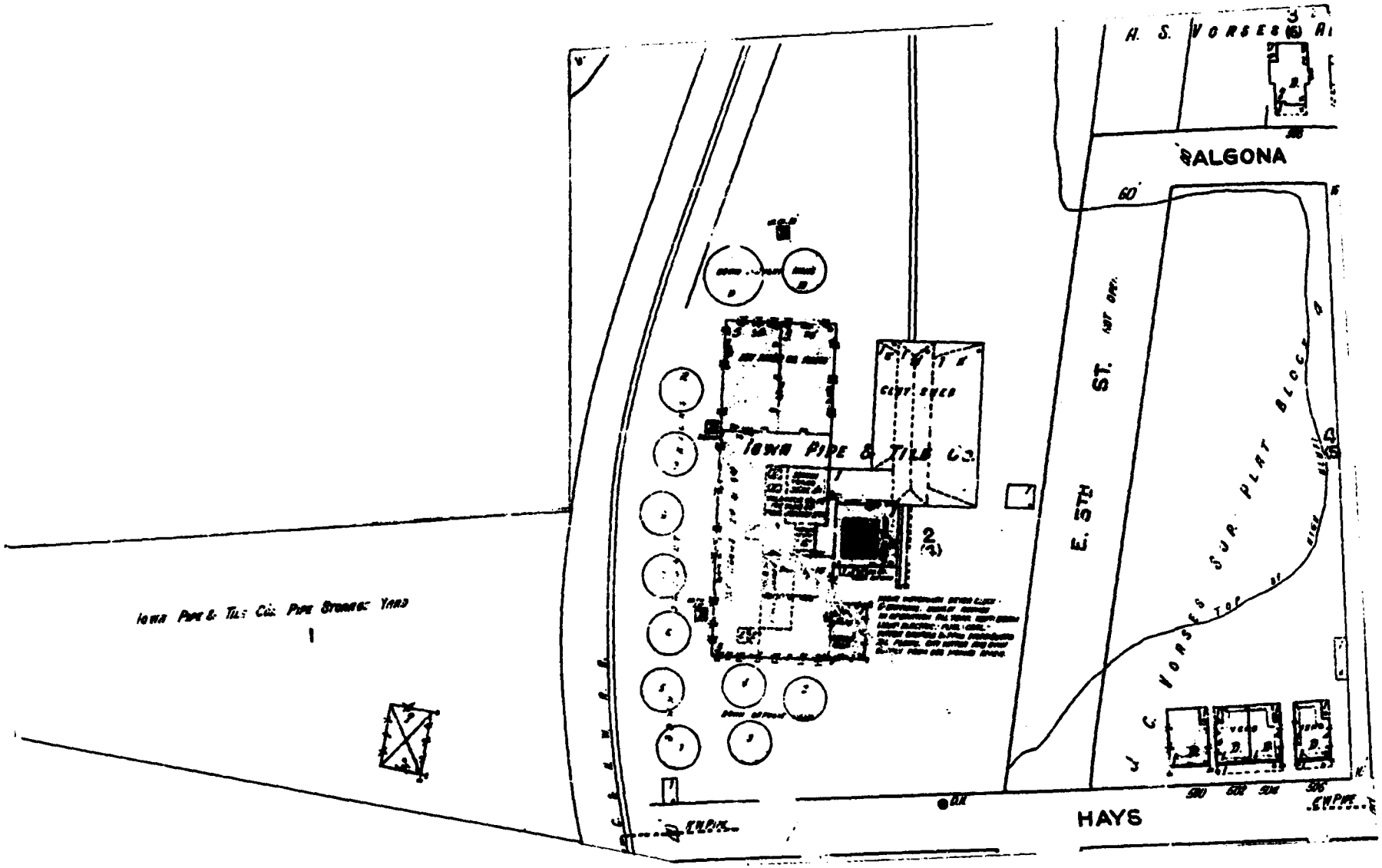

Figure 17. 1920 Fire Insurance Map Showing Location of the Iowa Pipe and Tile Company (from Sanborn Company 1920).

unknown function was located in the southeast corner of that yard. The main building was further expanded and remodeled between 1920-1957, with one of the kilns removed by 1957 (Figure 18). In that year, the fire insurance map (see Figure 18) noted that this was "formerly" the Iowa Pipe and Tile Company and that all of the buildings had been vacated. It was in the late 1950s that the construction of Interstate 235 was begun and likely resulted in the demolition of the pipe and tileworks buildings. It is known that the remaining topsoil at this location was borrowed for use in the interstate construction. River Drive was also created at this same time rerouting traffic from the former East 4th Street which was cut off by construction of the interstate. By the late 1970s, when construction of the Des Moines Botanical Center was begun, the pipe and tileworks site was an overgrown, grassy lot with no standing buildings or structures (Rosen, personal communication 1992). Recent construction of a greenhouse to the southeast of the main building of the Botanical Center revealed an area of rubble fill, including a section of railroad track, to a depth of at least 23 ft below the present ground surface (Ibid.). This rubble may have been used to fill in the area of the main building of the former brick and tile plant, one or more of its kilns, and/or the clay pits.

