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## **PHASE I**

## **CULTURAL RESOURCES INVESTIGATION**

## **FOR THE PROPOSED**

## **RICHARDSON OLMSTED COMPLEX PROJECT,**

## **CITY OF BUFFALO, ERIE COUNTY, NEW YORK**

### **Prepared for:**

**RICHARDSON CENTER CORPORATION  
c/o The Buffalo News  
One News Plaza, P.O. Box 100  
Buffalo, New York 14240**

### **Prepared by:**

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**April 2011**

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**April 2011**

# Management Summary

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**SHPO Project Review Number (if available):**

**Involved State and Federal Agencies:**

**Phase of Survey:** Phase I Cultural Resources Reconnaissance Survey

**Location Information:**

**Location:** North of intersection of Forest Avenue and Richmond Avenue

**Minor Civil Division:** City of Buffalo

**County:** Erie County, New York

**Survey Area (Metric & English):** 12.8 acres (5.2 hectares)

**USGS 7.5 Minute Quadrangle Map:** USGS Buffalo-NW Quadrangle 1965

**Archaeological Survey Overview**

**Number & Interval of Shovel Tests:** 163 shovel tests total: 156 shovel tests dug at 50-ft (15-m) interval; 7 shovel tests dug at closer interval

**Results of Archaeological Survey**

**Number & name of historic sites identified:** none

**Number and name of sites recommended for Phase II/Avoidance:** none

**Results of Architectural Survey**

**Number of structures within project area:** one modern utility building (Building 46)

**Number of buildings/structures/cemeteries adjacent to project area:** five historic buildings (Buildings 1, 9, 10, 44, 45) and four modern buildings (51, 62, 62A, and 79)

**Number of identified eligible buildings/structures/cemeteries/districts:** The project area is within the NRHP-listed Richardson Olmsted Complex

**Report Author(s):** R. Hanley, M. Steinback, R. Emans, E. Button, M. Cinquino

**Date of Report:** April 2011

# Table of Contents

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Management Summary.....	ii
List of Figures and Tables.....	iv
List of Photographs.....	v
1.0 Introduction .....	1
1.1 Project Description .....	1
1.2 Environmental Setting .....	3
2.0 Historical and Archival Review .....	5
2.1 Prehistoric Period .....	5
2.2 Historic Period.....	12
2.3 Documentary Research.....	27
2.3.1 Historical Map Analysis .....	27
2.3.2 Site File and Archival Review .....	30
3.0 Field Investigation .....	35
3.1 Methodology.....	35
3.2 Laboratory Analysis.....	35
3.3 Results of the Field Investigation.....	36
3.4 Conclusions and Recommendations .....	39
4.0 References .....	41
Appendices	
Appendix A: Photographs	
Appendix B: Shovel Test Log	

## List of Figures and Tables

---

<b>FIGURE</b>	<b>PAGE</b>
1.1 Location of the project area in the City of Buffalo, Erie County, New York .....	2
1.2 Soils within and adjacent to the project area.....	4
2.1 Land purchases and reservations in Western New York, ca. 1804 .....	15
2.2 Lower Black Rock at the end of the Civil War .....	24
2.3 Buffalo State Hospital for the Insane 1872.....	28
2.4 Buffalo State Hospital for the Insane 1894.....	29
2.5 Buffalo State Hospital for the Insane 1916.....	31
2.6 Buffalo State Hospital for the Insane 1927.....	32
2.7 New York State Hospital for the Insane 1951 .....	33
3.1. Location of shovel tests and photograph angles within the project area .....	37
3.2 Location radial shovel tests around positive STP 4.6.....	38

### TABLE

1 Soils within and adjacent to the project area .....	3
2 Archaeological sites within one mile of the project area.....	30
3 National Register-Listed Sites within one mile of the project area.....	34
4 Artifact Catalog (excluding modern materials discarded in the field).....	39

## List of Photographs

---

<b>PHOTOGRAPH</b>		<b>PAGE</b>
1	Western entrance of the South Lawn Area (Study Area A), facing northwest .....	A-1
2	The open cut-grass terrain shovel tested in the South Lawn area (Study Area A) facing north.....	A-1
3	Utility building on the south-central side of the south lawn, facing southwest .....	A-2
4	Trees and lawn in the eastern part of Study Area A, facing north .....	A-2
5	Gravel and utilities common along the south side of the historic buildings (Buildings 10, 44, 45) facing west-southwest .....	A-3
6	Gravel and utilities common along the south side of the historic Building 44 [note: field technician in foreground is at positive STP 4.6], facing northeast .....	A-3
7	The western side of Study Area B where a new parking area is proposed, facing south.....	A-4
8	The northern and central parts of Study Area B where a new parking area is proposed, facing east-southeast .....	A-4
9	Grading in the southwestern part of Study Area B, facing southeast.....	A-5
10	The northwestern part of Study Area C, facing southeast .....	A-5
11	The western part of Study Area C showing existing drive and parking lot, facing east .....	A-6
12	The eastern and central parts of Study Area C showing an existing parking lot, facing west .....	A-6
13	Rear elevation of Building #1 (c.1912) located just south of Study Area C, facing southeast.....	A-7
14	A modern utility building on the east side of Study Area C, facing southeast .....	A-7
15	Close-interval shovel testing around positive STP 4.6 [note adjacent disturbances, facing north.....	A-8

# 1.0 Introduction

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## 1.1 PROJECT DESCRIPTION

Panamerican Consultants, Inc. was contracted by the Richardson Center Corporation (RCC), Buffalo, New York, to conduct a Phase I cultural resources investigation for the proposed Richardson Olmsted Complex project in the City of Buffalo, Erie County, New York (Figure 1.1). RCC plans to rehabilitate the complex for reuse by implementing the *Richardson Olmsted Complex Master Plan Core Project*. This Phase I investigation evaluates an approximately 12.8-acre Area of Potential Effect (APE) examining the following three noncontiguous locations:

- **South Lawn.** This 9.6-acre area is located between the Towers Building 45 and Forest Avenue from the main entry at Richmond Avenue to Abbotsford Place. Presently a mix of open lawn and parking, this area will be recreated to a park-like setting that pays homage to the “therapeutic landscape” of the original grounds and provides access to the Core Project (RCC letter to SHPO 01/27/11).
- **North Replacement Parking Lot.** This 1.2-acre area is adjacent to the northeast corner of the Strozzi Building (Building 62) where parking spaces will be created to replace those lost in the South Lawn area.
- **South Replacement Parking Lot.** This 2-acre area is on the north side of the Management Services building (former Superintendent’s Residence) where parking spaces will be created to replace those lost in the South Lawn area.

Site plans of the proposed reuse/modifications for these areas are presented in the *Richardson Olmsted Complex Cultural Landscape Report* (Heritage Landscapes 2008: Figures 12 and 13) and the APE is delineated in figures presented throughout this report.

The purpose of the Phase I investigation was to determine if any previously recorded or yet unidentified cultural resources are present within the APE. The cultural resources investigation included archival and historical map research, a site file and literature search, an intensive walkover reconnaissance, photographic documentation of field conditions, and shovel testing throughout the APE. Photographs of the field investigation are presented in Appendix A.

The cultural resources investigation was conducted in compliance with the National Environmental Policy Act, the National Historic Preservation Act, the State Historic Preservation Act, the New York State Environmental Quality Review Act, and all relevant state and federal legislation. The investigation was also conducted according to the New York Archaeological Council’s Standards for Archaeological Investigations and New York State Historic Preservation Guidelines.

Fieldwork was conducted in April 2011. Mr. Robert J. Hanley, M.A., RPA, served as principal investigator, Mr. Mark A. Steinback, M.A., was project historian, and Dr. Rebecca J. Emans, RPA, was project archaeologist and laboratory director. Mr. Edwin W. Button, M.A., was the field director and conducted the field investigation assisted by six field technicians. Dr. Michael A. Cinquino, RPA, served as project director.

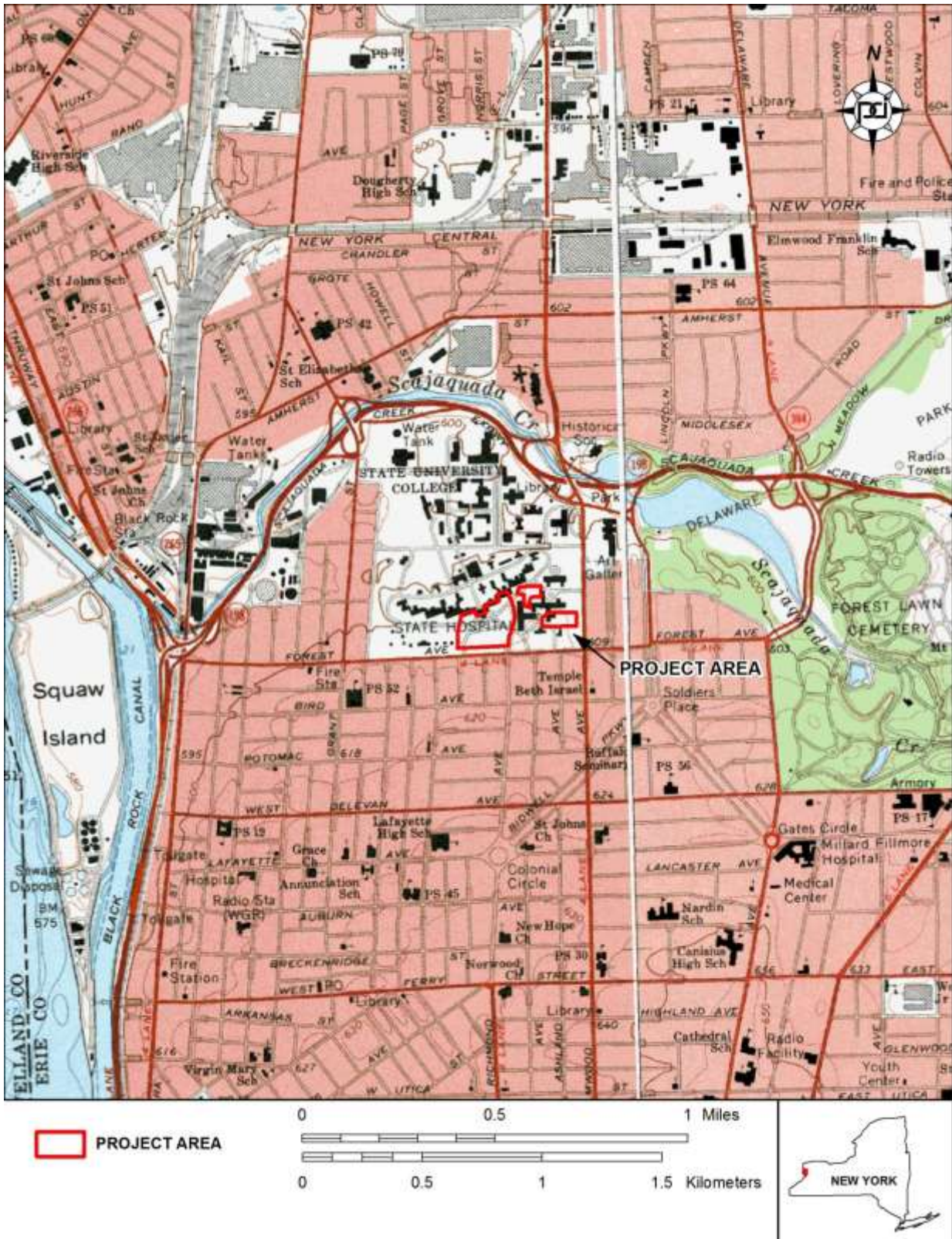


Figure 1.1. Location of the project area in the City of Buffalo, Erie County, New York (U.S. Geological Survey [USGS] Buffalo NW 1965).



## 1.2 ENVIRONMENTAL SETTING

**Topography.** Located on the eastern shore of the Niagara River and south of Scajaquada Creek, the project area is situated within the Erie Lake Plain physiographic province, one of the two physiographic provinces of Erie County (the Allegheny Plateau is the other). The lake plain province is located along Lake Erie and its topography is typical of an abandoned lake bed with little significant relief except for narrow ravines carved by the area's streams. Elevations within the project area range between 600 and 610 feet (183 and 186 meters; see Figure 1.1). The terrain is relatively level, with areas that have likely been leveled (grading/filling) or otherwise altered.

**Geology.** Bedrock beneath the project area is Onondaga limestone, consisting of Middle Devonian age limestone and chert (Owens et al. 1986:3-4). It lies deeply buried beneath glacial deposits and no rock outcroppings are visible on the ground surface. This formation is notable for its chert nodules that were the primary prehistoric lithic resource used in western New York. Relatively flat, the bedrock underlying Erie County tilts to the southwest at approximately 50 ft (15 m) per mile (Owens et al. 1986:2-4).

**Soils.** The project area is situated within the City of Buffalo, where the soils are predominantly classified as Urban Land. Urban Land comprises nearly level, typically disturbed soils that are poorly to well drained, and on lowland plains. Minor soils within the APE are Collamer Complex, 1 to 6 percent slopes (UmA), and Schoharie Complex (Uu). These soils are summarized in Table 1, and shown in Figure 2.1.

**Table 1. Soils within and adjacent to the project area.**

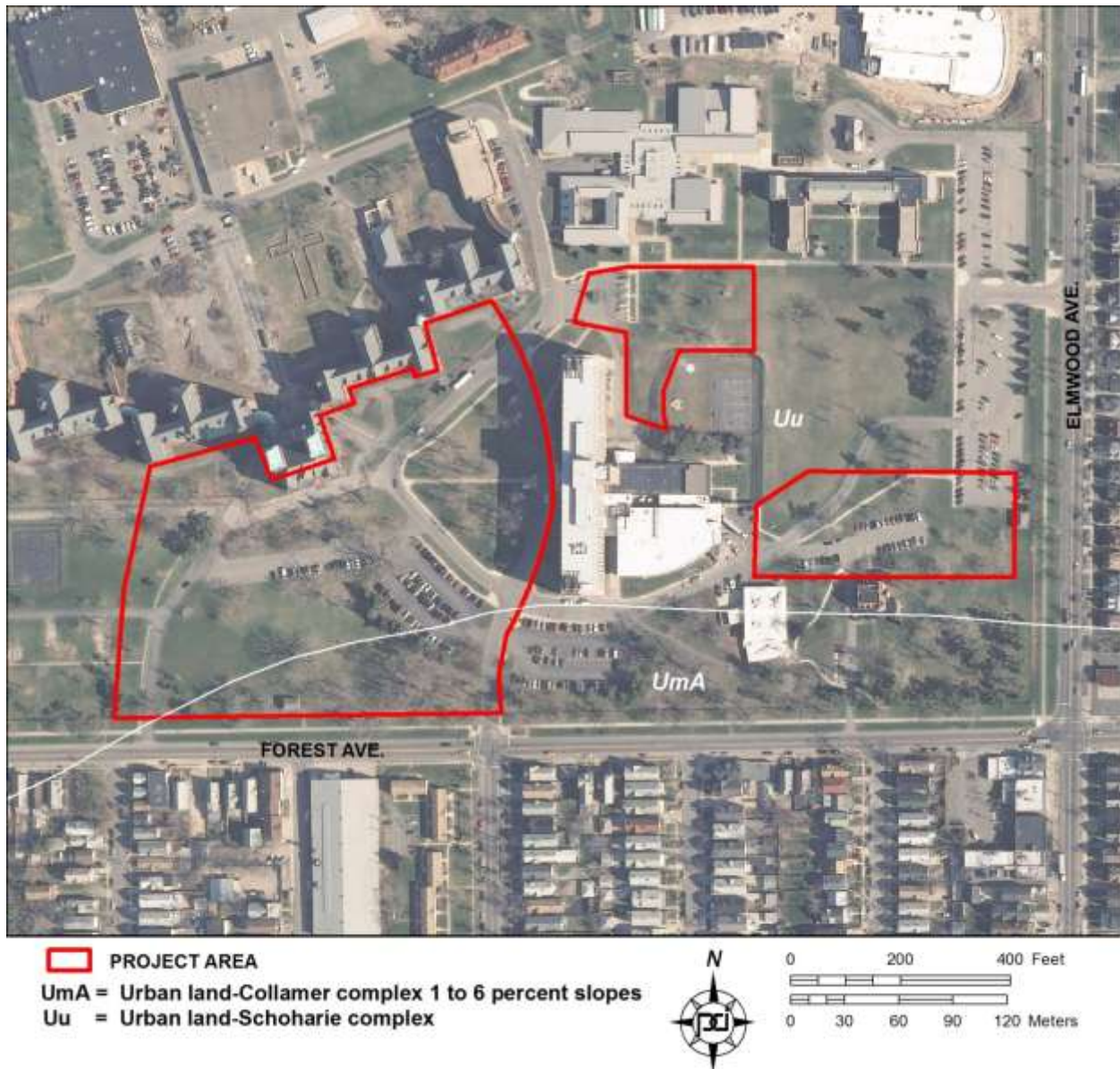
Name	Soil Horizon Depth in (cm)	Color	Texture	Slope %	Drainage	Landform
Urban Land-Collamer complex (UmA)	0-8 (0-20)	dark gray brown	silt loam	1-6	moderately well	urban areas
	8-10 (20-25)	brown	silt loam			
	10-32 (25-81)	brown dark yellow brown	silt loam silty clay loam			
	32-60 (81-152)	brown	silt loam sandy loam			
Urban Land-Schoharie complex (Uu)	0-9 (0-23)	dark brown	silt loam	0-3	moderately well to well	flat landscapes
	9-31 (23-79)	brown red brown	silty clay			
	31-60 (79-152)	red brown	silty clay			

**Drainage.** Scajaquada Creek is approximately 1,600 ft (488 m) north of the project area. The creek flows westward into the Niagara River, located approximately one mile (1.6 kilometers) to the west. The Niagara River flows northwards over Niagara Falls into Lake Ontario.

**Forest Zone and Vegetation.** At the time of pioneer settlement during the late eighteenth century and early nineteenth century, the natural landscape consisted of Beech-Maple forest in which a beech-maple-biome dominated much of the somewhat poorly drained Erie Lake plain (Miller 1973:15). Well-drained areas would have supported greater numbers of oak, hickory, pine and chestnut species. Areas along Lake Erie as well as the northern portion of Erie County lie within the Elm-Red Maple-Northern Hardwood forest zone (de Laubenfels 1966:92). This

zone reflects recent conditions where poorly drained areas are widespread, the natural forest has been removed, and better drained areas have been utilized for agriculture.

**Manmade Features and Alterations.** Prior to 1870, the project area was rural farmland. Impacts associated with the clearing of forests, stump removals, and subsequent plowing are anticipated, although evidence of this activity has diminished with the passing of time. After 1870, the project area was part of the “State Hospital for the Insane” and received extensive development through the work of renowned architect Henry Hobson Richardson and famed landscape architect Frederick Law Olmsted. Mapped disturbances within the project area include buried storm systems, sewers, phone lines, and electrical lines associated with lampposts. Visible impacts include the presence of roadways, paved parking, and sidewalks.



**Figure 1.2. Soils within and adjacent to the Richardson Olmsted project area** (soils data: Owens et al. 1986:sheet 35; aerial source: NYS GIS Clearinghouse 2008).

## 2.0 Historical and Archival Review

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This section examines the existing literature on cultural resources in and around the Area of Potential Effect and provides a review of the culture history of the region. This review, along with more specific information on sites in the area, is used to identify cultural resources that are present and that could be present in the APE. A review of the literature on the prehistoric culture history of Western New York is presented first; and, a summary of historical events after European-American contact and settlement follows. The section concludes with a subsection presenting archival analysis and descriptions of the recorded cultural resources in the vicinity of the APE.