In summary, the Iowa Pipe and Tile Company operated a pipe, drain tile, and brick factory at this location from 1881-c. 1957. It was one of the city's important drain tile works and may have been "the largest drain tile works in the state" in the 1880s (Bushnell 1885:81). In addition to the Rawson family members, who were prominent in the company's establishment and operations throughout its history, F.A. Percival (c. 1895-96) and J.R. Rollins (c. 1902) also served terms as company president. There does not appear to have been any substantial development of this lot prior to 1881. After the plant closed in the mid to late 1950s, the buildings were demolished and the lot abandoned until the construction of the Des Moines Botanical Center in the late 1970s.

Fieldwork

The field investigation resulted in the recording of one previously unrecorded historic archaeological site which consists of impacted remains associated with the Iowa Pipe and Tile Company's plant dating from 1881-c. 1957. The site has been designated as site 13PK534 by the present investigation (see Figure 2). Shovel testing and examination of a backhoe trench within the Phase II construction area revealed that evidence of the former brick and tile plant is present at the site location in the form of bulldozed rubble and broken by-products along the river's edge and in front (west) of the Botanical Center. While no intact remains of the pipe and tile plant were encountered, the artifactual material recovered includes broken products manufactured at this plant as well as firebrick and kiln furniture from the kiln structures. Usually, such impacted remains and likely secondary deposits are not considered sites by definition. However, because it is known that this was the location of the pipe and tile plant and its storage yard, and because there is evidence in the greenhouse area outside of the project area of deep fill deposits and potentially of buried structural remains, the area of the Botanical Center and its environs has been designated as an archaeological site.

The backhoe trench in the Phase II construction area was excavated by the construction contractor on October 7, 1992. This trench revealed a dense, extensive deposit of waste brick, tile, and pipe, coal, ash, kiln furniture, and firebricks along the riverbank and to the east within 20 ft of River Drive (Plates 9-12). The depth of this deposit could not be fully determined because it extends from near the present ground surface to

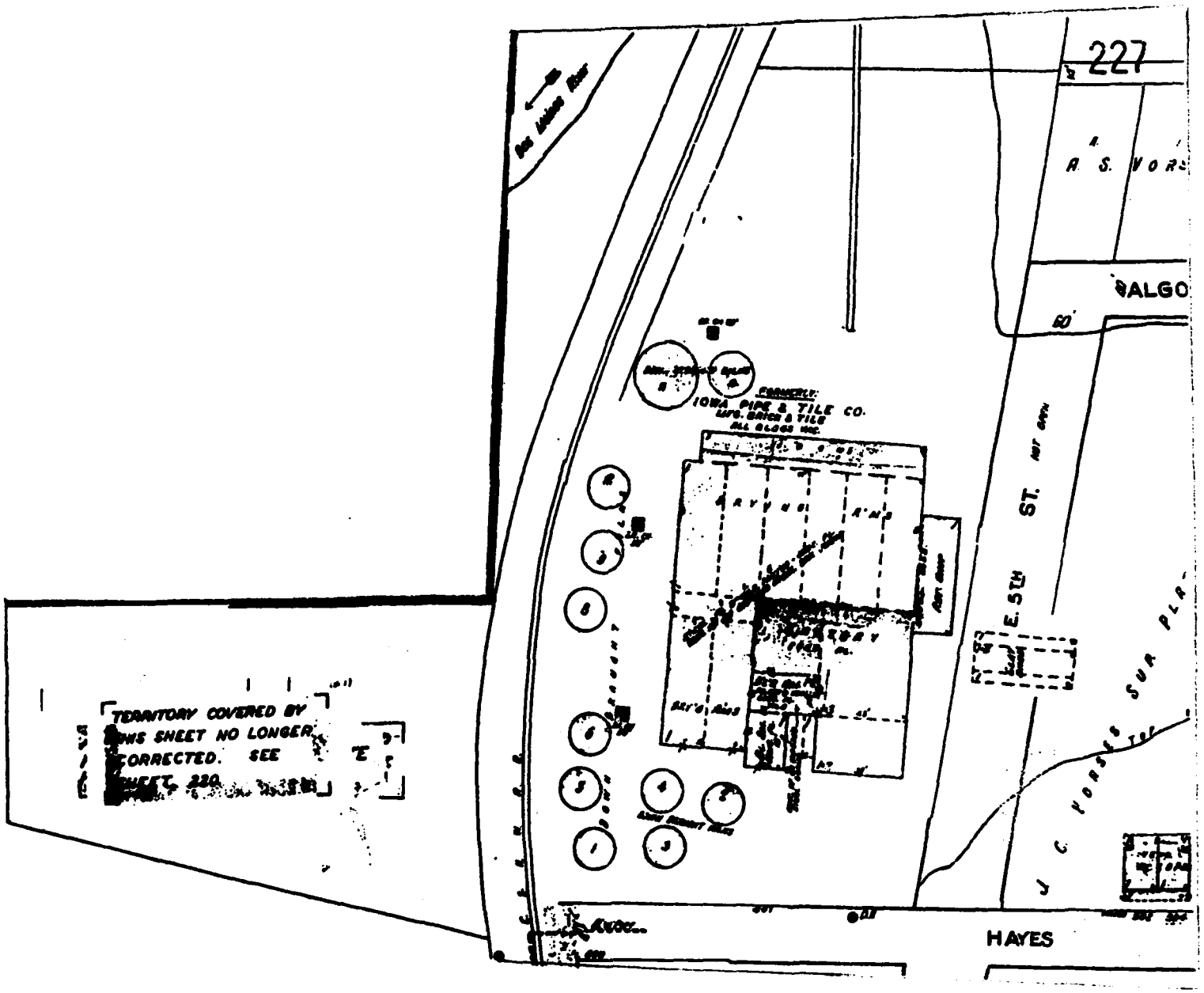

Figure 18. 1957 Fire Insurance Map Showing Location of the Iowa Pipe and Tile Company (from Sanborn Company 1957).

Plate 9. Backhoe Trench in Phase II Construction Area Showing Exposed Rubble Deposit, View to the North.
Field Date: October 7, 1992

Plate 10. Exposed Rubble Deposit in Phase II Construction Area, View to the Northeast.
Field Date: October 7, 1992

Plate 11. Backhoe Trench in Phase II Construction Area Showing Fill Overlying the Rubble Deposit, View to the Northeast. Field Date: October 7, 1992

Plate 12. Backhoe Trench in Phase II Construction Area Showing Exposed Profile of Riverbank and Rubble Deposit, View to the South. Field Date: October 7, 1992

well below the present level of the river. The deposit also continues into the river to an undetermined extent.

To further examine the horizontal extent of this deposit, a total of 11 shovel tests was excavated in the Phase III construction area between River Drive and the Des Moines River (Figure 19). These tests revealed that the level "terrace" in this area is actually of artificial construction and represents the northern extension of the rubble deposit uncovered in the backhoe trench (see Plates 2-4 and 9-12). This deposit covers the full north-south length of the Phase III construction area and likely continues into the already completed Phase I Promenade area (see Plate 4). The artifacts recovered from this deposit are described in Table 1 and represent products manufactured at the former pipe and tile plant as well as kiln furniture and firebrick.

The six shovel tests excavated north-south along this artificial terrace were excavated to a maximum depth of 40 cm where dense rubble precluded further excavation. Examination of the exposed riverbank below the terrace and above the cement river wall revealed that the dense rubble deposit extends into the river as it does in the Phase II construction area (Plates 13 and 14). The remaining five shovel tests were excavated along the sideslope just west of the sidewalk and to the east of the artificial terrace. These tests revealed a mixed fill deposit to varying depths of 30-50 cm below surface where a clayey subsoil was encountered. This layer of fill was probably deposited when River Drive and the sidewalk berm were constructed. The artifacts recovered from 10 of the 11 shovel tests in this area were all associated with the former pipe and tile plant and are described in Table 2.

The project area between River Drive and the Botanical Center was investigated by the excavation of seven shovel tests (see Figure 19). These tests revealed a mixed fill deposit extending to varying depths of 20-50 cm below the present ground surface where a clayey subsoil was encountered. The greater depth of the fill in Shovel Test #18 to 67 cm below surface resulted when the flower beds along the west edge of the Botanical Center were constructed. No intact structural remains or other features were encountered in any of the shovel tests. The majority of artifacts recovered from these tests are associated with the former pipe and tile plant and are described in Table 2.

The shovel tests results also indicated that the former A horizon had been entirely removed prior to the deposition of the fill and rubble deposits and the construction of the Botanical Center. As a result, any evidence of prehistoric occupation of the project area was destroyed in the process. In fact, there was no evidence of any pre-1881 occupation of the site location.