### 2.1 PREHISTORIC PERIOD

The three major cultural traditions manifested in western New York State during the prehistoric era were the Paleo-Indian, Archaic, and Woodland. Cultural evolution of the area can be summarized as a gradual increase in social complexity, punctuated by several important cultural or technological innovations. The earliest people were nomadic big-game hunters; changing environmental conditions required an adaptation of the economy, resulting in a shift to the efficient exploitation of temperate forest resources by Archaic hunter-gatherers. In many areas of eastern North America, the Archaic is followed by a Transitional period, which bridges the Archaic and the subsequent Woodland period. While it does not represent a departure from Archaic social and economic patterns, important changes do occur in the artifact assemblage and in burial practices (Ritchie 1955, 1980). The Woodland tradition is marked by the introduction of pottery, agriculture, and burial mounds, and resulted in a plethora of new and very different social and economic adaptations (Ritchie 1980).

After about 3,000 years ago external influences began to have an increasingly greater effect as the area was occupied by groups that later formed the Erie and Neutral confederacies. Culturally, they shared much with groups in southern Ontario, Canada. The introduction of corn horticulture ca. AD 1000 encouraged population growth, village life, and warfare in western New York. The nations that eventually formed the Haudenosaunee or Iroquois Confederacy evolved from antecedents in the central sub-area between the Genesee River and the Tug Plateau. Prior to the time of European contact Seneca hunting territory comprised an area extending from Lake Ontario to the headwaters of the smaller Finger Lakes and from the Genesee River to Cayuga Lake. There was very little interchange between these groups and those of the western New York area until the seventeenth century (Tuck 1978; White 1961, 1978a, 1978b; Tooker 1978).

***Paleo-Indian Period (ca. 12,000–8000 BC).*** Hunter-gatherer bands of the Paleo-Indian culture were the first humans in New York State after the last glacial retreat approximately 14,000 years ago. At this time, Lake Ontario and the St. Lawrence River were thick with ice, but it is possible that the environmental fluctuations that occurred during this early period were conducive to periodic forays by the Paleo-Indian groups into the region when conditions were suitable. As the climate gradually became more temperate, these forays may have become more extended. Prior to 10,000 years ago, the ice had not retreated very far north of the Lake Ontario and its basin was still somewhat inhospitable (Fitting 1975:27-28; Ritchie 1980; Engelbrecht et al. 1993:10).

Technologically, the Paleo-Indian period has been associated with the fluted point industry. The points are generally large (2.5 to 10 centimeters [1 to 4 inches] in length), with a flute on each face, produced when channel flakes were struck from the base. While many

suggestions have been made regarding the function of the flute, the most obvious is that it facilitated hafting (Snow 1980). Paleo-Indian sites have been classified into two main categories: quarry workshops and camps. Chert quarrying and the preliminary stages of tool production were carried out at the tool workshops (Ritchie and Funk 1973:333).

The Paleo-Indian subsistence strategy has traditionally been viewed as one that emphasized hunting big game. These species, many of which are extinct, included mastodon, mammoth, caribou and moose-elk, along with a variety of smaller game. Few tool associations have been made with aquatic resources remains. However, it is difficult to imagine these people not utilizing such a diverse and abundantly available food source once water conditions allowed.

A band-level social organization is attributed to Paleo-Indian groups, with each band consisting of 25 or 30 people. These bands were initially "free wandering communities that moved frequently and without restriction, their direction, persistence and territory covered being controlled mainly by game movements and the abundance of other wild food resources" (Snow 1980:150). No Paleo-Indian resources have been recovered from the City of Buffalo, despite evidence of megafauna (e.g., mastodon, mammoth) habitation in areas around Lake Erie and the Niagara River (Ritchie 1980).

**Archaic Period (ca. 8000–1000 BC).** The Archaic period is differentiated from the Paleo-Indian period by a stylistic shift in lithic assemblage, an apparent increase in population, changes in the subsistence strategy, and a less nomadic settlement system. Three subdivisions are generally recognized for the Archaic: Early, Middle, and Late (or Terminal).

**Early and Middle Archaic (ca. 8000–4000 BC).** Although the Early Archaic period began in the eastern United States as early as 10,000 years ago, there is no extant settlement data this early in the Northeast. It has been suggested that the lack of dated sites in the Northeast prior to 10,000 years ago is due to the low carrying capacity of the postglacial boreal forest environment (Ritchie 1980; Fitting 1968; Mason 1981).

Most of what is known about the Early Archaic is based on data from outside the Lake Ontario basin. Since the water level of Lake Ontario during this prehistoric period was much lower than at present, archaeological deposits left by people drawn to the lake margins would have been obliterated by the rising lake level—both by erosion and inundation. Although Early Archaic data is scant, it appears that big-game hunting was no longer central to subsistence and band movement was less erratic. Groups began to settle into territories and camp movement adjusted to a seasonal round (Snow 1980; Engelbrecht et al. 1993:16-19).

A few technological changes, such as the production of ground and polished stone tools, serve to identify the Middle Archaic period. The territorial "settling in" process begun during the Early Archaic continued into the Middle Archaic, stimulating a process of group isolation. Since qualitative changes cannot be seen between the Early and Middle Archaic periods, Mason (1981) does not distinguish them as separate periods. Instead, he views them as a single transitional period between the Paleo-Indian and the Late Archaic.

**Late Archaic (ca. 4000–1500 BC).** The Late Archaic is seen as the flowering of preceramic culture in the Northeast (Snow 1980; Mason 1981). The period begins about 6,000 years ago and continues to the advent of pottery around 1500 BC. During this period prehistoric cultures "fully adjusted to the humid Temperate Continental climate which, with its oak-chestnut-deer-turkey biome, persisted to the present day" (Ritchie and Funk 1973). The increased

carrying capacity of this richer and more diverse biome is reflected by an increase in the number, size, and kinds of sites documented in the archaeological record.

The relatively diverse and abundant biome provided a subsistence base that was much broader than that of previous periods. Food resources consisted of large game (deer and bear), small game, fish, shellfish, waterfowl, birds, insects, vegetables and fruits. This diversity not only allowed for greater procurement efficiency, it also provided a cushion against seasonal failures of any single resource. The general increase in numbers of milling and fishing tools suggests a shift away from red meat as a preferred resource.

**Transitional Period (ca. 1500–1000 BC).** The Transitional period features a continuation of Late Archaic cultural and economic patterns, with only a few innovative traits. Among these are a developing burial/ceremonial complex and, toward the end of the period, the introduction of ceramics. Snow has characterized the period as Terminal Archaic, and "the stage/period was seen as technologically transitional from the preceramic Late Archaic to the ceramic Early Woodland via an episode of soapstone vessel manufacture" (1980:235).

**Woodland Period (1000 BC–AD 1500).** While the previous hunting and gathering economy continued as a means of subsistence during Woodland times, native groups became more and more dependent on domesticated plants for food. This gradual shift to domestication is in itself less important than the ramifications of the shift. Agriculture brought with it a score of new problems that required new adaptations, and every aspect of native culture was transformed. With agriculture came settled village life, a general increase in population, technological changes, warfare, and a litany of social and political changes.

**Early Woodland (1000 BC–AD 1).** The onset of the Woodland mode occurred gradually in northeastern United States, and at somewhat different times throughout the region. The Early Woodland period in western New York is generally thought to have begun with the Meadowood phase about 3,000 years ago. Meadowood sites are found throughout the Northeast, and particularly New York (Engelbrecht et al. 1993:22-23).

Meadowood settlements appear to be year-round, primarily located near large bodies of water, such as the Niagara River. The basic social unit was composed of approximately 150 people occupying a territory of around 390 square miles (1,000 square kilometers). Marriage outside the band produced social linkage to other local bands, resulting in the formation of a regional band composed of around 500 people. In the autumn, winter, and early spring local bands operated from base settlements. In the spring and summer, the local group fissioned into smaller task groups, operating from resource extraction camps.

Mortuary ceremonialism, which had its roots in the Archaic and continued to develop through the Transitional period, became more developed during the Early Woodland. Typically, the dead were placed on scaffolds or in charnel houses, and were cremated after decay. Flexed, bundled, and multiple burials also occurred. Grave offerings were numerous, consisting of cache blades (sometimes numbering in the hundreds), smoking pipes, gorgets, birdstones, copper, fire-making kits, and a generous sprinkling of red ochre. Meadowood cemeteries were generally situated on knolls, a fundamental concept which may have been a precursor of the Middle Woodland artificial burial mound. Cultural manifestations of the latter part of the Early Woodland in New York have been grouped into the early Point Peninsula tradition. This tradition is somewhat vaguely defined and is primarily recognized by the presence of Vinette pottery, characterized by cord-marked exterior and interior surfaces.

**Middle Woodland (AD 1-700).** In western New York, the Middle Woodland period is poorly understood in comparison to the Early Woodland. The Point Peninsula tradition, expressed primarily by ceramic traits, continues throughout the Middle Woodland period. Point Peninsula development during this period is characterized by four phases: Canoe Point (AD 2-150), Squawkie Hill (AD 100-300), Kipp Island (AD 300-650), and Hunter's Home (an early Late Woodland manifestation). Point Peninsula ceramics were recovered at the Martin site (Office of Parks, Recreation, and Historic Preservation [OPRHP] #02914.000017) on Grand Island and at the Lewiston Mound along the Niagara River (Engelbrecht et al. 1993:25-26).

Known from only a few sites, the Canoe Point phase is vaguely understood and demonstrates little change from the Early Woodland. "Subsistence, seasonality, and the larger settlement unit continued much as previously, although the settlement system was probably more decidedly semi-permanent sedentary" (Snow 1980:274). No house structure patterns have been found in New York, but analogous Canadian sites show the presence of rectanguloid structures measuring 10-to-16 ft-x-16-to-23 ft (3-to-5 m-x-5-to-7 m), and containing single hearths. The single hearth and the house size would seem to indicate a basic household social unit no larger than an extended family.

In western New York, the Canoe Point phase is overlapped by the Squawkie Hill phase, which is marked by the intrusion of the Hopewell burial cult from Ohio. Hopewell can be characterized as a body of material and behavioral traits associated with the burial of the dead. It is not clear whether Hopewell is a manifestation of a true cultural system, or simply a burial cult like the Adena. In the upper Midwest, Hopewell can be seen in its entirety. In New York, however, it is evidenced only by burial mounds, simple and small by comparison to those found in Ohio. New York mounds are generally about 30 ft (9 m) in diameter, and 3 or 4 ft (.9 to 1.2 m) high. Common ceremonial assemblages consist of cured base platform pipes, copper axes, copper ear ornaments, pearl beads, and mica. Polished stone celts and adzes, and red ochre are also found in New York burial mounds, although pottery is not. Burials are generally secondary cremations, and are rarely extended, flexed, or bundled.

The subsequent Kipp Island phase is known from seasonal and semi-permanent camps and cemeteries. Hunting, gathering, and fishing appear to be the main sources of subsistence. While maize horticulture was well established in the Hopewell heartland prior to this time, it is still not evident in New York. Kipp Island phase burial practices are less elaborate than Squawkie Hill, and indicate continued Hopewellian influence, but in a much attenuated form. Grave offerings often consist of polished stone pendants, several pipe types, barbed bone points, and some of the more common Hopewell artifacts.

The reasons for the eventual decline of Hopewell influence in mortuary ceremonialism can be explained best by the nature of the cult itself. Hopewell burial ritualism was based on elaborate trade networks for obtaining exotic materials such as obsidian from the Rockies and the Southwest, and shells from the Gulf Coast. According to Prufer (1964), the late Middle Woodland period is characterized by a general increase in "unrest" and warfare, evidenced by the fortification of some of the Hopewell heartland centers. The disruption and later destruction of the Hopewell trade networks cut the flow of exotic raw materials and, later, finished goods. Western New York and other peripheral areas were particularly vulnerable. Following the collapse of the Hopewell, local traditions were re-established. In much of New York this was the terminal Point Peninsula tradition, the Hunter's Home phase.

**Late Woodland (AD 700–1500).** In western New York, the transition between the Middle and Late Woodland periods is marked by the Hunter's Home phase, an aspect of the terminal Point Peninsula tradition and sometimes designated Late Woodland (Mason 1981). According to Ritchie and Funk (1973), most Hunter's Home sites are moderately large with heavy refuse concentrations, storage pits, house patterns, and a wide range of artifacts. The phase, which has been dated as late as AD 1000, is often difficult to distinguish because of the presence of both Kipp Island phase and later Owasco traits. The notched projectile points common in Kipp Island are less popular in Hunter's Home, and are generally replaced by the triangular Levanna points which became commonplace during Owasco times and foreshadow triangular Iroquoian points (Mason 1981).

Another important feature that marks the Hunter's Home phase is a decrease in elaborate mortuary ceremonialism. Both single and multiple in-the-flesh interments and bundle burials occur, but the presence of grave offerings is sporadic. The predominance of secondary burials seems to indicate that corpses were left above ground, possibly in charnel houses, for a considerable time before interment (Ritchie 1980).

Hunter's Home phase economy can generally be characterized as a hunting-fishing-collecting system. Increases in both social complexity and population are evident, leading to the hypothesis that "maize horticulture was already being practiced as an important aspect of the Hunter's Home economy" (Ritchie and Funk 1973:356). This hypothesis is partly founded on Ritchie's contention that some horticulture was practiced in the earlier Kipp Island phase (1980:240).

Once maize horticulture was significantly incorporated into the economy later in the period, it did not seem to drastically alter existing cultural patterns. For most of the Late Woodland period horticulture served simply as an additional procurement system. It was not until European disruption of native culture that groups became more fully dependent on horticulture for subsistence.

In New York State, the two primary Late Woodland traditions are Owasco, beginning with the Carpenter's Brook phase (AD 1000), and the prehistoric Iroquois/Haudenosaunee, beginning with the Oak Hill phase (AD 1300). In western New York, however, the Owasco tradition does not occur in a pristine state. Instead, the prehistoric cultures of western New York developed under heavy influence from the southern Ontario Princess Point Complex.

Princess Point subsistence generally consisted of hunting, fishing, gathering and, after about AD 500, maize horticulture. This represents the first occurrence of maize horticulture in northeastern North America. The corn was of the Northern Flint variety (*Zea mays*) with eight rows of kernels, probably related to a variety cultivated by the Hopewell cultures of Ohio and Illinois (Noble 1975).

Sites are generally located on relatively flat, exposed areas near, and not much above, water. Low riverine areas were occupied during the late spring and summer, whereas winter and spring occupations were in hilly areas away from the flood plain and free of seasonal inundation (Stothers 1977). Corn horticulture was not solely equated with village life. Evidence has been found which also associates horticulture with Princess Point riverine camps (Noble 1975; Winter 1971; see Hart and Brumbach 2003 for a reevaluation of the dating of the components that comprise the Owasco culture, which undermines the utility of Owasco as a cultural construct).

The Princess Point complex shared many cultural traits with the Owasco to the east. Pottery was manufactured using the paddle and anvil technique as opposed to the coil or fillet method used prior to this time. Most tools were made from Onondaga chert; points were trianguloid, similar to Levanna points. Some antler points and bone awls have also been recovered. Because of its similarity to the Owasco, these cultures have been referred to as Ontario "Owasco" (Stothers 1977). The Martin site (OPRHP #02914.000017), an important Hunter's Home/Princess Point site where fishing was an essential method of food procurement, is located along the Niagara River shore, at the southern end of Grand Island. Another important fishing site is the Portage site in Lewiston.

The horticultural complex of corn, beans and squash, called the Three Sisters by the Haudenosaunee in later times, are found together in some of the earliest Late Woodland sites (Ritchie and Funk 1973; Hart et al. 2003), indicating the importance of these plants for at least some early garden systems and subsistence strategies. However, the frequency with which these crops were grown together is poorly understood (Fritz 1990; Smith 1992; Kuhn and Funk 2000). The common perception is that a heavy reliance on corn horticulture was supplemented by growing beans and squash, with declining roles for hunting, fishing and gathering. Primary animal prey most likely included one or more of deer, fish, and shellfish, based on faunal evidence, site locations, and the prevalence of netsinkers and other fishing technology at some sites (Cleland 1982; Ritchie 1980; Ritchie and Funk 1973).

The development of bean and squash horticulture is roughly correlated to a growth in population and village size. Near the beginning of the period (ca. 1100), groups lived in semi-sedentary villages, occupation was seasonal, and the villages moved periodically. Around 1570, these same groups were living, year-round, in semi-permanent sedentary villages. Like the later Huron (Sykes 1980), these groups moved their villages every 15 to 20 years in response to changing environmental conditions. While the impetus for village movement most often cited is soil exhaustion (Sykes 1980; White 1960, 1961, 1963), other factors such as depletion of game and firewood, refuse accumulation, and chronic warfare also may have contributed. Game depletion, in particular, may have been a strong motivation for movement, since deer provided a resource for both food and clothing (Gramly 1977; see also Engelbrecht et al. 1993:29-30). Just prior to substantial European contact in the early seventeenth century, groups on both sides of the Niagara River and Lake Ontario coalesced into the Neutral Confederacy. The confederacy existed until its decimation by the Seneca in 1650 (Engelbrecht et al. 1993:32-33).

In conclusion, important changes occurring in this period were social rather than technoeconomic. The technology of the period is characterized by refinement of the developments of earlier periods with styles and techniques becoming more regionalized. Horticulture, primarily the growing of corn, beans, and squash, was the primary source of plant food for the prehistoric Iroquois/Haudenosaunee, but never totally supplanted the hunting, fishing, and collecting strategy as the most important means of subsistence procurement. The practice of horticulture, however, had other ramifications. Primary among these was that it allowed, even demanded, increased sedentarism. With the added premium placed on land in the Late Woodland, territorialism was accelerated.

The Late Woodland period brought increasing sociopolitical complexity and diversification of resource exploitation. These trends were greatly accelerated by contact with European explorers beginning in the sixteenth century (Kuhn and Funk 2000). Changes in the social environment caused by European-American intervention resulted in further adaptive responses,



culminating in the formation of the Haudenosaunee or Iroquois Confederacy in either Late Woodland or early Protohistoric times.

***Protohistoric/Contact Period (AD 1500–1650).*** During the late Prehistoric and Protohistoric/Contact periods, tribal clusters of Iroquoian-speaking peoples were distributed throughout New York State and lower Ontario. Comprising several thousand people in at least one, and usually several, villages in proximity to one another, each tribal cluster was separated from the others by extensive and widespread hunting and fishing areas (Trigger 1978:344; Engelbrecht 2003). Native American nations in western and central New York were profoundly affected by the introduction of the fur trade, long before the arrival of a permanent European-American population in the area. The Protohistoric period conventionally begins in 1534 when the French explorer Jacques Cartier sailed up the St. Lawrence River and met groups of Iroquoian-speaking Native Americans at what is now Québec City and Montréal. However, there is some evidence that Basque, Portuguese and Breton fishermen were traveling to the Gulf of St. Lawrence-Newfoundland area and making sporadic contacts with Native groups somewhat earlier (Hoffman 1961; Brassler 1978; Trigger 1978). This period dates the beginning of the end of traditional Native American cultural patterns due to ever-increasing political, military, religious and economic interactions with Europeans.

Beginning in the last decades of the sixteenth century, the increasingly regular encounters between Europeans and Native Americans incubated a pandemic of European diseases among unprepared Native populations, which decimated many Native American nations. The presence of typhus, smallpox, measles, and others ravaged native communities. In addition to the tensions introduced through simple contact with Europeans, trade had a major impact upon traditional aboriginal cultural patterns (Brasser 1978:83). Once the fur trade was established, assuring a stable supply of European items, the manufacture of native goods rapidly declined until they were entirely replaced by European manufactured implements.