Of the artifacts recovered that can be associated with the former pipe and tile plant, the majority represent sewer pipe and drain tile fragments, with some brick fragments, firebrick, kiln furniture, and coal ash and slag in evidence. The drain tile and sewer pipe fragments included the following varieties: unglazed/unslipped, slip glazed, and clear glazed. Sewer pipe forms included pipes with either straight ends or bell-shaped ends (Plate 15). Some also had scored lines near the ends (see Plates 13 and 15). The few brick recovered exhibited stiff-mud and dry-pressed manufacturing techniques (Plate 16). The only marked brick was a firebrick fragment impressed with "ERLING" (see Plate 16) which may represent the "STERLING" mark of the Chicago Retort and Fire Brick Company in Illinois dating from 1921-42 (Gurke 1987:300). All of the firebrick was of a buff colored fireclay and were likely manufactured elsewhere and imported to

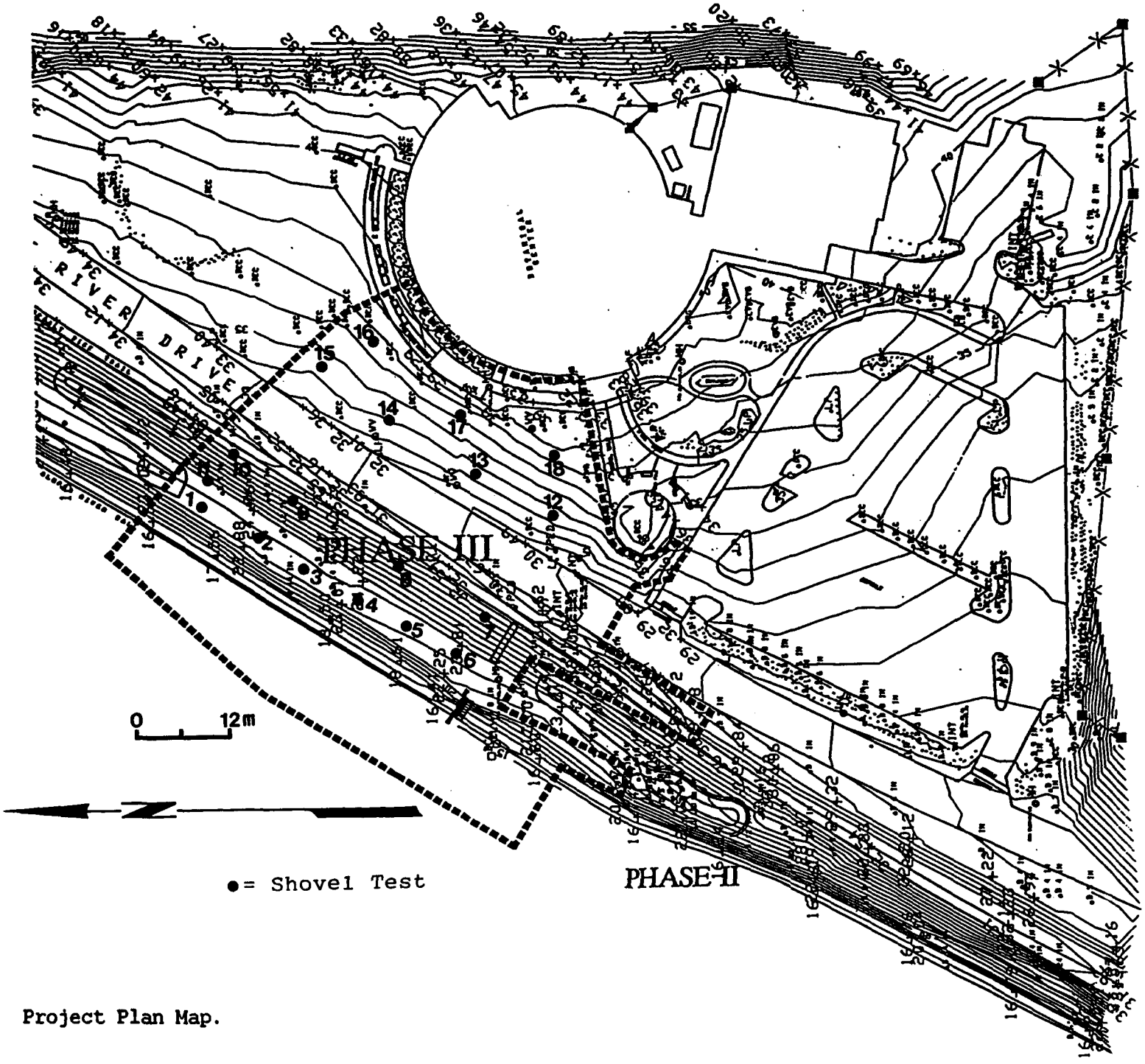

Figure 19. Project Plan Map.

Table 1. Artifact Sample Recovered from Exposed Backhoe Trench in Phase II Construction Area.

Count	Description
1	Sewer pipe fragment, straight end, scored lines, clear glaze
2	Sewer pipe fragments, straight ends, scored lines, slip glaze
1	Sewer pipe fragment, straight end, plain, slip glaze
1	Sewer pipe fragment, body, plain, clear glaze
1	Sewer pipe fragment, bell-shaped end, plain, clear glaze
1	Sewer pipe fragment, bell-shaped end, molded ribs, slip glaze
3	Kiln stacking pieces
1	Brick, stiff-mud, whole (8-1/2" x 3" x 3"), dark red clay
1	Brick, dry-pressed, half (3-1/2" x 2-1/4"), orange red clay
1	Brick, stiff-mud, half (3-1/2" x 2-1/4"), reddish purple clay, perforated (2 holes)
1	Firebrick, quarter, adhering glaze spills
1	Firebrick, half, extremely burned with adhering coal slag
1	Firebrick, whole (4-1/2" x 9" x 2-1/4"), extremely burned with adhering slag, impressed mark "ERLING"
1	Firebrick, flat, whole (8" x 6" x 1-1/2"), adhering slag
17	

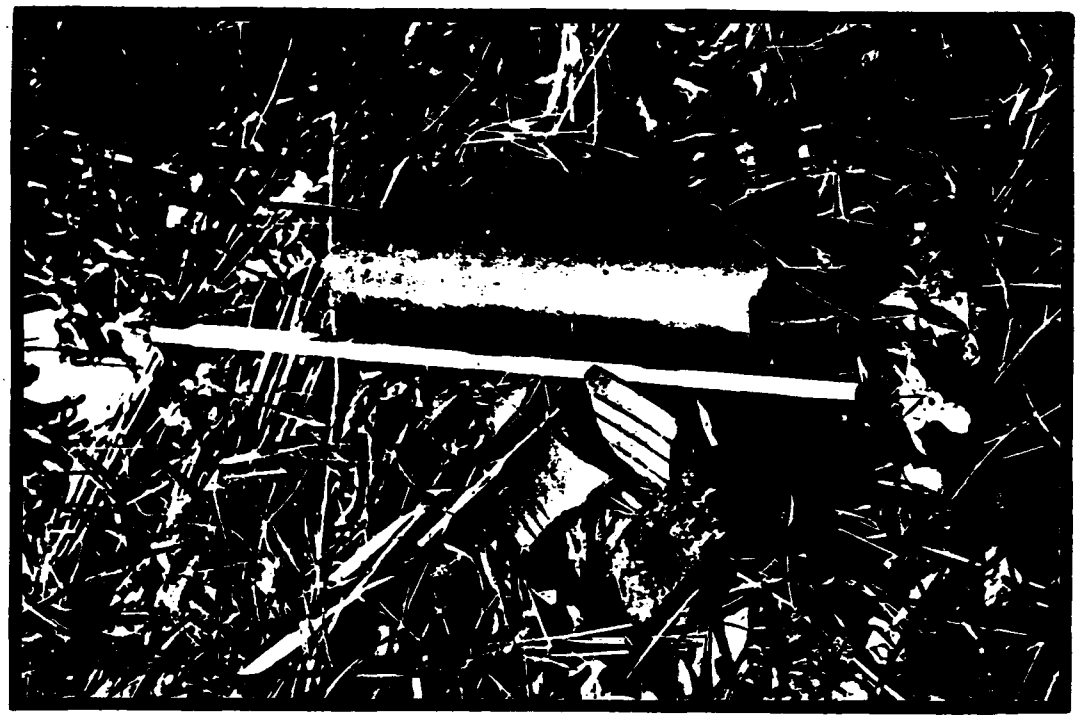

Plate 13. Sewer Pipe and Kiln Furniture Fragments on Surface of Riverbank in Phase III Construction Area.
Field Date: October 8, 1992

Plate 14. Dense Scatter of Pipe and Tile Fragments on Surface of Riverbank in Phase III Construction Area.
Field Date: October 8, 1992

Table 2. Artifacts Recovered from Phase III Construction Area.

Provenience	Count	Description
ST #1		
10-30 cm bs	1	Kiln stacking piece
	1	Brick, dry-pressed, quarter (3-3/4" x 2-1/2"), dark red clay
	1	Sewer pipe fragment, bell-shaped end, unglazed/unslipped
	1	Sewer pipe fragment, straight end, clear glaze
	2	Sewer pipe fragments, body, clear glaze
	6	Drain tile fragments, body, unglazed/unslipped
	3	Coal slag/cinders
ST #2		
10-45 cm bs	1	Glass bottle body fragment, unid. manufacture, green
	1	Glass bottle body fragment, unid. manufacture, clear
	1	Kiln stacking piece
	5	Sewer pipe fragments, body, slip glaze
	3	Sewer pipe fragments, body, clear glaze
	1	Sewer pipe fragment, bell-shaped end, scored lines, clear glaze
	1	Sewer pipe fragment, straight end, scored line (interior) clear glaze
ST #3		
10-30 cm bs	7	Kiln stacking pieces
	6	Drain tile fragments, body, unslipped/unglazed
	3	Sewer pipe fragments, body, clear glaze
ST #4		
0-40 cm bs	2	Kiln stacking pieces
	1	Brick fragment, small, unid. manufacture, red orange clay
	1	Sewer pipe fragment, straight end, slight scored lines, slip glaze
	1	Sewer pipe fragment, body, slip glaze
	2	Sandstone fragments
	1	Limestone fragment
	1	Concrete spill chunk, large aggregate
ST #5		
10-40 cm bs	1	Drain tile fragment, exfoliated
	1	Firebrick fragment, small
	2	Limestone fragments
	11	Sandstone fragments
ST #6		
10-40 cm bs	1	Hollow tile block fragment, small
	2	Drain tile fragments, body, unglazed/unslipped
	1	Sewer pipe fragment, body, slip glaze
	2	Coal slag fragments
ST #7		
10-44 cm bs	1	Drain tile fragment, exfoliated
	1	Sewer pipe fragment, body, clear glaze
	1	Charcoal fragment

Table 2. Continued.