Finally, changes occurred in sociopolitical relationships after 1640 as the fur trade intensified and the supply of furs declined. The most important of these changes was the formation of confederations such as the Five Nations or Haudenosaunee Confederacy of New York State, the Neutral Confederacy and the Huron Confederacy. An important catalyst for these sociopolitical changes was the European policy of supplying guns and ammunition to native groups as part of a strategy to enlist the various nations and confederacies as proxies in the European struggle for control over the continent. The introduction of firearms in some quantity led to a major adjustment in traditional warfare and upset the traditional balance of power in the region. That the Haudenosaunee of central and eastern New York State were the first to exploit this upset in the balance of power, and eventually proved to be victorious, is thought to be the result of their geographical location (Trigger 1976).

During the late sixteenth century, prior to European contact, three Iroquoian nations occupied Western New York—the Neutral, the Wenro and the Erie. A fourth Iroquoian nation, the Seneca, inhabited the areas well east of Buffalo, but would assert their power in the region's affairs beginning in the seventeenth century (White 1978a, 1978b; Abler and Tooker 1978). Located in the Niagara peninsula of Ontario and in the western portion of what is now Niagara County and northern Erie County, the Neutral earned their name from their location between the Hurons to the north and the Haudenosaunee to the east, and their efforts to remain non-aligned during the incessant warfare between those two groups. The Wenro occupied areas in Niagara and Orleans counties, east of the Neutral near Batavia. The Erie were located south of the present-day City of Buffalo along Lake Erie (or *Lac du Chat*, to the French) and utilized areas

southeast of the lake. The traditional homeland of the Seneca was the area between the Genesee River and Seneca Lake (Engelbrecht 2003; White 1978a:407-409, 1978b:412-413). Unlike their major competitors, the Haudenosaunee were surrounded on all sides by sedentary agricultural groups and, therefore, had no direct access to the fur resources of the interior of the region. The Huron Confederacy geographically straddled the major transportation networks and was able to exploit their hunter-gatherer neighbors' need for agricultural commodities by trading corn and other products for furs, thereby securing the advantage of access to the vast supplies of the interior. The Haudenosaunee wars of the mid-seventeenth century were aimed at eliminating the Huron and other agricultural groups as middlemen to obtain direct access to fur supplies (Trigger 1976; White 1971; Hunt 1940).

The Seneca were adamant in protecting their position as suppliers of pelts, and as the supply of animal skins diminished within Seneca territory, they expanded the range of their trading efforts into the traditional areas of other Iroquoian nations. Ultimately, Seneca expansion displaced these groups from their lands in the Niagara Frontier. Beginning in 1638 with the Wenro of Western New York, and in rapid succession, the dispersals began. After the Seneca had secured the resources of the Niagara Frontier, large-scale concerted attacks by the League were directed against the Huron Confederacy (dispersed by 1649), the Petun (dispersed by 1650), the Neutral Confederacy (dispersed by 1651) and, finally, the Erie Confederacy (dispersed by 1655). Thus, by the mid-seventeenth century, the Haudenosaunee emerged as a politically, militarily, and economically united confederacy with sole access to both the land and resources surrounding the lower Great Lakes (Abler and Tooker 1978:505-507; White 1978b: 414-416; Trigger 1978:354-356).

The general vicinity within and around the present-day City of Buffalo was occupied during prehistoric times and the Buffalo waterfront (e.g., confluence of Buffalo Creek and Little Buffalo Creek as well as Lake Erie) was a prime location for resource procurement. Prehistoric material recovered southwest of the former location of the Memorial Auditorium indicated a prehistoric occupation of the site from 4000 BC to about AD 1500 (OPRHP #02940.023650). This occupation may have been continuous or periodic based on seasonal variations of the relative wetness of the area. The area may have served as a node in the prehistoric/protohistoric Great Lake trade network (Schieppati et al. 2004; Smith et al. 2007).

## **2.2 HISTORIC PERIOD**

The French were the first Europeans to penetrate the valley of the Niagara River and explore the shores of Lake Erie. As early as the 1620s, Catholic missionaries and French traders were establishing contacts with the local native nations. For example, Joseph de la Roche Daillon, a Récollet (Franciscan) missionary, lived among the Neutrals for three months in 1626, and Jesuit priests St. Jean de Brébeuf and Pierre Joseph Marie Chaumonot visited the Neutrals in 1640-1641. However, these visits to the region were infrequent until the 1660s. By this time, the fur trade was central to the Seneca economy and, as the supply of animal skins diminished within their hunting territory, they expanded the range of their hunting and trading efforts into the traditional areas of other Iroquoian groups. During the mid-seventeenth century, the Haudenosaunee became increasingly embroiled in successful conflicts with other Native nations to the south and west as this supply of beaver pelts declined. By the 1650s, Haudenosaunee attacks against their rivals in western New York had reduced the area to an unsettled hinterland under Seneca control (White 1978a:407-409; Trigger 1978:348-355; Johnson 1876:24-26).

For almost all of the seventeenth and eighteenth centuries European activities in the area that would become known as the Niagara Frontier involved limited religious, commercial, and military endeavors. In 1678-1679, as part of general reconnoitering and trade expeditions by the French in the Niagara valley, men under the direction of René-Robert Cavellier de La Salle constructed a ship called *Griffon* along the Niagara River in the vicinity of Cayuga Island, opposite Grand Island. This ship would be the first sail vessel to ply the waters of Lake Erie and prosecute the Great Lakes fur trade (Trigger 1978:349-352; Abler and Tooker 1978:506-507; Smith 1884:1:35-36).

As the fur trade became an imperial concern for the European powers during the seventeenth and eighteenth centuries, the subsequent competition among these kingdoms resulted in the erection of fortified trading posts along the frontier, such as the short-lived French Fort Conti in 1679, which later became Fort Niagara. French efforts to sow Christianity among the Haudenosaunee generally bore little fruit during this period, as their relationship fluctuated between grudging acceptance and outright war. The Haudenosaunee would not have a stable peace with the French until 1701 (Abler and Tooker 1978:505-507; White 1978b:414-416; Trigger 1978:354-356; Old Fort Niagara 2004).

Despite consistent failures in establishing a permanent trading post along the Niagara River, French strategists continued to accept the idea that asserting control over the Niagara River valley offered strategic advantages within their imperial goals. A trader, interpreter, and former soldier, Louis-Thomas de Joncaire, Sieur de Chabert parlayed his years as a captive and adoptee of the Seneca into permission to erect a series of trading posts along the Niagara River and Lake Ontario, to the north, including one at the Lower Landing in what is now the Village of Lewiston, ca. 1720. Finally, in 1726, with the construction of a permanent fortification along the Niagara River—Fort Niagara—the French began to exercise military control of the Niagara valley. By the middle of the eighteenth century, the French had created a string of military and trading installations that extended from Fort Niagara along Lake Ontario, south to Daniel (or Chabert) de Joncaire's temporary trading settlement at Buffalo Creek (referred to as la Riviere aux Chevaux), and along the southern shore of Lake Erie to present-day Erie, Pennsylvania into the Ohio valley (Abler and Tooker 1978:506-507; Tooker 1978:431-432; Kellerman 1960:8-10; Old Fort Niagara 2004; Graham 1967:10).

The ancient rivalry between the British and the French intensified during the course of the eighteenth century, reaching a crescendo during the 1750s, as the two countries again went to war. After a 19-day siege, British troops captured Fort Niagara in July 1759, crippling the French presence in the region, although skirmishing between Native Americans and the English continued the closing days of the French and Indian War. After the Devil's Hole Massacre in 1764, where a group of Seneca killed more than 90 people as part of a supply train, tossing their bodies and goods into the Niagara gorge, the Seneca were compelled to cede a four-mile swath of land along both sides of the Niagara River to the British (Abler and Tooker 1978:507; Tooker 1978:434; Smith 1884:1:47).

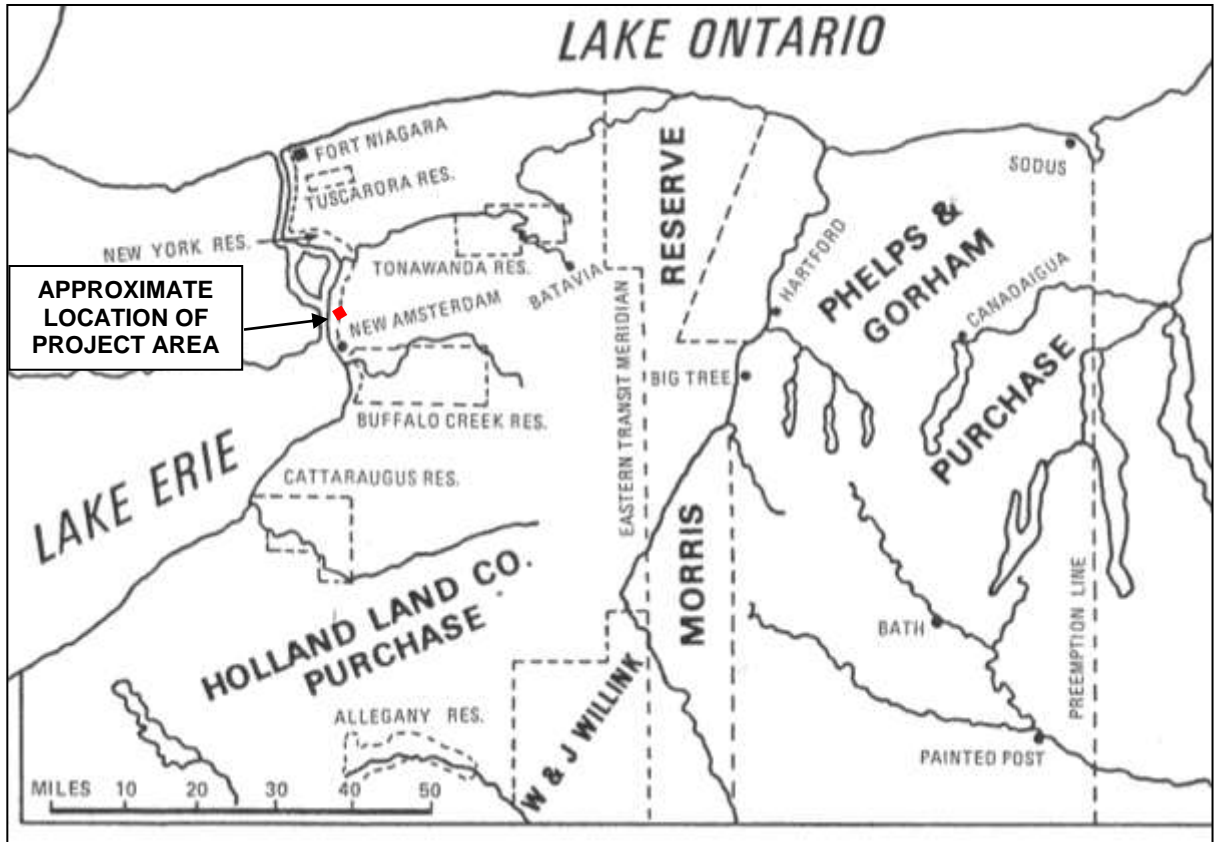
During the Revolutionary War, both the British and Americans enlisted the aid of individual Haudenosaunee nations in their battles in the frontier, as several of the nations allied with Great Britain and several with the Americans. Warfare initially remained well east of the region, but Britain's efforts to cripple the frontier economy engendered raids by their Haudenosaunee allies against isolated farming communities, notably in the Mohawk valley. In response, Major General John Sullivan led a punitive assault into the heart of Haudenosaunee country in 1779 to halt the

attacks against American settlers. The Continentals, utilizing "scorched earth" tactics, destroyed more than 40 villages and hundreds of acres of crops in an area between the eastern Finger Lakes and the Genesee River. Many Haudenosaunee, burned out of their central New York villages, sought refuge at Fort Niagara where they suffered through a difficult winter of hardship and hunger (Abler and Tooker 1978:507-508; Ellis et al. 1967:115-117; Spiegelman 2011). Still controlled by the British, Fort Niagara served as the center for Loyalist activities within frontier New York and as the headquarters of Colonel John Butler and his Rangers. Groups of Haudenosaunee, provisioned and armed by the British, periodically attacked colonial settlements until the end of the war, although the Seneca were no longer a major military threat. By 1780, some Haudenosaunee subsequently settled along Buffalo Creek, which would later be incorporated into the Buffalo Creek reservation (Smith 1884:I:51-52).

The British and their Loyalist allies were expelled from the new United States after the Treaty of Paris (1783) ended the Revolutionary War, and settled on the west bank of the Niagara River in what was then called Upper Canada. The Haudenosaunee, abandoned in the United States by their British allies after the Treaty of Paris, were forced to make peace as separate nations with the Americans. As a result of the Second Fort Stanwix Treaty (1784), the Haudenosaunee relinquished all their land west of the Niagara River. This treaty was disputed by several groups of Haudenosaunee until 1794, when a treaty was signed at Canandaigua between the United States government and the Six Nations. The Pickering or Canandaigua Treaty of 1794 defined the boundaries of Seneca lands and the reservations of the other Haudenosaunee nations (Abler and Tooker 1978:508-509-512; Goldman 1983:27-31; Hutchins 2004).

Native American title to the land in Western New York was largely extinguished with the Treaty of Big Tree (present-day Geneseo, New York) in 1797, although several areas were reserved for the Native Americans to use and live on, including reservations at Buffalo Creek, Allegany, Cattaraugus, and Tonawanda (Figure 2.1). Lying on both sides of Buffalo Creek, the Buffalo reservation consisted of 130 square miles and extended east from Lake Erie. William Street in the Town of Cheektowaga was the reservation's approximate northern boundary (Smith 1884:I:74-75, 489; Abler and Tooker 1978:509; Goldman 1983:27-29).

Despite the end of hostilities in 1783, the British refused to vacate Fort Niagara until 1796. Nevertheless, with the return of peace, settlers and land speculators again began to trickle westward, exerting pressure to open up land formerly occupied by the Haudenosaunee. However, boundary disputes between New York and Massachusetts, both of which claimed the new territory west of Fort Stanwix, frustrated the actual, legal sale of these lands. Under an agreement signed in Hartford, Connecticut, in 1786, the land once occupied by the Haudenosaunee came under the jurisdiction of New York State, but the Commonwealth of Massachusetts maintained the pre-emption right to the area west of Seneca Lake once the Native American title to it was extinguished, except for a one-mile swath along the east side of the Niagara River, which New York State reserved for itself (the Mile Reservation or "Mile Strip"). Despite the state's reservation of this parcel, the Seneca maintained they retained title to the Mile Strip, which was affirmed in the Pickering Treaty of 1794 without New York's concurrence (Hutchins 2004:215-217). During the next decade large grants of land in western New York would be sold to private investors who would attempt to open the area to settlement (Ellis et al. 1967:152-156; Abler and Tooker 1978:507-509; Quinn 1991:14-15). All of the current Richardson Olmsted complex project area, except for the eastern 500 ft, was within Lot 105 of the former Mile Strip reservation (Quinn 1991).



**Figure 2.1. Land purchases and reservations in Western New York, ca. 1804** (Chazanof 1970:23).

After having problems with the land's initial purchasers, a syndicate of land speculators headed by Oliver Phelps and Nathaniel Gorham, the Commonwealth of Massachusetts sold the rights to the unsurveyed portion of the area to Robert Morris in 1791. Reserving a portion of the land for his own purposes, Morris sold the remainder, including the present Erie County except for the area within the Mile Strip and Grand Island, to a consortium of Dutch investors called the Holland Land Company in 1792-1793 (Turner 1974 [1850]:396-403; Ellis et al. 1967:154-156; Smith 1884:I:75). New York State asserted ownership of the Mile Strip, and the status of Grand Island was unclear.

Augustus Porter, pioneer of Western New York, surveyor, and entrepreneur, reported that in the spring of 1795 "all that part of the state of New York, lying west of 'Phelps and Gorhams's Indian Purchase,' was still occupied by the Indians, their title to it not being yet extinguished. There was of course no road leading from Buffalo eastward, except an Indian trail, and no settlement whatever on that trail" (Turner 1974 [1850]:372). However, Porter stated that four people lived in Buffalo at that time: Captain William Johnston, a British Indian interpreter; Martin Middaugh, a Dutch cooper, and his son-in-law, Ezekiel Lane; and Cornelius Winne, a trader. All of these people lived in proximity to Buffalo Creek, south of the project area. In June 1796, Joseph Landon, at that time a surveyor on his way to Ohio, reported that five households were located in what is now Buffalo in proximity to present-day Exchange Street. The rest of the area was a wilderness (Landon 1904 [ca. 1863]).

As a precursor to settlement of the area, Theophilus Cazenove, Philadelphia-based agent of the Holland Company, contracted Joseph Ellicott in July 1797 to survey the company's land in western New York and divide it into townships (see Figure 2.1). The process began in the spring of the following year. The future City of Buffalo was sited and laid out by Ellicott, who called the village on Buffalo Creek New Amsterdam and named the streets after his Dutch patrons and local Native American nations. However, the increasing number of local residents resisted the Dutch appellations and referred to the village as "Buffaloe" (Smith 1884:II:26-27, 30-31; White 1898:I:140). Dealing with the Seneca and Captain Johnston, who had received from the Haudenosaunee in the early 1780s a tract measuring two square miles north of what is now the Buffalo River as well as a mill seat on Scajaquada Creek, Ellicott renegotiated the northern boundary of the Buffalo Creek reservation to ensure that New Amsterdam would be located at the foot of Lake Erie along the meandering Buffalo River. For relinquishing most of his land in New Amsterdam, Johnston kept his mill seat on the Scajaquada and added a square mile of timbered land around it (Johnson 1876:100).

The Seneca claim to the area within the Mile Strip reservation from Buffalo to Stedman's farm (i.e., Fort Schlosser/Niagara Falls) including Black Rock was extinguished by a treaty signed in Albany in August 1802 and ratified by the U.S. Senate that December. Little settlement had apparently occurred within the Mile Strip south of Stedman's farm by this time—only two Seneca families lived there year-round, but others fished and used the forest along the shore (Hutchins 2004:338). The impetus for the treaty was the initiation of construction of a fort near Black Rock (Fort Tompkins) by the U.S. Army in 1801.

In 1802, all land west of the Genesee River was incorporated into Genesee County, and all land west of Ellicott's east transit, including the project area, was subsumed under the Town of Batavia. Two years later, the Town of Batavia was divided into the towns of Batavia, Willink, Erie, and Chautauqua. Separated by Ellicott's west transit (present-day Transit Road), the Towns of Erie and Willink stretched from Lake Ontario to the Pennsylvania border. The project area was within the Town of Erie (Beers 1880:7-8).

Once townships had been surveyed and roads in the area cut, lots were sold to prospective pioneers. These early settlers were predominantly New Englanders (especially Vermonters) and Pennsylvanians, who entered the territory during the early 1800s (Johnson 1876:126). Settlement and growth followed quickly. By 1806, sixteen dwellings were located in the village as well as two stores, a drug store, several taverns, and two blacksmith shops (Ketchum 1970 [1864]:II:183-184; Landon 1904 [ca. 1863]; Smith 1884:II:182). Although the settlement at Buffalo Creek had been made a point-of-entry in 1805, little had been done about creating a more accessible harbor at the mouth of the creek (Ketchum 1970 [1864]:II:246-247).