Provenience	Count	Description
ST #8		
10-50 cm bs	1	Sewer pipe fragment, body, slip glaze
	2	Drain tile fragments, body, unglazed/unslipped
	1	Coal slag fragment
	1	Limestone fragments
ST #10		
10-58 cm bs	2	Drain tile fragments, exfoliated
	1	Sewer pipe fragment, body, slip glaze
	2	Coal slag fragments
	2	Sandstone fragments
ST #11		
0-20 cm bs	1	Drain tile fragment, body, unglazed/unslipped
	3	Sewer pipe fragments, body, clear glaze
ST #12		
10-33 cm bs	1	Glass bottle neck fragment, machine made, applied color label (7-Up), green
	2	Iron wire fragments
	1	Iron machine cut nail fragment, extremely burned
	2	Iron unid. nail fragments
	3	Firebrick fragments, small
	4	Drain tile fragments, exfoliated
	2	Sewer pipe fragments, body, slip glaze
	2	Sewer pipe fragments, body, clear glaze
	1	Brick fragment, unid. manufacture
	1	Hollow tile block fragment, textured exterior
ST #13		
15-38 cm bs	1	Brick, stiff-mud, quarter (3-1/2" x 2-1/2"), red clay
	1	Kiln stacking piece
	5	Drain tile fragments, exfoliated
	1	Sewer pipe fragment, straight end, scored line/molded ribs (exterior), scored lines (interior), slip glaze
	3	Coal slag fragments
ST #14		
5-50 cm bs	1	Firebrick fragment, small
	2	Brick fragments, small, burned
	1	Sewer pipe fragment, straight end, scored lines, clear glaze
	2	Sewer pipe fragments, body, clear glaze
	1	Sewer pipe fragment, body, scored line, clear glaze
	2	Drain tile fragments, body, unglazed/unslipped
	4	Drain tile fragments, exfoliated
ST #15		
18-45 cm bs	1	Iron wire fragment

Table 2. Continued.

Provenience	Count	Description
ST #16		
10-45 cm bs	2	Iron wire nails, whole (3" and 2-1/4" in length)
	1	Firebrick fragment, small
	3	Drain tile fragments, body, unglazed/unslipped
	1	Sewer pipe fragment, body, clear glaze
	1	Concrete fragment, flat slab, large aggregate
	1	Stoneware body sherd, Bristol glazed interior/exterior
ST #17		
28-37 cm bs	1	Drain tile fragment, body, unglazed/unslipped
	1	Sewer pipe fragment, body, slip glaze
	1	Sewer pipe fragment, body, clear glaze
ST #18		
30-67 cm bs	1	Firebrick fragment, small
	2	Drain tile fragments, body, unglazed/unslipped
	1	Brick spall, unid. manufacture
Surface		
Near River	1	Stoneware milk bowl rimsherd, salt Bristol glaze (exterior), Albany slip glaze (interior)
TOTAL =	154	