Seth Pease surveyed the state's curving Mile Line in 1798 for the Holland Company. Once the treaty with the Seneca was ratified, Joseph Annin, Deputy State Surveyor, surveyed the Mile Reserve into lots beginning in 1803. The goal was to create lots containing 160 acres, but because of the curved nature of the Niagara River many lots were larger. A total of 111 lots were laid out within the Mile Strip between Buffalo and Lake Ontario, in addition to several exceptions to the survey. These were the Jones and Parrish tracts, each of which covered 640 acres north of present-day Scajaquada Creek, the federal tract on which Fort Niagara is located (716 acres) and Stedman's farm lot which contains 680 acres. Further, one square mile was set aside for a village south of Fort Niagara, which became Lewiston, and another was set aside at the southern end for the Village of Black Rock, each of these was 640 acres (Quinn 1991:Map 1). The area in proximity to Scajaquada Creek was within an area referred to as Lower Black

Rock, while the 640-acre tract set aside for the state-organized Village of Black Rock, was referred to as Upper Black Rock (Smith 1884:II:53; Quinn 1991: Plate 10). On February 26, 1805, John McDonald, Archibald McIntyre, Benjamin Barber, Birdsey Norton, and Peter B. Porter, among their other acquisitions within the Mile Strip, purchased Mile Strip lots 104 through 107, or all the land between Scajaquada Creek and the village of Upper Black Rock west of what is now Elmwood Avenue, comprising 708 acres, for little more than \$4 an acre.

Since inland roads, especially in the western part of the state, were generally poor and difficult to navigate, conveyance by water during any part of the trip increased efficiency and lowered costs. As a result, the Niagara corridor between the lakes was utilized heavily by the portage industry. Peter B. and Augustus Porter with Benjamin Barton (and Joseph Annin) formed a successful Great Lakes trading company (Porter, Barton and Company), and obtained a monopoly of this trade around Niagara Falls from Lewiston to Peter Porter's trading community at Black Rock, south of what became known as Squaw Island. The Porters, Barton, and their associates purchased at least 40 of the lots offered for sale within the Mile Strip. Although formed in 1805, Porter, Barton & Company did not actively engage in the transfer business over the Niagara portage until 1807. While Joseph Ellicott and Paul Busti, the Holland Company's Philadelphia-based, American agent, endeavored to create a viable village at Buffalo Creek, Porter attempted to form a village within the state's mile-strip reservation north of the creek where the harbor was said to be "safe and commodius" (Grande 1982:2; Whittemore 1976; Smith 1884:II:55; Quinn 1991: Plate 1). Bird Island at the head of the Niagara River on the American side served as a small refuge from storms for small vessels to unload cargo on the nearby shore. In 1807, Black Rock contained the Porter, Barton and Company warehouse, Nathaniel Sill's house, and a log hut (Norton 2004 [1863]).

Beginning ca. 1809, Porter attempted to relocate the customs houses (or ports of entry) in Western New York from Buffalo Creek and Fort Niagara to Black Rock and Lewiston, two locations where Porter, Barton and Company were erecting trading facilities. U.S. Customs Collector Erastus Granger objected to the relocation of the facility to Black Rock, and defended Buffalo and its harbor. An annoyed Granger remarked that Black Rock "consisted of no more than one white and two black families, a temporary ferry-house and tavern" (Powell 2001). However, President James Madison decided in March 1811 that the port of entry would be located at Black Rock "'from the first day of April to the first day of December in every year' and at Buffalo 'for the residue of each and every...year.' Madison had in effect placed the customs house above the falls at Black Rock during the shipping season and moved it to Buffalo only during the winter months" (Grande 1982:6; Smith 1884:II:56).

In 1808, Niagara County (consisting of what are now Erie and Niagara Counties) was formed from Genesee County, with New Amsterdam or Buffalo as the county seat. Niagara County contained three townships: Cambria, Clarence, and Willink; the last two were extended to the middle of the Buffalo Creek reservation, although they had only nominal jurisdiction over those lands. Two years later the Town of "Buffaloe" was created. By 1813 New Amsterdam was incorporated as the Village of Buffalo, but as a result of the chaos engendered on the frontier by the war with Great Britain, the village was not formally incorporated until 1816 (Beers 1880:20; White 1898:I:14-15; Smith 1884:I:113-114, 116). Prior to the War of 1812, Buffalo was a growing community that supported several blacksmiths and carpenters, a mason, a wagon-maker, and a cabinet-maker, as well as other tradesmen and retail stores. With a population of less than 500 people, the village contained less than 100 dwellings, but accommodated three taverns and three merchants. At that time, the harbor mouth of Buffalo Creek was obstructed by a recurring sand bar (Smith 1884:II:47; Ketchum 1970 [1864]:II:419).

In 1809, the community of Black Rock consisted of the Porter, Barton & Company store near the Black Rock from which the area derived its name, Frederick Miller's house "under the bank, where a ferry-house and tavern are kept," one white family, and two black families (Johnson 1876:178). Niagara Street had been laid out and cut between 1807 and 1809, but not extensively used until after the war (Severance 1912:265; see also Norton 2004 [1863]). By 1812, Black Rock village clustered around Niagara and Ferry streets and its natural harbor was better than the one at Buffalo Creek.

**War of 1812.** The region's growth was stunted by the War of 1812 as the Niagara River valley served as one of the primary theaters of the conflict and areas near the border with Upper Canada (the current Province of Ontario) were ravaged by attacks and counterattacks. Defenses in proximity to Black Rock included Sailor's Battery, on the south side near the mouth of Scajaquada Creek; a battery on Niagara Street; Fort Tompkins (in proximity to the intersection of Niagara and School streets); a mortar battery near the site of the water works in the 1860s; a 24-pounder on the north corner of what would become the grounds of Fort Porter (near what is now the American Plaza of the Peace Bridge); and a breastwork on the Terrace in the City of Buffalo. All of these defenses, with the exception of Sailor's Battery, focused on the river and the Canadian shore, and were vulnerable by attacks from the north (Dorsheimer 1993 [1863]:187; Smith 1884:II:57; Babcock 2005 [1927]: 20-21).

The Village of Black Rock was founded during the war, in 1813, because it was well suited for shipbuilding. The village covered an area from what is now School Street (north of the Peace Bridge) on the south to what is now Austin Street, north of Scajaquada Creek, on the north between the river and the eastern boundary of the Mile Strip Reservation. Scajaquada Creek served as the colloquial division between Lower Black Rock, north of the creek, and Upper Black Rock, south of the creek (LaChuisa nda). Scajaquada Creek below Black Rock

was ideal and it was comparatively easy to bring material to Black Rock from the east. In 1812 and 1813 the Federal Government made it a temporary United States naval station where a number of fighting vessels were built. ... After the war shipbuilding for private purposes began once more. Captain Asa Stanard, of Black Rock, had established a shipyard on Scajaquada Creek in 1812. His apprentice, Benjamin Bidwell, fell heir to the business when Stanard died and the new company was called Bidwell and Davidson, later Bidwell and Carrick, and finally Bidwell and Banta [Rapp nd].

In early October 1812, two British vessels lying at anchor at Fort Erie, HMS *Detroit* (formerly an American ship, the *Adams*) and HMS *Caledonia* and their cargoes, were captured by forces under the direction of Lieutenant Jesse D. Elliott, who was stationed at the Black Rock Navy yard. The yard was located along the south bank of the creek west of the Military Road bridge then across the creek. The *Detroit* ran aground on the west side of Squaw Island during an exchange of cannon fire and was burned by the Americans, and the *Caledonia* was brought to Black Rock. The village endured a heavy shelling of cannon fire from the Canadian side, resulting in damage deemed "substantial" (Smith 1884:I:129-130, II:57-58; Johnson 1876:213-215; Hickey 1989:131; Babcock 2005 [1927]:39-42; Grande 1982:8-9). During the winter of 1812-1813, at least five ships were outfitted for military service at Black Rock's Scajaquada Creek shipyard, while American forces encamped at Flint Hill, Erastus Granger's farm near what is now Delaware Park. Poor provisions and sanitation, disease, starvation, and a harsh winter conspired in the deaths of approximately 300 American soldiers that winter. The dead were



buried near Granger's farm at that time (Johnson 1876:226; Rapp nd; Dorsheimer 1993 [1863]:192-193; Norton 2004 [1863]; Babcock 2005 [1927]:21; Napora 1995).

In early summer 1813, Major General Henry Dearborn, commander of American forces on the Niagara Frontier, withdrew all the regular soldiers from Black Rock and Buffalo to serve on the St. Lawrence front. Recognizing that the repositioning of the soldiers left the Niagara Valley exposed to attack, he ordered a small contingent of militia and a few artillery specialists to Black Rock to protect the public stores housed there. On July 11, 1813, a British raiding party comprising approximately 250 soldiers crossed the Niagara below Squaw Island and occupied and burned the Navy yard at Scajaquada Creek. At the time, a small collection of structures—a blockhouse, storehouse, battery, and barracks—were located along the south bank of the creek near its confluence with the river. Moving south, the British dispersed the militia maintaining the three pieces of artillery at the Fort Tompkins blockhouse, and burned it and the associated barracks before plundering the public stores. Despite the flight of American forces from Black Rock, other militia gathered at Buffalo and drove the invaders back to the creek. While most of the British raiders escaped into Canada, a number in the last boat to launch from the American side were captured or killed as they tried to flee. Before this raid, the ships outfitted at the Scajaquada Creek naval yard had left to join the command of Oliver Hazard Perry at Erie, Pennsylvania (Johnson 1876:231-238; Grande 1982:8-9; Rapp nd; Dorsheimer 1993 [1863]:192-193; Smith 1884:I:140-145; Cook 1961; Babcock 2005 [1927]:105-107).

American forces had occupied Fort George on the west side of the Niagara River since May 1813 but, by the beginning of December, the American position had become untenable. Brigadier General George McClure of the New York militia, commander of the post, decided to evacuate the fort. As part of the evacuation on December 10, he ordered his troops to burn the adjacent village of Newark (present-day Niagara-on-the-Lake) to the ground, evicting more than 400 people into zero-degree weather. In retaliation for such callous treatment, British forces captured and occupied Fort Niagara (killing 80, mostly by bayonet, and taking 350 prisoners) on December 19. Beginning at the same time, a detachment of British soldiers with their Native American allies savagely attacked and burned Lewiston, the Tuscarora village near the Niagara River, and Manchester (also known as Schlosser; present-day Niagara Falls). After a respite, in early morning of December 30, a British force of more than 1,000 troops and perhaps 400 Native Americans led by Major General Phineas Riall attacked the approximately 2,000 militia defending Buffalo and Black Rock. As planned by Lieutenant General Gordon Drummond, British forces landed north of Scajaquada Creek near what is now Amherst Street and after a skirmish crossed the wooden bridge over the creek and captured Sailor's Battery, before advancing south to Black Rock. The battery of three guns at the location of Bird's future house and the six heavy guns at Fort Tompkins were quickly overrun as the British torched the small community. The invaders then marched down Niagara Street to Buffalo, destroying ships and supplies. The devastation was substantial (Smith 1884:I:147-159, II:58-74; Johnson 1876:242-262; Bowler 1976; Goldman 1983:21-24; Hickey 1989:140-143).

After a subsequent British raid ended on January 1, 1814, only three structures remained in the village of Buffalo—David Reese's blacksmith shop on Seneca Street, Margaret St. John's house on Washington Street, and a small, stone jail on Washington Street near Eagle Street (Bowler 1976). Along the Niagara River at Black Rock, only one structure escaped the conflagration: a log house where women and children had taken refuge. "The *Ariel*, *Little Belt*, *Chippewa*, and *Trippe*, vessels that performed service in the battle on Lake Erie a little more than a hundred days before, were committed to the flames" (Lossing 2003 [1869]). Governor

Daniel Tompkins remarked, "The whole frontier from Lake Ontario to Lake Erie is depopulated & the buildings & improvements, with a few exceptions, destroyed" (Hickey 1989:143).

Residents began to trickle back with the diminishment of hostilities. However, the area remained an active part of the Niagara theater, with a detachment of soldiers stationed in Buffalo, as well as a staging area for later actions during the remainder of the year. "Twice during the winter small squads of the enemy crossed the river, but were driven back by the soldiers and citizens without much fighting" (Johnson 1876:264).

By the summer of 1814 the Niagara Frontier was again the scene of heavy fighting as the Americans invaded Upper Canada, capturing Fort Erie on July 3 and using it as a staging area for the subsequent battles of Chippawa (sometimes Chippewa) and Lundy's Lane. After these engagements the Americans withdrew to Fort Erie, which the British under General Drummond put to siege. During the siege Drummond sent Lt. Colonel John Tucker and between 500 and 1,000 soldiers across the Niagara River to raid the stores of supplies and ordnance at Black Rock. These troops crossed below Squaw Island during the early morning hours of August 3 and advanced to the bridge over Scajaquada Creek, only to find that the planking of the bridge had been removed. The bridge and adjacent creek were guarded by approximately 250 riflemen under the command of Major Lodowick Morgan. The battalion offered withering fire to keep the British on the north bank, despite their repeated attempts to cross. Tucker then sent a detachment farther east in an attempt to ford the creek, but this move also ended in failure. Morgan had anticipated the flanking maneuver by positioning militia in that area. After two to three hours, the skirmish ended with Tucker's riflemen enfilading the American position to cover the British withdrawal to Upper Canada (Smith 1884:I:168-169; Johnson 1876:281-282; Babcock 2005 [1927]:184-186; Dorsheimer 1993 [1863]:201-202; Hickey 1989:185-189). Because of the variety of spellings and pronunciations of "Scajaquada," this skirmish has been called the battle of Conjockey or Conjocta Creek with Morgan regarded as the "hero of Conjockey Creek." He was later killed during another skirmish as part of the siege of Fort Erie, which lasted until September 21, when the British began to withdraw to positions near Chippawa. The fort was evacuated and blown up by the Americans on November 5, 1814.

**Development of Black Rock.** One of the highlights of Black Rock's shipbuilding history was the construction of *Walk-in-the-Water*, the first steamer to navigate the Great Lakes above Niagara Falls. This ship carried passengers and freight regularly between Black Rock and Detroit, with stops in Cleveland and Erie, Pennsylvania. Named for the Wyandotte chief, the ship was constructed in the Black Rock shipyards near Scajaquada Creek and initially launched from Black Rock in 1818. Its engines, however, were no match for the current of the Niagara River and the ship had to be towed by oxen to enter the lake for its first successful run in August of that year. (The strength of the current near Black Rock was one of a number of the criticisms leveled at its harbor in the age of sail craft, which led to the siting of the western terminus of the Erie Canal at Buffalo.)

The region received a tremendous economic boost when it was determined that the western terminus of the Erie Canal would be located somewhere along Lake Erie. Construction of the Erie Canal, which would link the Hudson River and Lake Erie, began in 1817 near what is now Rome, New York, although the location for the western terminus was still undetermined. The villages of Buffalo and Black Rock engaged in a vigorous five-year battle to be the site of the canal terminus, with each village completing extensive harbor improvements to entice the commissioners. Buffalo's harbor improvements centered on the connection between the Little Buffalo Creek, Big Buffalo Creek (now Buffalo River) and Lake Erie, including extensive work at

the harbor mouth (Symons and Quintus 1902). Improvements in Black Rock included improving the connection between Scajaquada Creek and the Niagara River and creating a pier between Squaw Island and Bird Island (Grande 1982). In 1821, all land south of Tonawanda Creek was removed from Niagara County to form Erie County.

In an effort to influence the canal commissioners to site the western terminus of the canal at Buffalo, Samuel Wilkeson organized the Buffalo Harbor Company in 1819 to improve harbor conditions. Wilkeson directed the construction of Buffalo harbor, which began in the spring of 1820 and continued through 1822 (Whittemore 1976; Powell 2001:part II; Symons and Quintus 1902). In that year the canal commissioners were swayed to locate the western terminus of the canal at Buffalo. The construction plan as enunciated in early 1822 by David Thomas, new principal engineer of the western section, “was to continue the canal excavation ‘from a point above the lower end of Squaw Island, up the shore of the river, by Black Rock, in the rear of the storehouses, to a point above that village; and then extend it on a right line, through the Buffalo Swamp, in the rear of the sand bank, into Buffalo Creek’” (Powell 2001:part II). This report also reiterated the deficiencies of the harbor at Black Rock, which was described “as too vulnerable to British attack, too exposed to ice damage, and too expensive to develop” (Grande 1982:19). Unsatisfied, Peter Porter returned to Albany to campaign for his village, informing the legislators of any occurring flood damage to Buffalo harbor or dangers engendered by the recurring sandbars.

Although favoring Buffalo, the commissioners expressed reservations about both harbors and, after fruitful lobbying by Porter, the legislature appropriated \$12,000 for construction of a harbor and piers at Black Rock in April (Grande 1982:19; Powell 2001:Part III; Shaw 1990:150). These improvements would include the partial damming of the Niagara River by the construction of a pier connecting Squaw Island to Bird Island to create more useful channel (Hodge 1909:388). A pier to link Squaw Island with the mainland was also planned. The Bird Island Pier was damaged on several occasions because of ice and weather, but subsequently repaired and was incorporated into the outer pier of the improved Black Rock harbor constructed by the federal government during the first decade of the twentieth century (Powell 2001:part III).

Construction of the portion of the canal from Little Buffalo Creek to halfway to Sandy Town began in August 1823. One casualty of the construction of the Erie Canal through Black Rock was the black rock from which the community derived its name. Irish workers digging the canal blasted the rock into memory in August 1823 (Powell 2001:Part III; Johnson 1876:353; Hodge 1909:388; Napora 1995). The climax of this rivalry ended quietly in early 1825. A compromise was reached that allowed for construction of the canal along the Niagara’s shore in proximity to Black Rock, if needed, but the canal would terminate in Buffalo (Shaw 1990:159-162; Smith 1884: II:92-102). As a result, Black Rock harbor began to lose shipping commerce and Buffalo’s continued to gain commerce. The location of the terminus at Buffalo guaranteed its victory in its rivalry with Black Rock, and after it opened on October 26, 1825, Buffalo became the *de facto* transshipment point for goods moving between the Midwest through the lakes to New York and ocean trade. The canal was a major gateway to the West, bringing hundreds of thousands of settlers through Buffalo and a time of economic prosperity (Shaw 1990:5-6, 181-187; Vogel et al. 1993:16-17 see Schieppati et al. 2004). In 1825, the population of Black Rock was 1,039, and Buffalo’s was 2,412 (Grande 1982:22).

Peter Porter, despite his unsuccessful efforts with the canal, continued to advance the prospects of Black Rock. Founded by Porter and William Bird, his nephew, the Buffalo & Black Rock Railroad was the first railroad in Buffalo in 1834. A horse-pulled line, the Buffalo & Black

Rock Railroad ran on 2.5 miles of track from approximately School Street to Main Street parallel to the Erie Canal along its eastern side. In 1836, a steam-powered line was extended along Sixth Street (later Front Avenue; now, Busti Avenue) from Buffalo through Black Rock west of Niagara Street across the Scajaquada all the way to Niagara Falls, becoming the Buffalo & Niagara Falls Railroad. By 1847, it ran two trains a day in both directions (Dunn 2000:10-11; Emslie and Kirk 1850). It was consolidated into the New York Central Railroad in 1853.

The economic success of the Erie Canal and the arrival of immigrants into Western New York dramatically increased the area's population, which was a mixed blessing to some.

Buffalo is as undesirable a place of residence as any in the free states. It is a rendezvous of all manner of persons, the passage through which fugitives pass from the States to Canada, from Canada to the States, and from Europe and the Eastern States into the wild West. Runaway slaves come here, and their owners follow in hopes of capturing them. Indian traders, land speculators, and poor emigrants come here, and the most debased Indians, the half-civilized, hang about the outskirts. No influence that the mass of respectable inhabitants can exert can neutralize the bad effects of a floating population like this; and the place is unavoidably a very vicious one [Rapp nd:40, quoting Harriet Martineau (1838)].

Population increases engendered new cities, towns, and villages. In 1832, the City of Buffalo was incorporated; its boundaries were North/York (now Porter) streets on the north, Jefferson Street on the east, and the Buffalo Creek reservation on the south.

Although largely vacant, Upper Black Rock, the area southeast of Squaw Island, was just over the northern border of the growing city and with trolley service established after 1834 began to be closely linked to the city. In 1836, the Town of Tonawanda was created from the Town of Buffalo. In April 1837, the Village of Black Rock was incorporated. In February 1839, the Town of Black Rock was organized from what remained of the Town of Buffalo outside the city, as well as nominally the area south of the city to the center of the Buffalo Creek reservation. By 1850, Erie County had a population of more than 100,000 with Buffalo having 42,261 residents (Smith 1884:1:116, 182, 212, 221; Johnson 1876:424, 429; Van Ness 2001; Napora 1995).

In 1853, the City of Buffalo extended its boundaries even farther, annexing all of the Town of Black Rock and receiving a new city charter (Smith 1884:1:230). The project area was now another section of the City of Buffalo, although, the area was predominantly vacant land. Several areas along North Street, the city's 1832 northern boundary, had been reserved for use as cemeteries. Further, the county almshouse, founded ca. 1829, which housed poor, sick and enfeebled men, women and children, was also located along North Street (Hodge 1993 [1879]:55; Emslie and Kirk 1850; Abramowitz 1996:156-157).

Upper Black Rock had lost its competition with Buffalo to be the terminus for the canal and was absorbed into the slowly growing west side of the City of Buffalo. The area adjacent to the Erie Canal and its confluence with the Niagara River was referred to as Prospect Hill, for its commanding view of the lake. This area was later subsumed into the federal reservation for Fort Porter, which was under construction beginning in the early 1840s. The fort was situated on approximately 28 acres in the Prospect Hill area. Named for War of 1812 general and Black Rock booster Peter B. Porter, the fort suffered from the paltry military budgets of the era, and it as well as some of its supporting elements were not completed. In 1845-1846, Fort Porter became the home of the garrison formerly located at the Buffalo or Poinsett Barracks at the southeast corner of Delaware Avenue and North Street (the National Register-listed Ansley Wilcox Mansion is all that remains of these barracks). The fort was underutilized and the

Engineer Corps moved into it beginning in 1861. With the conclusion of the Civil War, the military decided to abandon the fort. The Fenian uprising of 1865-1866, however, led the federal government to station two companies of troops at the fort (Spear 1977:21; NYS Division of Military and Naval Affairs 2006).

By the end of the Civil War, Black Rock in general had become one of the most heavily industrialized sections of the city. Mills had been located along the Niagara River and Scajaquada Creek since the 1830s, and included Frontier Mills (reputedly erected in 1832 by Stephen W. Howells), Globe Mills (ca. 1935), and Enos' flourmill, all of which were still extant in 1884. (William Bird, Peter Porter and Robert McPherson reputedly erected a flour mill at Lower Black Rock, ca. 1831.) Most of these mills were located south of Bird Avenue and along the pier extending south from Squaw Island, and many of them had burned down or were torn down by the 1920s (Smith 1884:II:251-252; Stone and Stewart 1866; American Atlas Company 1894; Hill 1923:738-740). The mills and factories of Black Rock served to attract German and Irish immigrants to live in the area (Smith 1884: II:251-252; Napora 1995; Kowsky et al. 1981; Goldman nd).

**Post-Civil War Development.** Although Gibson, Johnson and Ehle operated a foundry and machine shop in Black Rock in 1826 and Mr. Justin built a forge at Black Rock Dam (Lower Black Rock) in 1838, it wasn't until the middle of nineteenth century that heavy industry took root in Black Rock (Wilkeson 2005 [1864]). Circa 1850, the Pratt brothers partnered with William Pryor Letchworth from Auburn, New York, to form Pratt & Letchworth, which subsequently became renowned for saddlery hardware. Headquartered on the Terrace in Buffalo, Pratt & Letchworth established the Buffalo Malleable Iron Works on Tonawanda Street in 1860, probably subsuming the existing Iron and Nail Works at the site (Thomas 2003 [1866]; Stone and Stewart 1866; Smith 1884: II:256; Holder 1960:14). In 1872, Pratt & Letchworth occupied 38 acres between the New York Central Railroad and Scajaquada Creek, which emptied into the Erie Canal adjacent to the Black Rock depot. Interestingly, Pratt & Letchworth also used prison labor at the nearby penitentiary to produce some articles under contract (Smith 1884:II:256; Figure 2.2).

While Upper Black Rock was becoming largely a residential area of the City of Buffalo (except for locations adjacent to the Erie Canal/Niagara River corridor), Lower Black Rock saw extensive industrial and commercial development after the conclusion of the Civil War. At the time, numerous industrial operations were situated along both sides of Scajaquada Creek, including saw mills of Laycock Brothers and N.H. Hoyt, and a shingle mill on the creek's south side, and Parsons saw mill, the Malleable Iron Factory, Niagara Pail and Tub Factory, Ball and Son Fire Brick Factory, and a shingle factory on the north side (see Figure 2.2). Pratt's Iron Works were located along the river south of the creek. Iron ore smelting began in Buffalo around 1860, as economical lake transportation of ore to Buffalo enabled the city's commerce-based economy to gradually shift to a manufacturing economy (Stone & Stewart 1866; Beers 1880; Holder 1960:14, 16).

While industry took root at the junction of Scajaquada Creek and the Niagara River/Erie Canal, areas to the east remained vacant or in farmland. As of 1866, Forest Avenue had been constructed south of the current project area, but Elmwood Avenue terminated at Delevan Avenue. Further, Rees Street had not been surveyed at that time and Grant Street was labeled Scajaquada Street (see Figure 2.2). The project area would remain a farm until its purchase by New York State for the construction of the hospital in 1870.



**Figure 2.2. Lower Black Rock at the end of the Civil War** (Stone and Stewart 1866).

The arrival of the railroads during the mid-nineteenth century fostered the continued economic diversification of Buffalo and Black Rock from commercial and transshipment operations into more densely populated, more heavily industrialized areas. As noted, the Buffalo & Niagara Falls Railroad ran two trains a day in both directions by 1847 and was incorporated into the New York Central Railroad system in 1853 (Dunn 2000:10-11; Emslie and Kirk 1850). In 1869, the New York Central merged with Cornelius Vanderbilt's Hudson River Railroad, becoming the New York Central and Hudson River Railroad (New York Central for short).

By 1879, the New York Central had three principal passenger stations within the City of Buffalo: one in east Buffalo that was utilized by the New York Central and the Lake Shore & Michigan Southern line; one on Exchange Street (built 1855-1856) and one on Erie Street (west of Main) that used by the Grand Trunk Railway as well as the Buffalo, Niagara Falls & Lockport Railroad. To simplify its operation, the New York Central linked the Buffalo & Niagara Falls line with the Exchange Street station, which resulted in the termination of the Erie Street station and the creation of a local passenger station on the Terrace by 1880 (Beers 1880; Dunn 2000:98-99).

This new link in downtown Buffalo was a key component in the creation of the infrastructure for "a belt line passenger service all the way around" the city. Beginning operation in July 1883, the so-called Belt Line used the tracks of the Junction Railroad on the eastern side, which had been completed to the International Bridge by 1872, and the tracks of the

former Buffalo & Niagara Falls Railroad on the western side. A total of 2,100 passengers were served in the first week (Dunn 2000:99).

The extension of the Belt Line fostered industrial and residential development in the sparsely settled areas in the city's northern limits. Industries were liberated by the railroads from the necessity of locating near the waterfront or the canal to transport their goods. The advent of hydroelectric power at the turn of the nineteenth century also facilitated this transition. "Factories began to spring up along the tracks of the Belt Line. In Black Rock an industrial strip developed along the tracks that used the Tonawanda-Amherst Street station to transport their goods" (Zornick 2002; Goldman 1983:178-180; American Atlas Company 1894; USGS 1901). For example, Pratt & Letchworth expanded their operations in the 1880s and were joined in Black Rock by a variety of other industrialists in "the new urban-industrial frontier in Black Rock" (Zornick 2002, quoting Kowsky et al. 1981).

Located at Niagara Street and Forest Avenue, the Niagara Bridge Works was regarded as one of Buffalo's most important establishments in connection with the iron industry in the 1880s. The company was founded at that Black Rock location in 1873 by G.C. Bell and S.J. Field and employed between 100 and 300 workers in the early 1880s (Smith 1884:II:88; Hill 1923:810). The International Starch Works opened in Black Rock in 1877 and employed 50 workers, with a capacity of 400 bushels of corn per day. It also operated a barrel-heading factory at its location (Smith 1884:II:259). Buffalo Structural Steel Company erected a plant south of Scajaquada Creek in 1895, which was still in operation in the 1920s (Hill 1923:806). Buffalo Cooperative Stove Company operated a large plant at Amherst and Tonawanda streets. It produced the "well-known" Amherst stoves, ranges, and furnaces (Hill 1923:807).

In 1883, Thomas F. Griffin & Sons began manufacturing car wheels in a building on Forest Avenue near Niagara Street, and the Shepard Hardware Company relocated their foundry to three-and-one-half acres in this area from Chicago Street. Founded by John D. Shepard, a long-time Buffalo ironmonger, the Shepard Hardware Company occupied the entire area north of Forest Avenue and south of Scajaquada Creek between the Erie Canal and the New York Central tracks in 1889, but this area was completely vacant in 1894 and occupied by the Buffalo Gas Light Company in 1900. In 1894 the New York Car Wheel Works and Griffin Machine Works flanked the tracks of the New York Central south of Forrest Avenue between the Erie Canal and Niagara Street (Smith 1884:II:257-258; Sanborn Map Company 1889, 1899; American Atlas Company 1894).

Workers at that time when transportation was irregular or nonexistent, tended to live near the places they were employed. This practice continued into the early decades of twentieth century when transportation was improving. As industry became ensconced in sparsely settled areas of Black Rock and along Scajaquada Creek, workers, too, followed the Belt Line. Germans were the dominant ethnic group in this area in the early 1880s, but many of the new arrivals seeking employment in industries sprouting up in Black Rock were Eastern Europeans, particularly Polish immigrants, who had initially settled in Buffalo's East Side. What would become Assumption Parish was one example of this process of residential development complementing industrial development (Goldman 1983:179).

Development of the electric street railway or interurban at the end of the nineteenth century expanded residential opportunities and reinforced the accessibility of the park system by the city's residents. In 1895, the 35 cars of the Buffalo & Niagara Falls Electric Railway used the tracks of Buffalo Railway along Niagara Street through Black Rock into Buffalo. It served

662,445 patrons during its first year, running cars at a minimum of every 15 minutes from each terminal. By 1900, 25 streetcar lines paralleled city roads (along with 87 miles of track) connecting downtown Buffalo with outlying neighborhoods in all corners of the city. In 1902 the electric railway was consolidated with other streetcar lines to form the International Railway Company (Dunn 2000:182-184; Goldman 1983:186). The success of the electric railways undermined the profitability of the Belt Line, which stopped passenger service during World War I. The electric railways would, in turn, be undermined during the 1920s and 1930s by the successes of automobiles and buses.

By the end of the nineteenth century, Buffalo was the second leading railroad terminus in the United States (after Chicago), which had reduced the economic impact of the Erie Canal to near irrelevance (Goldman 1983:129-130; Smith 1884:I:320). As a result, New York State and canal interests believed another expansion of the old canal was necessary for it to compete with the railroads. By the last years of the nineteenth century, however, cost overruns and charges of incompetence caused the movement to improve the canal to be subsumed into the movement to re-conceive the canal in terms of the technological changes then-occurring: bigger, faster, motorized boats (McFee 1998:10-14, 39-42). While other portions of the state, including Niagara County, dramatically widened and deepened a new canal channel, the Buffalo electorate rejected a 1917 referendum to widen the Erie Canal in the city. Over the next thirty years the source of Buffalo's nineteenth-century economic success would be slowly filled with trash and buried. The Erie Barge Canal, as the new Erie Canal was called, terminated in the Town of Tonawanda, but canal traffic near Buffalo utilized the Black Rock channel and the Niagara River to reach Lake Erie or the Buffalo River (McFee 1998:74).

In the 1920s in general, Buffalo's vibrant industrial economy attracted other manufacturing concerns, such as the Curtiss-Wright Aeroplane Company (which employed more than 2,000 people in the 1920s), the burgeoning automotive industry employed more than 15,000 workers, various machine shops and foundries employed 13,000, meat-packing industries employed 3,000 workers as did the soap-making industries. The city had a population of 506,775 in 1920 (Goldman 1983:216-217; Graham 1967:97, 102; Van Ness 2001).

Improved transportation routes sparked the development of towns surrounding the city facilitating "suburban sprawl" as people began to relocate from older neighborhoods into residential subdivisions away from the urban core. Businesses also relocated away from the developed city since they had room to expand. The city's population fell from 580,132 in 1950 to 532,132 in 1960, as Erie County experienced increased suburbanization (county population exceeded one million in 1960) (Graham 1967:119; Goldman 1983:268-273). By 1966, the Niagara Thruway (I-190) had been completed along the river. In 2000, Buffalo's population was 292,648, and Erie County's population was 950,255. As revealed in the 2010 census, the City of Buffalo's population had fallen to 261,310, its lowest point since 1890, and Erie County's population was of 919,040.

**Richardson Olmsted Complex.** Originally the Buffalo State Asylum for the Insane, construction of the Richardson Olmsted Complex began in 1870, and took approximately 20 years to complete (ULI Briefing Book 2007; Richardson Center Corporation nd). The property was originally farmland, consisting of 203 acres south of Scajaquada Creek. Henry Hobson Richardson was chosen to design and construct the facility in 1870. Frederick Law Olmsted was chosen as the architect to design the grounds around the asylum, and his plans were approved the following year when ground was broken to begin construction.



The plans for the facility included a main building/central tower with five buildings on each side. The east wing of buildings was intended for male patients, and the west wing was for female patients. Overall, the complex of buildings was intended to have a V-shape layout, and follow the Kirkbride Plan. The intention of the Kirkbride system was to create a home-like and curative atmosphere for the patients, based on the belief that the physical and social environments could both cause and cure mental illness. Within the complex, not only were the patients segregated by gender, but also the kind and degree of illness, with the most stable patients closest to the central tower. The signature twin towers and west wing for men opened in 1880 as the Buffalo State Asylum for the Insane. The east wing for women opened in 1895.

In addition, the landscape surrounding the complex was intended to aid in treatment of the patients (ULI Briefing Book 2007; Richardson Center Corporation nd). The Richardson Complex was located adjacent to Delaware Park, with trees and wide expanses of green space. North of the buildings was about 100 acres of farmland for the use of the patients, who worked the fields as part of their therapeutic treatment. In front of the complex, including parts of the APE, were curvilinear drives and walkways meandering through gardens and wooded areas, intended for patients' use. In 1927, the northern agricultural fields were acquired by the Buffalo Normal School, a college for teachers, which reduced the complex from 203 acres to 91 acres. In 1928, ground was broken for new college buildings and the school was renamed State Teachers College at Buffalo. The new buildings were completed and occupied by the college in 1931. In 1961, the college was called State University College of Education at Buffalo, and is colloquially referred to as Buffalo State (Buffalo State 2011).

Today, much of the land to the north and south of the complex have been converted to parking lots or house additional building. To the south, surrounding the APE, are buildings for utilities, inpatient care, and offices. Part of the east wing of the complex was demolished in 1969 for an adolescent treatment facility. The Strozzi Building, located between two portions of the APE, was built in 1965, and is still used today for inpatient care. Use of the Richardson Complex diminished as the modern buildings were added to the property. The renamed Buffalo Psychiatric Center was no longer used for inpatient care in the 1970s, and it was totally abandoned, including for administrative purposes, in the mid-1990s.

The Richardson Complex was listed on the National Register of Historic Places in 1973, and was made a National Historic Landmark in 1986 (ULI Briefing Book 2007; Richardson Center Corporation nd). Some stabilization work, amounting to \$5 million, was done on the complex in 2004 and 2005, in order to secure the buildings and reduce physical impacts and damage from water. An additional \$76.5 million is now available from the state to preserve the building. Ten million dollars in stabilization is taking place between 2009 and 2011.

## 2.3 DOCUMENTARY RESEARCH

**2.3.1 Historical Map Analysis.** Eight historic period maps were reviewed for the project area (Stone & Stewart 1866; Hopkins 1872; American Atlas Company 1894; Sanborn Map Company 1916, 1951; USGS 1948; USGS 1965) in addition to the thorough sequence of maps presented in the *Richardson Olmsted Complex Cultural Landscape Report* which depict structure locations from the late nineteenth century to the present (Heritage Landscapes 2008).

The area was undeveloped in 1866 and does not appear on the Stone & Stewart map. As noted, Elmwood Avenue did not extend to the project area at that time. By 1872 (Figure 2.3),

the Richardson Complex appears for the first time. A structure identified as a “Porter’s Lodge” was shown on the grounds southeast of the Richardson Complex along Forest Avenue, approximately 200 feet (61 meters) south of the project area. No structures were shown within the APE. This map likely reflects the plan for the site rather than what was actually in existence at that time, since the facility as shown in the figure looks in full bloom, when ground had just been broken and the men’s building would not open for another eight years.

In 1894, the facility was near completion as the female buildings would open the following year. Several buildings had been added on the north side of the complex. A Summer House or pavilion was shown approximately 500 ft (152 m) east of the Richardson towers—approximately where the modern Strozzi Building (Building 62) is located today. The Porter’s Lodge, shown in 1872, was not extant (if it was ever built). No structures were shown within the APE.