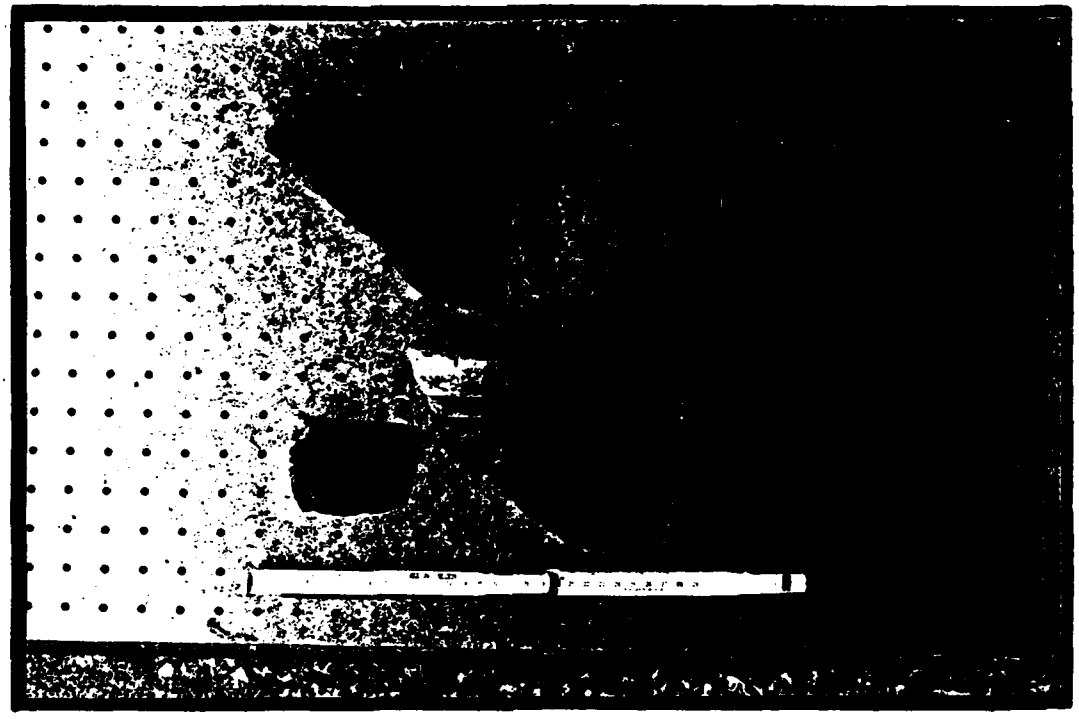

Plate 15. Sewer Pipe Sample Collected from Backhoe Trench in Phase II Construction Area.

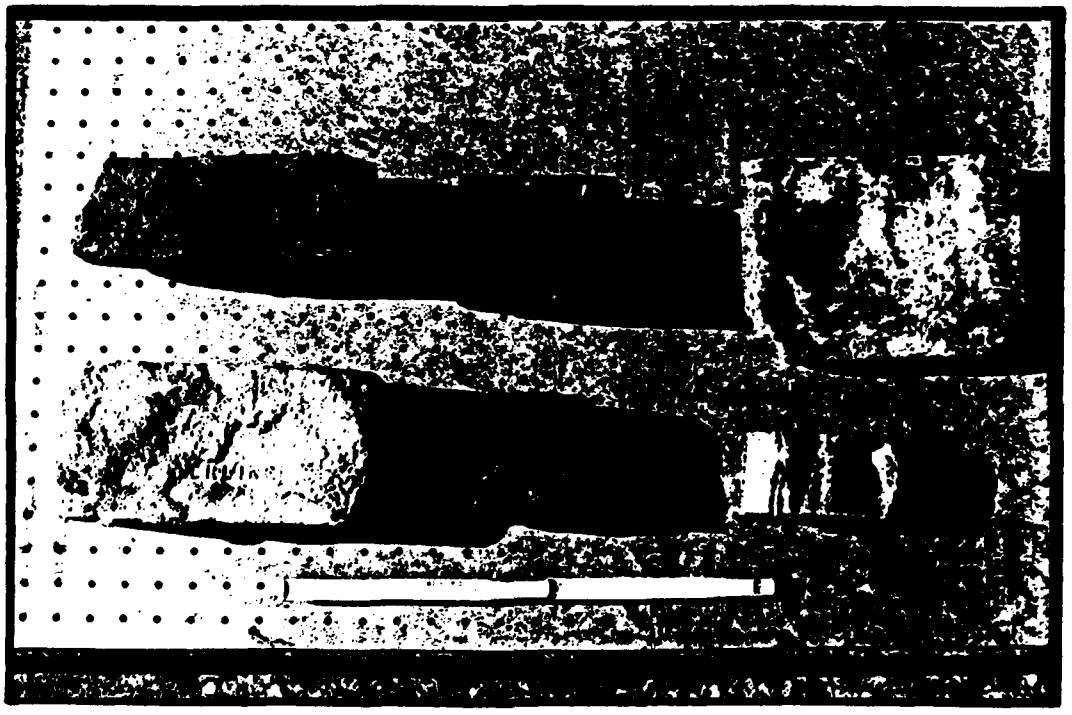

Plate 16. Brick and Firebrick Samples Collected from Backhoe Trench in Phase II Construction Area (Note: Marked firebrick in lower left-hand corner).

this plant for use in the construction of the down-draft kilns (see Plate 16). The kiln furniture consisted of stacking pieces, or round clay bands of varying widths which may have been used to separate the sewer pipes during firing to prevent the different glazed pieces from adhering to one another (Plate 17). Finally, the recovery of two pieces of hollow clay tile blocks suggests that this type of building block was also manufactured at this plant but that it was not a major product.

Other artifacts recovered included machine cut and wire nails, bottle glass, concrete, wire fragments, and two stoneware sherds. The latter included one Bristol slip glazed body sherd and one milk bowl Bristol/ Albany slip glazed rimsherd. It is unlikely that either stoneware was manufactured at the Iowa Pipe and Tile Company and probably represent secondary deposition at the site location. The milk bowl rimsherd has a temporal range of c. 1890-c. 1915 and was found on the present ground surface (Greer 1981:264). The Bristol glazed body sherd dates from after 1915 and was recovered between 10-45 cm below surface in Shovel Test 16 (Ibid.). The only diagnostic bottle glass was a machine made, green 7-Up soda pop bottle fragment with applied color labeling and dating from the post-1930s (Munsey 1970:52). The machine cut and wire nails and concrete could have been associated with the various constructions, additions, and remodelings of the Iowa Pipe and Tile Company main building, while the bottle glass and stoneware could represent items brought in by the plant workers and broken and discarded at the site.