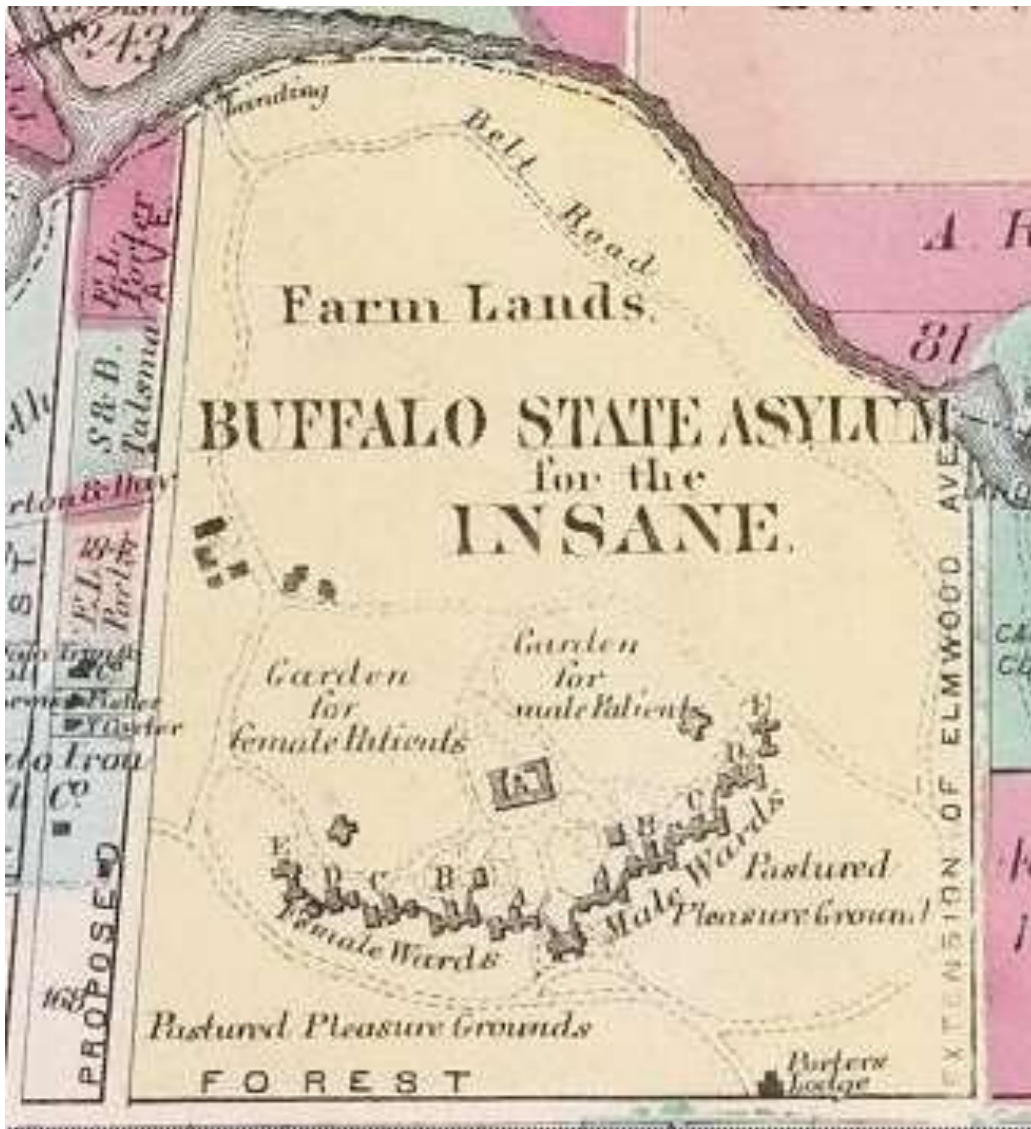


Figure 2.3. Buffalo State Hospital for the Insane 1872 (Hopkins 1872).

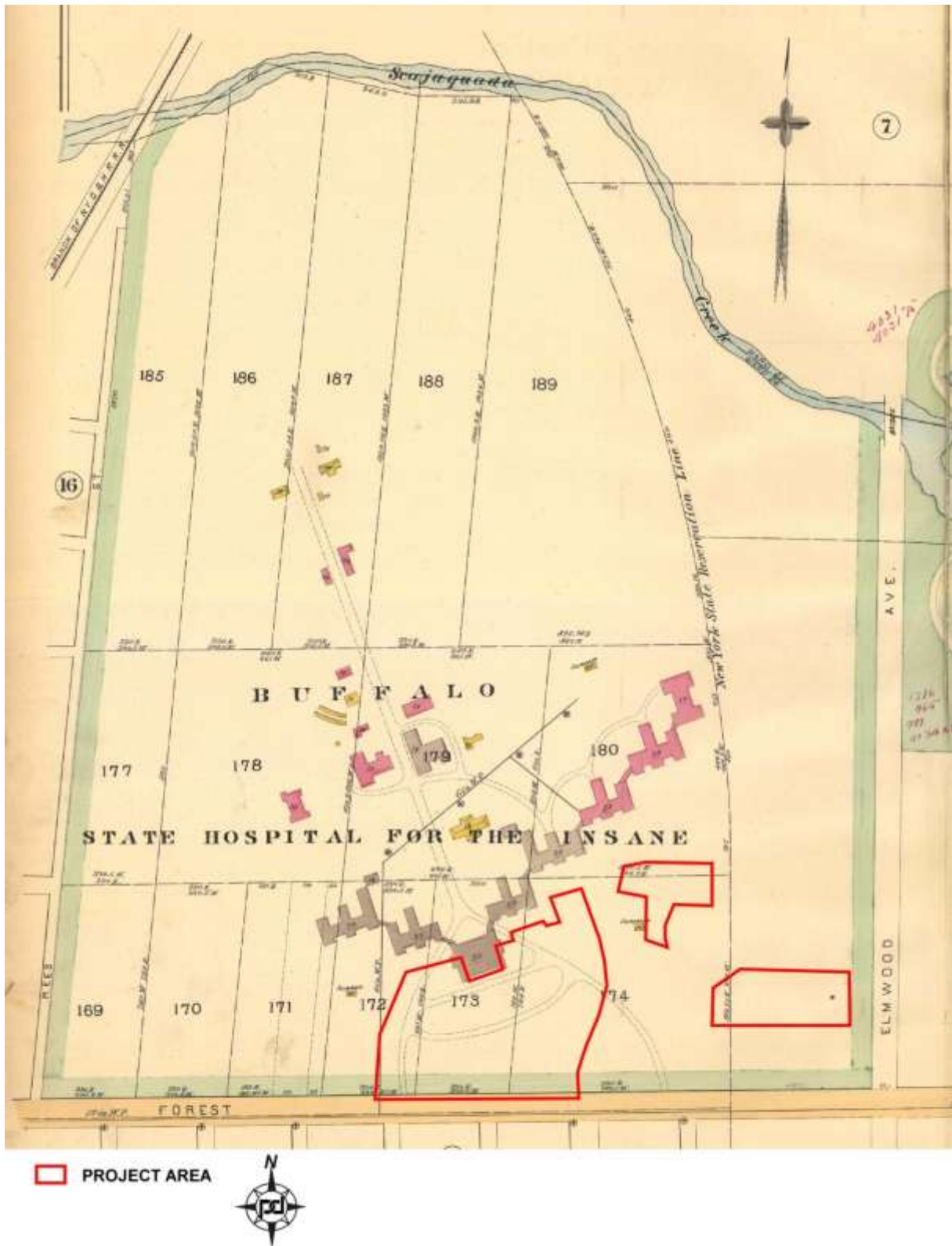


Figure 2.4. Buffalo State Hospital for the Insane 1894 (American Atlas Company 1894).

The 1916 Sanborn map (Figure 2.5) and the 1927 aerial (Figure 2.6) showed the facility fully constructed. Curvilinear roads traversed portions of the APE and several small buildings were located in proximity to the APE. By 1948, development was shown along the north side of Forest Avenue. Structures shown adjacent to the project area now include the Strozzi Building (ca. 1950), and the Superintendent's Residence (current Management Services building – ca. 1904-1905; Figure 2.7).

The USGS (1965) map showed the only identified former structure potentially within the limits of the APE. This building was the Medical and Surgical Building (constructed ca. 1949-1952) located at the northeast corner of the current Strozzi high-rise building. The north and east portions of the project area are adjacent to the former structure's building footprint. Disturbance associated with the demolition of the building is likely within portions of the new parking APE.

**2.3.2 Site File and Archival Review.** A review of archaeological site files revealed no previously recorded sites within the APE. Seven sites are within one mile of the APE, typically to the northeast or west, along Scajaquada Creek (Table 2). The closest site to the APE consists of two loci of historic fill deposits, dating to the beginning of the twentieth century. These are located about 1,677 ft (511 m) and 2,198 ft (670 m) northeast of the APE, within Delaware Park. The remaining sites are all prehistoric or historic Native American. About 2,569 ft (783 m) to the west, near the intersection of Forest Avenue and Danforth Street, are a series of workshops. The remaining sites are all 2,592 ft (790 m) or more from the APE. These include lithic scatter sites, a camp site, and an historic Native American village and cemetery site.

Early archaeological surveys such as Squier (1851), Beauchamp (1900), Houghton (1909), and Parker (1922) do not indicate the presence of any prehistoric sites in the project area. Later archaeological works by Ritchie (1980) and Ritchie and Funk (1973) also do not denote the presence of archaeological sites within the project area.

**Table 2. Archaeological sites within one mile of the project area.**

NYSOPRHP Site #	Additional Site #	Distance from APE m(ft)	Time Period	Site Type
2940.023698	NYSM 11576, UB 3745, Scajaquada 2 site	511 to 670 (1677-2198) NE	19th-20th century	historic fill deposits
	NYSM 8584, ACP Erie 6B	783 (2569) W	prehistoric	Workshops
2940.000100	UB 183, Buffalo S. site	790 (2592) N	no information	no information
2940.023697	NYSM UB 3744, Nottingham site	807 (2648) NE	unidentified prehistoric	Lithic scatter
2940.023696	NYSM 11574, UB 3743, Scajaquada 1 site	1028 to 1260 (3373-4134) NE	Locus 1: unidentified prehistoric; Locus 2: Archaic Laurentian	Locus 1: lithic scatter; Locus 2: stray finds
	NYSM 3171, ACP Erie 2	1190 (3904) NW	Historic Native	multiple burials
	NYSM 3176, ACP Erie 6A	1284 (4213) E	prehistoric	Camp

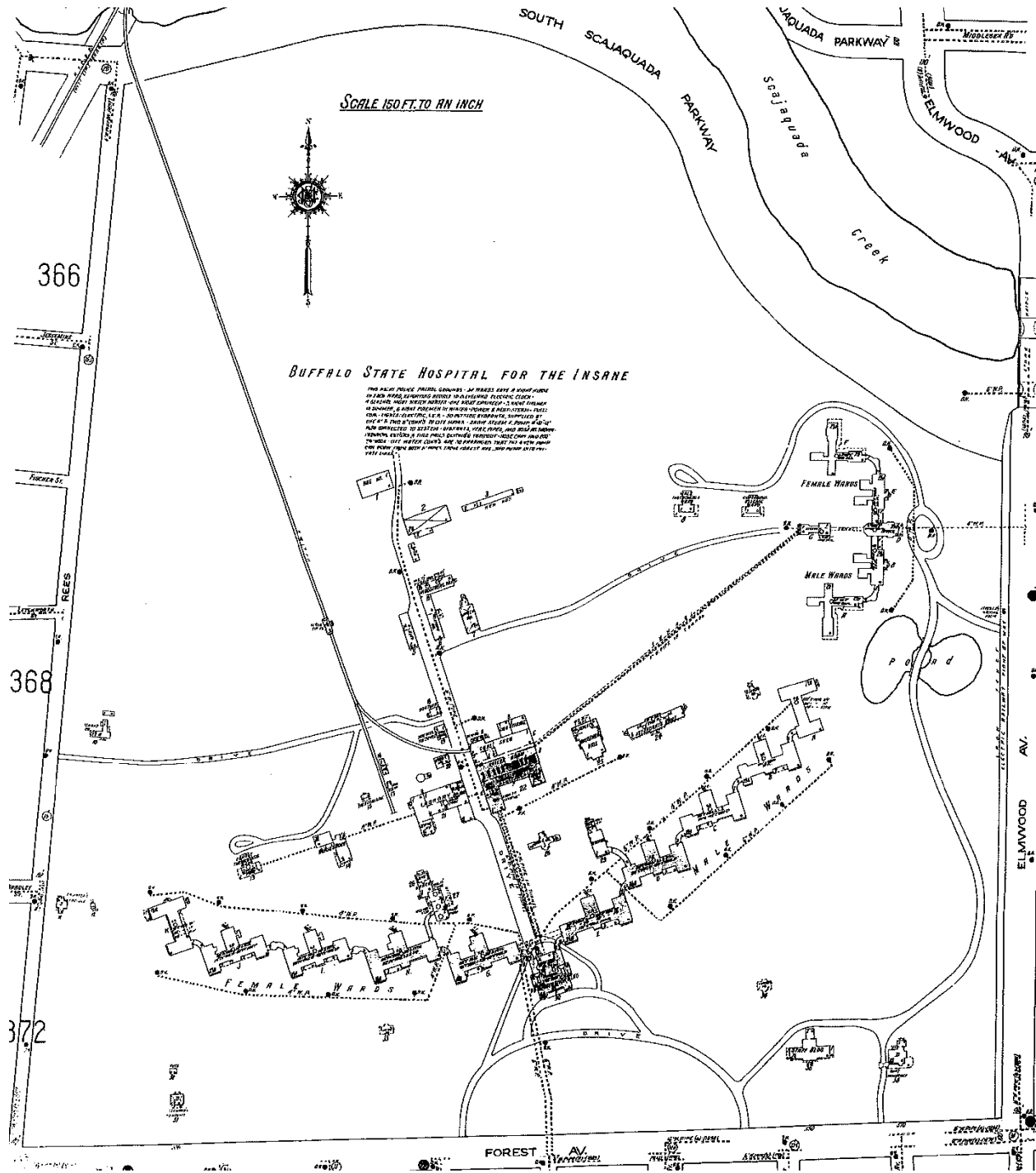


Figure 2.5. Buffalo State Hospital for the Insane 1916 (Sanborn Map Company 1916).



 PROJECT AREA



**Figure 2.6. Buffalo State Hospital for the Insane 1927 (Fairchild 1927).**

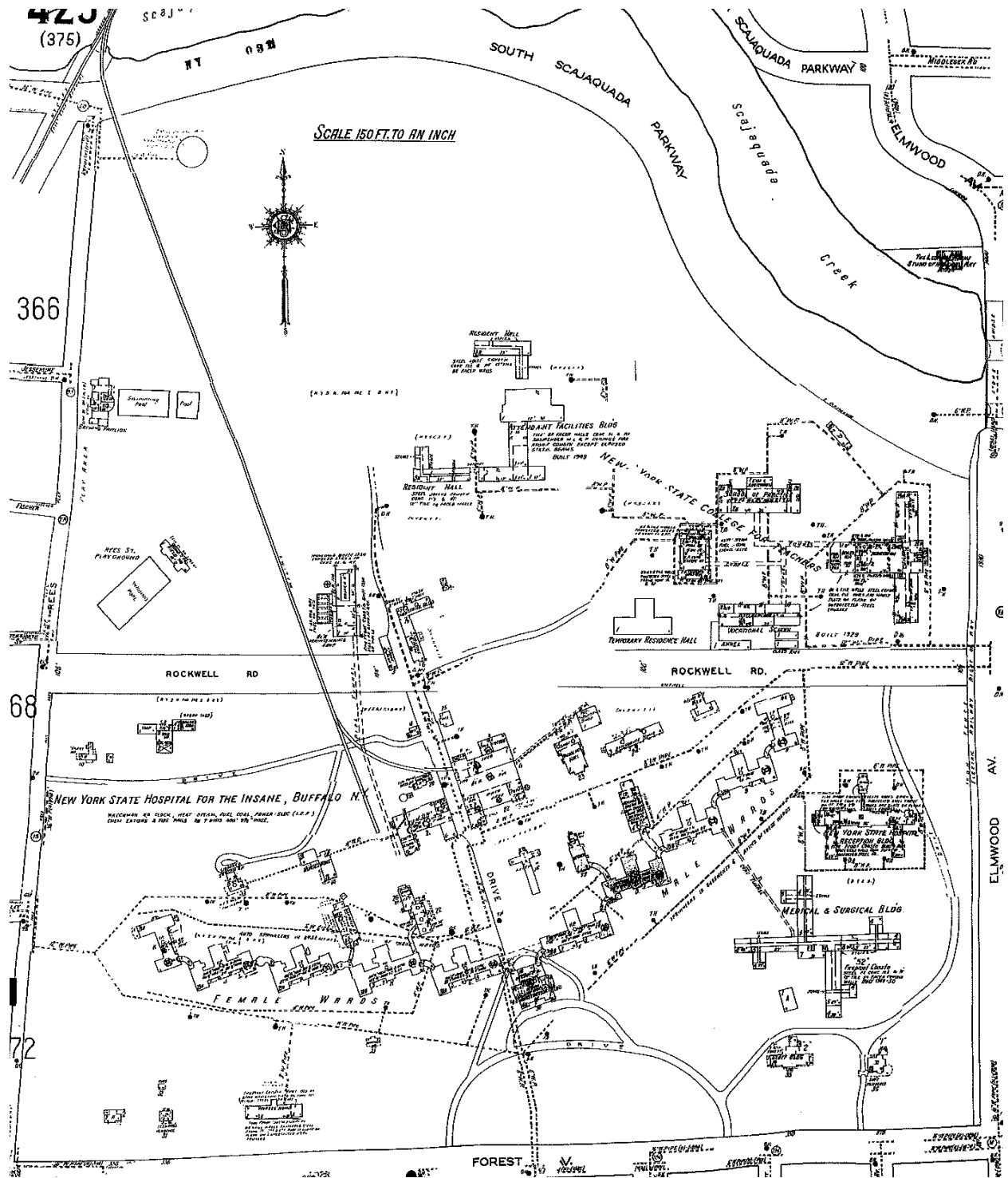


Figure 2.7. New York State Hospital for the Insane 1951 (Sanborn Map Company 1951).

**Register Listings.** There are 19 National Register-listed properties within one mile of the project area (Table 3). The Buffalo State Hospital/Buffalo State Asylum for the Insane is listed on the National Register (#90NR01260) and is a National Historic Landmark.

**Table 3. National Register-Listed Sites within one mile of the project area.**

<b>NR #</b>	<b>Name</b>	<b>Location</b>
90NR01237	Pierce Arrow Factory Complex	Elmwood & Great Arrow Avenues.
89NR0003	Parkside West Historic District	Amherst Street, Nottingham Terrace, Middlesex Road, Delaware Avenue.
90NR01221	Buffalo and Erie County Historical Society	25 Nottingham Court
90NR01239	Parkside East Historic District	Parkside Avenue, Amherst Street, Colvin Avenue, New York Central RR tracks, Main Street, Humboldt Avenue
90NR01243	D.D. Martin House Complex	123 Jewett Parkway
90NR03149	Forest Lawn Cemetery	1411 Delaware Avenue
90NR01210	Darwin D. Martin House	125 Jewett Parkway
90NR01217	Delaware Park Front Park System	Front Park, Porter Avenue to Symphony Circle, north along Richmond Avenue, Bidwell Parkway, Gates Circle, Delaware Park
90NR01260	Buffalo State Hospital/Buffalo State Asylum for the Insane	400 Forest Avenue
10NR06177	Buffalo Seminary School for Girls	205 Bidwell Parkway
90NR01242	Lafayette High School	370 Lafayette Avenue
08NR05896	Annunciation School	257 Lafayette Avenue
08NR05909	Richmond Ave. Methodist Episcopal Church	525 West Ferry Street
09NR05997	Lafayette Ave. Presbyterian Church	875 Elmwood Avenue
06NR05636	Parke Apartments	33 Gates Circle
06NR05627	Garrett Club	91 Cleveland Avenue
97NR01206	Edwin M. & Emily S. Johnston House	24 Tudor Place
97NR01205	Colonel William Kelly House	36 Tudor Place
97NR01207	James & Fanny How House	41 St. Catherine's Court



## 3.0 Field Investigation

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### 3.1 METHODOLOGY

Cultural resource investigations are designed to provide a complete examination of the Area of Potential Effect (APE) in order to identify and assess any known or unknown cultural resources. These resources include prehistoric and historic archaeological sites as well as standing structures or other aboveground features. The field investigation includes an intensive surface and subsurface examination (e.g., shovel testing) of the project area (APE) and photographic documentation of the project site and vicinity. Pedestrian or walkover reconnaissance surveys are conducted across the project area to identify testable locations, cultural features, surface visibility, soil disturbance, and wet or poorly drained areas, as well as well drained sensitive areas that would require testing. An intensive surface inspection is utilized as a primary method of survey when ground surface visibility is not obscured by vegetation (e.g., plowed agricultural fields) or standing water.

Shovel test pits (STPs) are excavated at a standard 15-m (50-ft) interval throughout the APE. Shovel tests average a minimum of 40 cm (16 in) in diameter and are excavated to at least 10 cm (4 in) below potentially artifact-bearing soils. All soils are matched to Munsell® color charts and sieved through ¼-inch hardware screens. Tests are terminated if water is encountered in the test pit, indicating poorly drained soils. Areas of severe disturbance, standing water, and slope greater than 15 percent are documented but not shovel tested. All shovel tests are backfilled to natural contour upon completion. Additional shovel tests are excavated around positive shovel tests to define preliminary site boundaries, artifact concentrations or determine that the find spot is an isolated occurrence. Closer interval shovel testing is implemented when surface features (e.g., a foundation or depression or the presence of map documented structures) are identified.

Artifacts found during the survey are collected and placed in plastic or paper bags and labeled with pertinent provenience information. Modern materials, such as plastic and container glass, are noted on field forms but not collected. Materials, such as coal, red brick fragments, and miscellaneous nail fragments also are noted but not collected unless they can be clearly identified as historic or found in association with historic period artifacts. All field information collected from shovel tests is recorded on shovel test forms, including the location, pertinent stratigraphic data, soil types, natural or man-made disturbances in the area, and the presence or absence of cultural materials. The field director maintains a daily log, and photographs pertinent manmade disturbances and environmental conditions. All shovel tests are recorded on a project map and included in the report.

### 3.2 LABORATORY ANALYSIS

Recovered cultural materials are stored at Panamerican's Buffalo Office for processing and analysis. Processing of recovered artifacts follows guidelines elaborated in 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections) and in the New York Archaeological Council's Standards and Curation of Archaeological Collections document (NYAC 1994). Standard archaeological procedures of cleaning and storage are also followed, with provenience information kept with artifacts at all times. Permanent curation of artifacts is arranged with landowner consent.

### 3.3 RESULTS OF THE FIELD INVESTIGATION

The nearly 13-acre APE includes fairly level wooded lawns interspersed with paved drives and parking lots on the grounds of the Richardson Complex (formerly New York State Asylum for the Insane) and the Buffalo Psychiatric Center at the northwest corner of Forest and Elmwood avenues (Figure 3.1; Appendix A: Photographs 1 through 15). There are two paved entrances and parking areas in the west portion of the APE, accessed from the north side of Forest Avenue. The east portion of the APE area can be accessed via a paved drive within the complex, or accessed from the east off of Elmwood Avenue.

The method of survey was shovel testing at the standard 15-m (50-ft) interval. A grid aligned north-south was established over the APE. The survey datum (indicated by a pin flag) was placed adjacent to the southwest entrance of the facility (specifically 7.5-m [25-ft] north of the iron fence, 7.5-m [25-ft] west of the center of the drive). As discussed in Section 1.2, mapped disturbances within the project area included storm drains, buried electrical lines (most often associated with street lights), water lines, and telecommunications lines. Planned STP locations determined to be on or near a mapped disturbance were moved 3-m to 5-m (10-ft to 15-ft) to an undisturbed location where feasible.

A total of 156 shovel tests were dug at 50-ft [15-m] intervals over the entire APE except where severe disturbances (e.g., subsurface utilities) or other obstructions (e.g., paved surfaces) were present (see Appendix B: Shovel Test Log). As presented in Section 1.0, the APE consists of three distinct areas—the South Lawn and the North and South Replacement Parking Lots. These areas were respectively designated Study Area A, Study Area B, and Study Area C for analytical purposes (see Figure 3.1). A discussion of the survey of each study area is presented below.

**South Lawn (Study Area A).** This study area includes the west portion of the APE, consisting of approximately 9.6 acres between the Richardson Complex at the north extent; Forest Avenue at the south extent; and the Strozzi High Rise Building (Building 62; part of the Buffalo Psychiatric Center) at the east extent (see Figure 3.1; see Appendix A: Photographs 1-6). The south portion of Study Area A has been an open lawn for more than century (see Section 2 and Appendix A: Photograph 1). A small utilities building (Building 46, valve house) is present along the south-central side of this study area (Appendix A: Photograph 3). It is modern (constructed in 1991) and no MDSs are depicted on any of the historic maps. An inspection of the lawn in proximity of the Richardson Complex at the north extent of the study area identified recent disturbances including: additional installed lighting with buried utilities; building maintenance debris; and gravel drives at the base of the buildings likely placed there to support construction / maintenance lifts (see Appendix A: Photographs 5 and 6).

A total 111 shovel tests were dug along 15 transects (Transects 1 through 15), aligned south to north (see Figure 3.1). Two horizons were typically identified within the shovel tests: Stratum 1 (i.e., A-horizon, topsoil) was typically dark grayish brown gravelly silty loam, averaging 26 cm (10.2 in) deep; Stratum 2 (i.e., B-horizon) was characteristically a mottled reddish brown and reddish gray clay or silty clay. The average terminal depth of the tests was 38 cm (15 in) (see Appendix B: Shovel Test Log). The topsoil was generally disturbed with gravel/crushed stone and cinders commonly found mixed in the soil matrix. Modern materials including plastic, bottle glass, Styrofoam, wire nails, and a soda can were also found in the topsoil of multiple shovel tests. The clay subsoil is likely the natural B-horizon subsoil.

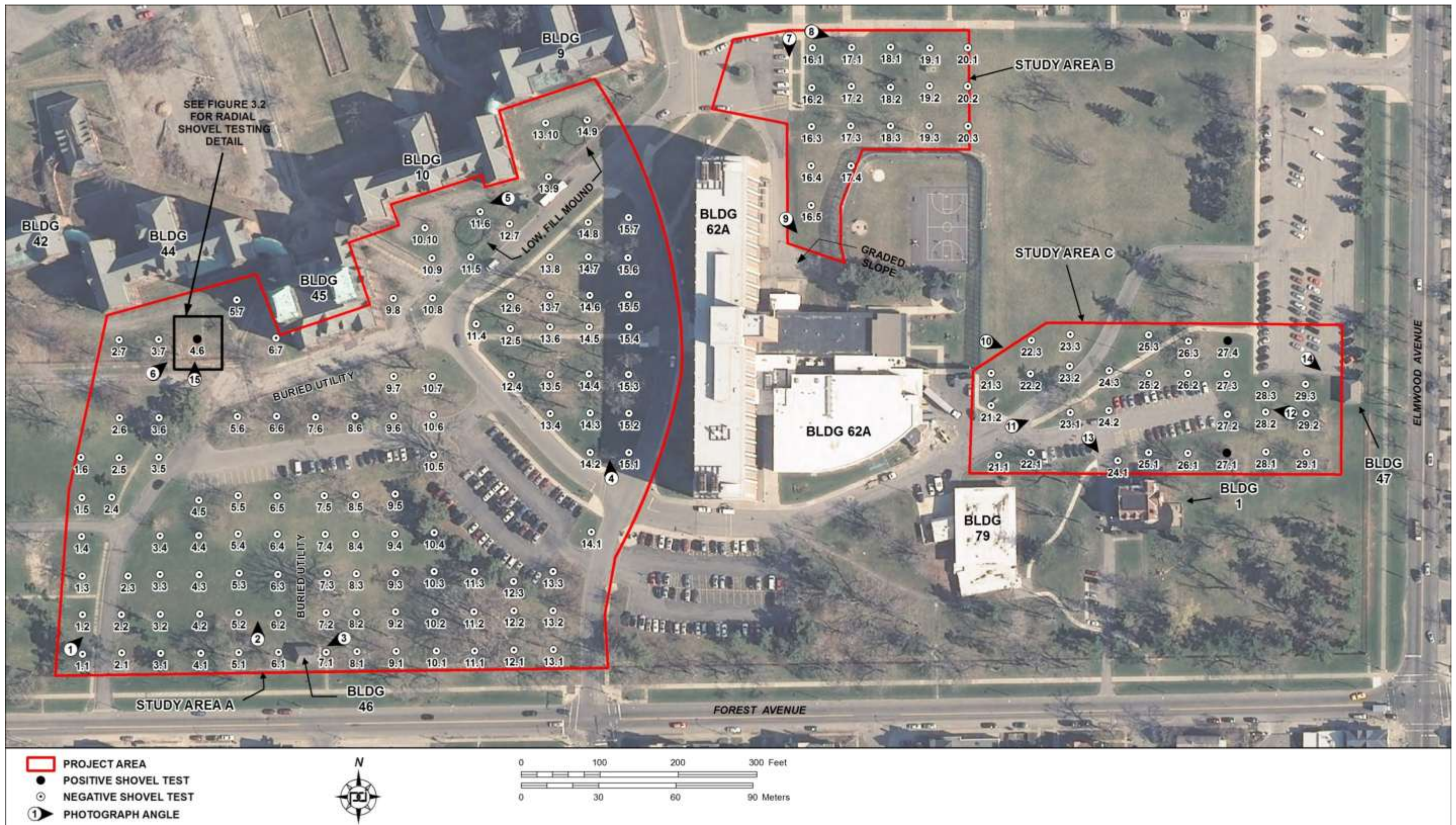
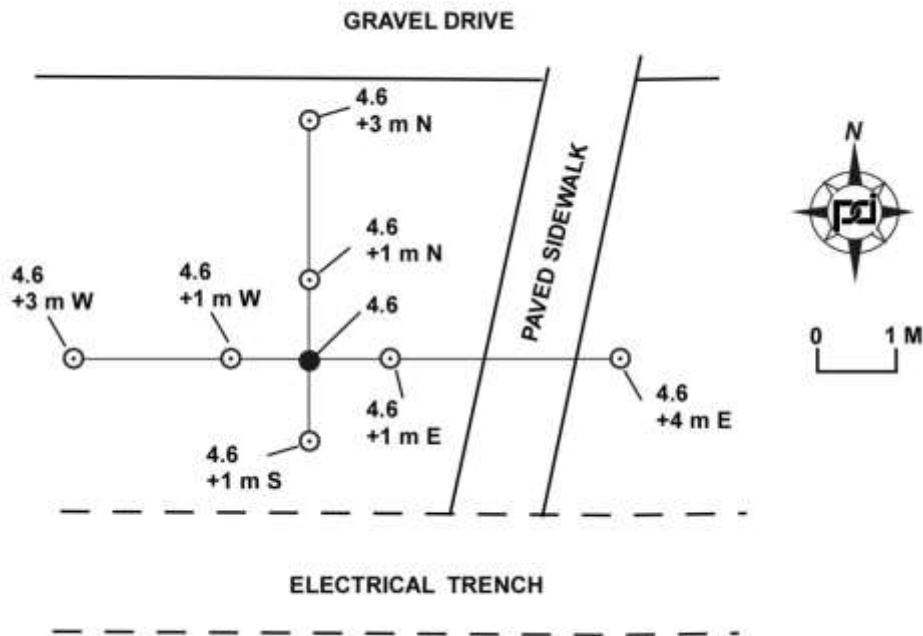


Figure 3.1. Location of study areas, shovel tests, and photograph angles within the project area (aerial source: NYS GIS Clearinghouse 2002).

Two prehistoric lithic (Onondaga chert) artifacts were found in Stratum 1 of a single shovel test (see Figure 3.1: STP 4.6). One is a flake fragment and the other is an expediently produced scraper (unifacially modified shatter). These artifacts were also found along with a red plastic poker chip fragment, a white piece of plastic, and a small piece of modern window glass. Although the soil is not mottled, its natural integrity is suspect due to the presence of modern materials. Seven close-interval (1-m and 3-m) radial shovel tests placed around the original positive shovel test in cardinal directions were negative. An eighth close-interval shovel test could not be placed 3-m south due to the presence of a buried electric line (Figure 3.2).



**Figure 3.2. Location radial shovel tests around positive STP 4.6.**

**North Replacement Parking Lot (Study Area B).** This 1.2-acre study area is adjacent to the northeast corner of the Strozzi Building (see Figure 3.1). The study area includes open lawn and paved surfaces (see Appendix A: Photographs 7-9). An electrical transformer is located in the northeast corner. A sidewalk and a paved drive bound the north and west extents of the APE. A ca. 1950 medical building (former Building 52, since removed) was located in proximity to the east and south extents of the study area. The north portion of Study Area B is fairly level and covered in grass, while the south portion exhibits an increasingly westward and southward sloping graded surface (see Appendix A: Photograph 9).

Seventeen shovel tests were dug along five transects (Transects 16 through 20), aligned north to south (see Figure 3.1). Two strata were identified within the shovel tests of this study area: Stratum 1 was a dark grayish brown silt or silty loam, averaging 25 cm (10 in) deep; Stratum 2 (i.e., B-horizon), as with Study Area A, was characteristically a mottled reddish brown and reddish gray clay or silty clay. The average terminal depth of shovel tests in this area was 38 cm (15 in) (see Appendix B: Shovel Test Log). The topsoil was typically disturbed, having small pieces of brick, asphalt, gravel, and concrete rubble mixed throughout the stratum. Natural

clay subsoil was present in the western half of this study area but the eastern part (Transects 18, 19, 20) was very disturbed. This area of greater and deeper disturbance is likely associated with construction and demolition of Building 52, which was partially at or adjacent to this location. No prehistoric or historic cultural materials or features were found within this study area.

**Table 4. Artifact Catalog (excluding modern materials discarded in the field)**

Location	Stratum	Quantity	Description	Additional Information
STP 4.6	I	1	flake fragment	Prehistoric, Onondaga chert
STP 4.6	I	1	scraper	Prehistoric, Onondaga chert, unifacially modified shatter with cortex, expediently produced Edge is 1 cm
STP 4.6	I	1	plastic (red poker chip)	Modern, red, fragment
STP 4.6	I	1	plastic (unidentified)	Modern, white
STP 4.6	I	1	window/flat glass	Modern, small shard
STP 27.1	I	1	whiteware ceramic sherd	Modern or Historic, undecorated
STP 27.4	I	1	graphite rod	Modern or Historic
STP 27.4	I	2	window/flat glass	Modern, small shards

**South Replacement Parking Lot (Study Area C).** This two-acre study area is east of Building 62 and north of the Management Services Building (Building 1 [former Superintendent's Residence]) (see Figure 3.1; see Appendix A: Photographs 10-14). The study area is level and largely covered with grass. A paved parking lot is centrally located, and the southern portion of a second parking lot extends into the northeast corner of the study area. A 30-ft (9-m) long brick utilities building (Building 47, valve house) adjacent to the east extent of the APE. Also constructed in 1991, it is identical to the valve house in the South Lawn study area. A sidewalk and a paved access road dissect the north portion of the study area.

Twenty-eight shovel tests were dug along nine transects (Transects 21 through 29), aligned south to north in Study Area C (see Figure 3.1) No extra shovel tests were placed in the vicinity of Building 1 due to limited space caused by utilities and paved surfaces. Two horizons were typically identified within tests. Stratum 1 was a dark grayish brown silty loam, with a mean depth of 20 cm (8 in); Stratum 2 was typically reddish brown or mottled reddish gray and reddish brown silty clay or clay. The mean terminal depth of the shovel tests in this area was 34 cm (13 in) (see Appendix B: Shovel Test Log). Ash/cinders, gravel, asphalt, and fragmented brick rubble was common in the topsoil. Two pieces of modern flat glass and a graphite rod were found in Stratum 1 of STP 27.4 and a small piece of whiteware was found in STP 27.1. No prehistoric or historic cultural materials or features were found. Paved surfaces and buried utilities limited opportunities for close-interval shovel testing near the former Superintendent's residence.

### 3.4 CONCLUSIONS AND RECOMMENDATIONS

The project area has a heightened archaeological sensitivity for prehistoric sites as a result of its proximity to Scajaquada Creek and former streams that were adjacent to the APE (see Heritage Landscapes 2008: Figures III.4 and III.6). This investigation identified only two prehistoric artifacts which were found near the front of the historic Administration Building. No additional artifacts were found during close-interval radial shovel testing. In addition, the find-spot might not be the original depositional location of these artifacts. The prehistoric artifacts

were intermixed modern materials with the lithics supporting the possibility that they are a secondary deposit that occurred during landscape manipulation (i.e., filling/grading) of the topsoil. It has been reported that large amounts of fill were placed throughout the site [i.e., property] during past construction episodes (Heritage Associates 2008:39).

The project area has experienced several ground-disturbing activities associated with the development of the existing complex. Disturbances were evident in the topsoil (e.g., rubble debris including gravel, asphalt, concrete) at many locations across the APE. The degree to which the topsoil has been mixed or moved is difficult to assess. Disturbances to the landscape typically did not extend to great depths. Natural subsoil was present throughout the surveyed APE except near the former location of Building 52 in the eastern portion of Study Area B.

This investigation found no archaeological evidence that would indicate that remains from former structures or landscape features (e.g., drives, walkways, fences) are present in the APE as posited in the *Richardson Olmsted Complex Cultural Landscape Report* (Heritage Landscapes 2008:38). In addition, map-documented structures have not been depicted within the APE on any of the multiple historic maps reviewed during this investigation.

No significant cultural resources were identified within the APE as a result of this investigation. The prehistoric artifacts are considered stray-finds (i.e., isolated) found without context in soils with questionable integrity. No cultural resources will be impacted as a result of the proposed construction of the project. The proposed restoration and modifications will have no adverse effect on cultural resources listed, or eligible for listing, in the State or National Registers of Historic Places. On the contrary, the project will have a beneficial effect on the NRHP-listed property with the reuse of the original Olmsted setting. Therefore, no further cultural resource investigations are recommended for the surveyed APE. Other locations within the complex outside of the APE are considered archaeologically sensitive unless significant disturbance can be documented.

## 4.0 References

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Abler, Thomas S., and Elisabeth Tooker

1978 Seneca. In *Northeast*, edited by Bruce G. Trigger, pp. 505-517. Handbook of North American Indians, vol. 15, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Abramowitz, Mimi

1996 *Regulating the Lives of Women; Social Welfare Policy from Colonial Times to the Present*. Revised ed. South End Press, Cambridge, MA.

American Atlas Company

1894 *Atlas of the City of Buffalo, New York*. 3 vols. American Atlas Company, New York.

Babcock, Louis L.

2005 [1927] *The War of 1812 on the Niagara Frontier*. Rpt. The Scholar's Bookshelf, Cranbury, NJ.

Beauchamp, William M.

1900 Aboriginal Occupation of New York. *New York State Museum Bulletin* No. 32. Albany.

Beers, Frederick W.

1880 *Illustrated Historical Atlas of Erie County, New York*. F.W. Beers & Company, New York.

Bowler, R. Arthur

1976 The Burning of Buffalo. Rpt. History of Buffalo Section. Buffalo Architecture and History website, Buffalo. Electronic document, <http://www.buffaloah.com/h/war1812/burning.html>, accessed April 4, 2011.

Buffalo State, State University of New York

2011 Campus History. Buffalo State webpage, Buffalo State, State University of New York. Electronic document, <http://www.buffalostate.edu/buffalostatehistory.xml>, accessed April 7, 2011.

Brasser, T.J.

1978 Early Indian-European Contacts. In *Northeast*, edited by Bruce G. Trigger, pp. 78-88. Handbook of North American Indians, vol 15, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Chazanof, William

1970 *Joseph Ellicott and the Holland Land Company: The Opening of Western New York*. Syracuse University Press, Syracuse.

Cleland, Charles E.

1982 The Inland Shore Fishery of the Northern Great Lakes: Its Development and Importance in Prehistory. *American Antiquity* 47:761-784.

Cook, Lura Lincoln

1961 The War of 1812 on the Frontier. *Adventures in Western New York History*. Volume IX. Buffalo and Erie County Historical Society, Buffalo.