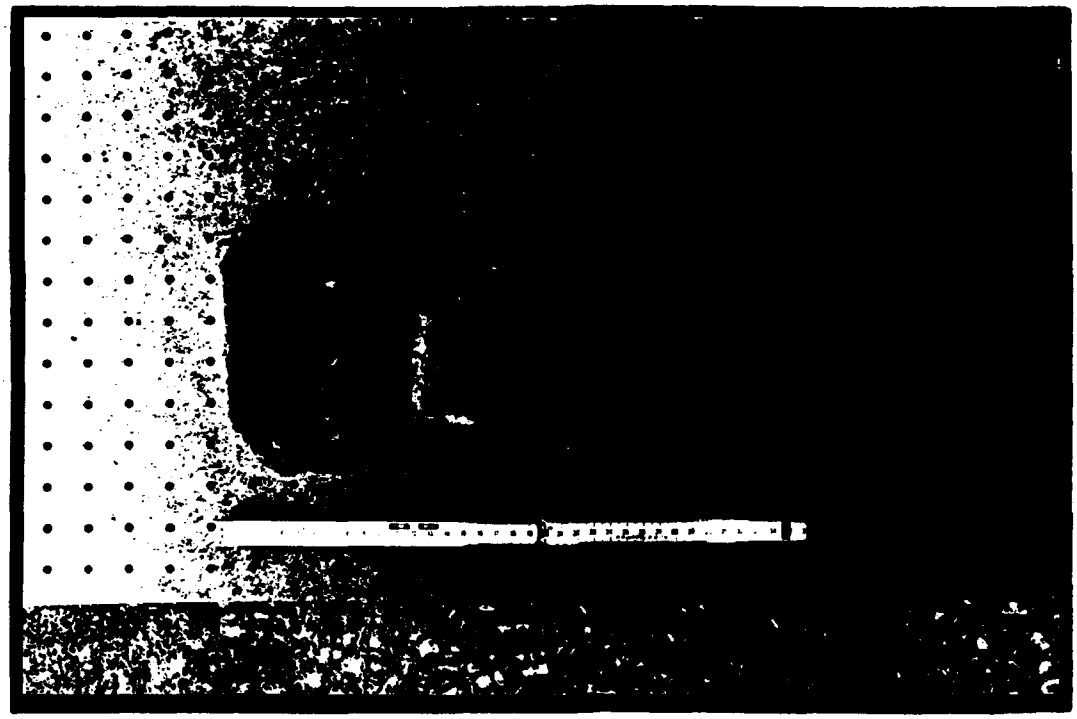

Plate 17. Kiln Furniture Fragment Sample Collected from Backhoe Trench in Phase II Construction Area.

CHAPTER VI. SUMMARY AND RECOMMENDATIONS

The Phase I archaeological survey of the proposed Riverfront Garden (or Phase III construction area) of the Des Moines Botanical Center Riverfront Park and Des Moines Recreational River and Greenbelt resulted in the identification of one archaeological site within the project area. This site was designated as site 13PK534 and represents the impacted remains of the former Iowa Pipe and Tile Company which operated at this location from 1881-c. 1957. Subsurface testing revealed a mixed, dense deposit of debris and rubble associated with the former pipe and tile plant but no intact structural features. Archival and oral historical data indicate that the major impacts to the site have included demolition of the buildings and structures by the late 1970s and borrowing of the remaining topsoil for construction of the nearby interstate in the late 1950s. An artificial terrace of broken pipe, tile, and brick products as well as building and kiln structural remains may have been bulldozed into place along the riverbank at that same time. As a result of these many impacts, the integrity of the site deposit within the Phase III construction area has been compromised and is ineligible for nomination to the National Register of Historic Places. However, there is some potential for buried, intact remains associated with the main pipe and tile plant buildings and the various kilns that once surrounded these buildings in the vicinity of the Botanical Center to the east and south of this building. This potential should be examined, and the remainder of the site evaluated for National Register eligibility, if future construction projects involve those areas.

Based on the results of this investigation, additional cultural resources investigations within the proposed project area are not warranted and project clearance is recommended. However, no field technique is completely adequate to define all potential cultural resources within a given area. Therefore, should any intact cultural features, such as intact structural remains, be detected during the process of the Phase III Riverfront Garden construction project, the U.S. Army Corps of Engineers, Rock Island District, and the Historic Preservation Bureau of the State Historical Society of Iowa in Des Moines should be notified immediately.

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