- de Laubenfels, David J.  
1966 Vegetation. In *Geography of New York State*, edited by John H. Thompson, pp. 90-103. Syracuse University Press, Syracuse.
- Dorsheimer, William  
1993[1863] The Village of Buffalo during the War of 1812. *Buffalo Historical Society Publications*. Buffalo Historical Society, Buffalo. Rpt: Cornell University Digital Collections, Ithaca, NY. Electronic document, <http://moa.cit.cornell.edu/Hunter/hunter.pl?handle=cornell.library.nys/nys297&id=1>, accessed March 26, 2011]
- Dunn, Edward T.  
2000 *A History of Railroads in Western New York*. 2<sup>nd</sup> Edition. Canisius College Press, Buffalo.
- Ellis, David M., James A. Frost, Harold C. Syrett, and Harry J. Carmen  
1967 *A History of New York State*. Cornell University Press, Ithaca, NY.
- Emslie, Peter, and T.H. Kirk  
1850 *New Subdivision Map of the City of Buffalo*. Jewett, Thomas & Co., Buffalo.
- Engelbrecht, William E.  
2003 *Iroquoia: The Development of a Native World*. The Iroquois and Their Neighbors series. Syracuse University Press, NY.
- Engelbrecht, William E., Eric G. Hansen, James E. Hartner, Elaine B. Herold, and John D. Holland  
1993 *Prehistory of Western New York*. The Archaeological Survey, Department of Anthropology, State University of New York at Buffalo and The Frederick M. Houghton Chapter, New York State Archaeological Association, Buffalo.
- Fairchild  
1927 Aerial Photograph. Fairchild Aerial Surveys, Inc., New York. Erie County Aerial Photos 1920's-Atlas No. 7. Greater Motorway System, Office of County Engineer, Buffalo. On file at Division of Highways, Erie County Department of Public Works, Buffalo. Electronic document, [http://www.erie.gov/depts/community/highways\\_aerial.phtml](http://www.erie.gov/depts/community/highways_aerial.phtml), accessed April 4, 2011.
- Fitting, James E.  
1968 Environmental Potential and the Postglacial Readaptation in Eastern North America. *American Antiquity* 33(4):441-445.  
  
1975 Climatic Change and Cultural Frontiers in Eastern North America. *Michigan Archaeologist* 21:25-39.
- Fritz, Gayle  
1990 Multiple Pathways to Farming in Precontact Eastern North America. *Journal of World Prehistory* 4:387-435
- Goldman, Mark  
1983 *High Hopes; The Rise and Decline of Buffalo, New York*. State University of New York Press, Albany.



nd First There was Black Rock. History of Buffalo Section. Buffalo Architecture and History Internet site, Buffalo. Electronic document, <http://www.ah.bfn.org/h/br/brgold/>, accessed March 27, 2011.

Graham, Lloyd

1967 *Buffalo; Metropolis of the Niagara Frontier*. Henry Stewart, Inc., Buffalo.

Gramly, Richard M.

1977 Deerskins and Hunting Territories: Competition for a Scarce Resource in the Northeast. *American Antiquity* 42:601.

Grande, Joseph A.

1982 Peter B. Porter and the Buffalo-Black Rock Rivalry. *Adventures in Western New York History*. Volume XXVII. Buffalo and Erie County Historical Society, Buffalo.

Hart, John P., and Hetty Jo Brumbach

2003 The Death of Owasco. *American Antiquity* 68(4):737-752.

Hart, John P., Robert G. Thompson, and Hetty Jo Brumbach

2003 Phytolith Evidence for Early Maize (*Zea Mays*) in the Northern Finger Lakes Region of New York. *American Antiquity* 68(4):619-640.

Heritage Landscapes

2008 *Richardson Olmsted Complex Cultural Landscape Report*. Prepared for Richardson Center Corporation and Good Clancy & Associates. October.

Hickey, Donald R.

1989 *The War of 1812; A Forgotten Conflict*. University of Illinois Press, Urbana

Hill, Henry Wayland, editor

1923 *Municipal History of Buffalo, New York; A History 1720-1923*. 4 volumes. Lewis Historical Publishing Company, Inc., New York and Chicago.

Hodge, William

1909 How Buffalo Dug the Canal. In *Canal Enlargement in New York State; Papers on the Barge Canal Campaign and Related Topics*, pp. 387-390, edited by F. H. Severance. Buffalo Historical Society Publications, Vol. 13. Rpt: Cornell University Digital Collections, Ithaca, NY. Electronic document, <http://encompass.library.cornell.edu/cgi-bin/cul.nys/>, accessed April 6, 2011.

1993 [1879] Buffalo Cemeteries. Read Before the [Buffalo Historical] Society, February 4, 1879, edited by Frank H. Severance. Buffalo Historical Society Publications. Buffalo Historical Society, Buffalo. Rpt: Cornell University Digital Collections, Ithaca, NY. Electronic document, <http://moa.cit.cornell.edu/Hunter/hunter.pl?handle=cornell.library.nys/nys315&id=1>, accessed March 27, 2011.

Hoffman, Bernard B.

1961 *Cabot to Cartier: Sources for an Historical Ethnography of Northeastern North America 1497-1550* University of Toronto Press, Toronto.

Holder, Robert

1960 *The Beginnings of Buffalo Industry. Adventures in Western New York History*. Volume V. Buffalo and Erie County Historical Society, Buffalo.

Hopkins, Griffith Morgan

1872 *Atlas of the City of Buffalo, Erie Co., New York*. G.M. Hopkins & Co., Philadelphia. New York Public Library Digital Gallery, The Lionel Pincus and Princess Firyal Map Division, Humanities and Social Sciences Library, New York. Electronic document, [http://digitalgallery.nypl.org/nypldigital/dgkeysearchresult.cfm?parent\\_id=1059894&word](http://digitalgallery.nypl.org/nypldigital/dgkeysearchresult.cfm?parent_id=1059894&word), accessed April 7, 2011.

Houghton, Frederick W.

1909 Indian Occupancy of the Niagara Frontier and Indian Village, Camp, and Burial Sites in the Niagara Frontier. *Bulletin of the Buffalo Society of Natural Sciences* 9(3):261-375.

Hutchins, Francis G.

2004 The Iroquois, New York and Federal Tribal Policy. Oneida Indian Land Claim Information Site, Madison County Wampsville, NY. On file, Historian's Office, Panamerican Consultants, Inc., Buffalo Branch, Buffalo.

Hunt, George T.

1940 *The Wars of the Iroquois: A Study in Inter-tribal Trade Relations*. University of Wisconsin Press. Madison.

Johnson, Crisfield

1876 *Centennial History of Erie County, New York*. Printing House of Mathews & Warren, Buffalo.

Kelleran, Ann

1960 Old Fort Niagara. *Adventures in Western New York History*. Volume I. Buffalo and Erie County Historical Society, Buffalo.

Ketchum, William

1970 [1864] *An Authentic & Comprehensive History of Buffalo*. 2 vols. Rockwell, Baker & Hall, Printers, Buffalo. Rpt: Scholarly Press, St. Clair Shores, MI.

Kowsky, Francis R.

1987 Municipal Parks and City Planning: Frederick Law Olmsted's Buffalo Park and Parkway System. Rpt. Buffalo as an Architectural Museum section, Buffalo Architecture and History Internet site, Buffalo [online www]. Available URL: "<http://preserve.bfn.org/bam/kowsky/kowold/index.html>" [accessed November 6, 2007]

Kowsky, Francis R., Mark Goldman, Austin Fox, John D. Randall, Jack Quinan, and T. Lasher

1981 *Buffalo Architecture: A Guide*. Buffalo Architectural Guidebook Corporation. The MIT Press, Cambridge, MA, and London.

Kuhn, Robert D., and Robert E. Funk

2000 Boning up on the Mohawk: An Overview of Mohawk Faunal Assemblages and Subsistence Patterns. *Archaeology of Eastern North America* 28:29-62.

LaChuisa, Chuck

1981 *The History of Buffalo: A Chronology*. Buffalo Architecture and History Internet site, Buffalo. Electronic document, <http://ah.bfn.org/h/1831.html#1813>," accessed April 6, 2011.

Landon, Joseph

1904 [ca. 1863] Notes of Joseph Landon. *Buffalo Historical Society Publications*. Buffalo Historical Society, Buffalo. Rpt: Cornell University Digital Collections, Ithaca, NY. Electronic document, <http://historical.library.cornell.edu/cgi-bin/cul.nys>, accessed April 5, 2011.

Lankes, Frank J.

1964 *The Senecas on Buffalo Creek Reservation*. West Seneca Historical Society, West Seneca, NY.

Lossing, Benson J.

2003 [1869] *Pictorial Field-Book of the War of 1812*. William Carr webpage hosted by Ancestry.com, np. Electronic document, <http://freepages.history.rootsweb.com/~wcarr1/Lossing2/Contents.html>, accessed April 7, 2011.

Mason, Ronald J.

1981 *Great Lakes Archaeology*. Academic Press, New York.

McFee, Michele A.

1998 *A Long Haul: The Story of the New York State Barge Canal*. Purple Mountain Press, Fleischmanns, NY.

Miller, N.G.

1973 *Late Glacial and Early Post Glacial Vegetation Change in Southwestern New York State*. New York State Museum and Science Service, Bulletin 420, Albany.

Napora, James

1995 *Houses of Worship: A Guide to the Religious Architecture of Buffalo, New York*. Unpublished Master's Thesis, State University of New York at Buffalo.

Noble, William C.

1975 Corn and the Development of Village Life in Southern Ontario. *Ontario Archaeology* 5:37-46.

New York Archaeological Council (NYAC)

1994 *Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State*. New York Archaeological Council, Albany.

NYS Division of Military and Naval Affairs

2006 Fort Porter. New York State Military Museum and Veterans Research Center, New York State Division of Military and Naval Affairs, Albany. Electronic document, [http://www.dmnna.state.ny.us/forts/fortsM\\_P/porterFort.htm](http://www.dmnna.state.ny.us/forts/fortsM_P/porterFort.htm), accessed April 11, 2011.

NYS GIS Clearinghouse

2008 New York State Interactive Mapping Gateway. New York State Statewide Digital Orthoimagery Program, Albany. Electronic database, [www.nysgis.state.ny.us/gateway/mg/cir.htm](http://www.nysgis.state.ny.us/gateway/mg/cir.htm), accessed March 27, 2011.

Old Fort Niagara

2004 History of the Fort. Old Fort Niagara Internet site, Old Fort Niagara, Youngstown, NY. Electronic document, <http://www.oldfortniagara.org/history/history.php>, accessed April 6, 2011.

Owens, Donald W., Willie L. Pittman, John P. Wulforst, and Willis E. Hanna

1986 *Soil Survey of Erie County, New York*. U.S. Department of Agriculture, Soil Conservation Service in cooperation with the Cornell University Agricultural Experiment Station. U.S. Government Printing Office, Washington, D.C.

Parker, Arthur C.

1922 The Archaeological History of New York. *New York State Museum Bulletin* Nos. 237, 238. Albany.

Pelligrino Faix, Monica

2011 Letter to Michael Schifferli, State Historic Preservation Office, New York State Office of Parks, Recreation, and Historic Preservation, Peebles Island, Waterford (dated January 27).

Powell, Stephen R., Editor

2001 Waterways and Canal Construction, 1700-1825. Buffalo, N.Y., excerpted from *Municipality of Buffalo, New York, A History: 1720-1923*, edited by Henry Wayland Hill, Lewis Historical Publishing Company, Inc., New York and Chicago. *The Buffalonian* webpage, np, Three Parts. Electronic document, <http://www.buffalonian.com/history/industry/waterways/WATERWAYS1.html>, accessed April 7, 2011.

Prufer, Olaf

1964 The Hopewell Cult. *Scientific American* 152.

Quinn, Thomas J.

1991 *The Western New York State Mile Reservation; A Short History*. Thomas J. Quinn, Niagara Falls, NY. Typed Ms, on file Historian's Office, Panamerican Consultants, Inc., Buffalo.

Ramsden, Peter G.

1978 An Hypothesis Concerning the Effects of Early European Trade among Some Ontario Iroquois. *Canadian Journal of Archaeology* #2.

Rapp, Marvin A.

and Commercial Princes of a Pioneer Port. Xerox of article on file Historians office, Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Date in question.

Richardson Center Corporation

and History and Timeline, The Richardson Olmsted Complex, Buffalo, NY. Richardson Center Corporation, Buffalo. Electronic document, <http://www.richardson-olmsted.com>,

accessed March 20, 2011.

Ritchie, William A.

1955 The Northern Burial Cult. *Pennsylvania Archaeologist* 25:45-50.

1980 *The Archaeology of New York State*. Revised Edition. Harbor Hill Books, Harrison, NY.

Ritchie, William A., and Robert E. Funk

1973 *Aboriginal Settlement Patterns in the Northeast*. New York State Museum, Memoir 20. Albany.

Sanborn Map Company

1889 *Sanborn Fire Insurance Map*. Sanborn Map Company, New York.

1916 *Sanborn Fire Insurance Map*. Sanborn Map Company, New York.

1951 *Sanborn Fire Insurance Map*. Sanborn Map Company, New York.

Schieppati, Frank J., Mark A. Steinback, Rebecca J. Emans, Michele H. Hayward, Michael A. Cinquino, and Karen S. Niemel

2004 *Phase II/III Cultural Resources Investigation and Data Recovery The Erie Canal Harbor Project, City of Buffalo, Erie County, New York*. 3 vols. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Parsons, Brinckerhoff, Quade & Douglas, Inc., Buffalo, and The Empire State Development Corporation, Buffalo.

Severance, Frank H.

1912 *The Picture Book of Earlier Buffalo*. *Buffalo Historical Society Publications*, Vol 16, edited by Frank H. Severance. Buffalo Historical Society, Buffalo. Rpt: Cornell University Digital Collections, Ithaca, NY. Electronic document, <http://moa.cit.cornell.edu/Hunter/hunter.pl?handle=cornell.library.nys/nys416&id=1>, accessed April 4, 2011.

Shaw, Ronald E.

1990 *Erie Water West; A History of the Erie Canal, 1792-1854*. Paperback edition. The University of Kentucky Press, Lexington.

Smith, Bruce D.

1992 Prehistoric Plant Husbandry in Eastern North America. In *The Origins of Agriculture*, edited by C. Wesley Cowan and Patty Jo Watson, pp. 101-119. Smithsonian Institution Press, Washington, D.C.

Smith, Donald A., Frank J. Schieppati, John Holland, Rebecca J. Emans, Mark A. Steinback, and Michael A. Cinquino

2007 *Phase III Cultural Resources Investigation of the Prehistoric Component (A02940.023650) within the Erie Canal Harbor Archaeological District (A02940.004623), City of Buffalo, Erie County, New York*. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Parsons, Brinckerhoff, Quade & Douglas, Inc., Buffalo, and The Empire State Development Corporation, Buffalo.

Smith, H(enry) Perry

- 1884 *History of Buffalo and Erie County*. 2 vols. D. Mason & Co., Syracuse, NY.
- Snow, Dean R.  
1980 *The Archaeology of New England*. Academic Press, New York.
- Spear, A.W.  
1977 *The Peace Bridge 1927-1977, and Reflections of the Past*. The Buffalo and Fort Erie Public Bridge Authority, Buffalo.
- Spiegelman, Bob  
2011 Sullivan/Clinton Campaign; Then and Now. Sullivan/Clinton Campaign Internet site, New York. Electronic database, <http://sullivanclinton.com>, accessed April 6, 2011.
- Squier, Ephraim G.  
1851 *Antiquities of the State of New York*. Geo. H. Derby and Co., Buffalo.
- Stone and Stewart  
1866 *New Topographical Atlas of Erie County, New York*. Stone and Stewart, Publishers, Philadelphia.
- Stothers, David M.  
1977 The Princess Point Complex. National Museum of Canada, *Archaeological Survey of Canada Paper No. 58*.
- Sykes, Clark M.  
1980 Swidden Horticulture and Iroquois Settlement. *Archaeology of Eastern North America* 8:45-52.
- Symons, (Major) Thomas W., and John C. Quintus  
1902 History of Buffalo Harbor; Its Construction and Improvement during the Nineteenth Century, pp. 239-285. *Publications of the Buffalo Historical Society*, Vol. V., edited by Frank Severance. Buffalo Historical Society, Buffalo. Rpt: Cornell University Digital Collections, Ithaca, NY. Electronic document, <http://moa.cit.cornell.edu/Hunter/hunter.pl?handle=cornell.library.nys/nys343&id=1>, accessed April 7, 2011.
- Tooker, Elisabeth  
1978 The League of the Iroquois: Its History, Politics, and Ritual. In *Northeast*, edited by Bruce G. Trigger, pp. 418-441. Handbook of North American Indians, vol. 15, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Trigger, Bruce G.  
1976 *The Children of Aataentsic: A History of the Huron People to 1660*. McGill-Queens University Press, Montréal.  
  
1978 Early Iroquois Contacts with Europeans. In *Northeast*, pp. 344-356. Handbook of North American Indians, vol. 15, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Tuck, James A.  
1978 Northern Iroquoian Prehistory. In *Northeast*, edited by Bruce G. Trigger, pp. 322-333.
-

Handbook of North American Indians, vol. 15, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Turner, Orsamus

1974 [1850] *Pioneer History of the Holland Purchase of Western New York*. Geo. H. Derby and Co., Buffalo. Rpt: James Brunner, Geneseo, NY, 1974.

U.S. Geological Survey (USGS)

1901 *New York (Erie County) Buffalo Quadrangle*. 15-Minute Series. U.S. Geological Survey, Washington, D.C. On file, Historic USGS Maps of New England & New York. Dimond Library, Documents Department & Data Center, University of New Hampshire, Durham. Electronic document, <http://docs.unh.edu/NY/buff01ne.jpg>, accessed March 25, 2011.

1948 *New York (Erie County) Buffalo Quadrangle*. 15-Minute Series. U.S. Geological Survey, Washington, D.C. On file, Historic USGS Maps of New England & New York. Dimond Library, Documents Department & Data Center, University of New Hampshire, Durham. Electronic document, <http://docs.unh.edu/NY/buff48ne.jpg>, accessed March 25, 2011.

1965 *Buffalo NW Quadrangle New York–Ontario*. 7.5-Minute Series (Topographic). USGS, Reston, VA.

Urban Land Institute

2007 H.H. Richardson Complex, Buffalo, New York. ULI Briefing Book. Urban Land Institute, np.

Van Ness, Cynthia

2001 Population Growth and Decline over the Years [1810-2000]. Buffalo Architecture and History Internet site, Buffalo History section, Buffalo. Electronic document, <http://ah.bfn.org/h/bflop.html>, accessed April 7, 2011.

Vogel, Michael N., Edward J. Patton, and Paul F. Redding

1993 *America's Crossroads; Buffalo's Canal Street/Dante Place; The Making of a City*. The Heritage Press, Western New York Heritage Institute, Canisius College, Buffalo.

White, Marian E.

1960 Niagara Frontier Iroquois village movements. *Eastern States Archaeological Federation Bulletin* 19:16.

1961 Iroquois Culture History in the Niagara Frontier Area of New York State. *Anthropological Papers*, No. 16. Museum of Anthropology, University of Michigan.

1963 Settlement Pattern Change and the Development of Horticulture in the New York-Ontario Area. *Pennsylvania Archaeologist* 33:1-12.

1971 Ethnic Identification and Iroquois Groups in Western New York and Ontario. *Ethnohistory* 18:19-38.

1978a Neutral and Wenro. In *Northeast*, edited by Bruce G. Trigger, pp. 407-411. Handbook of North American Indians, vol. 15, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

1978b Erie. In *Northeast*, edited by Bruce G. Trigger, pp. 412-417. Handbook of North American Indians, vol. 15, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

White, Truman C. (Editor)

1898 *Our County and its People; a Descriptive Work on Erie County, New York*. 2 vols. Boston History Company, Boston.

Winter, Joseph

1971 A Summary of Owasco and Iroquois Maize Remains. *Pennsylvania Archaeologist* 41(3):1-11.

Wilkeson, John

2005 [1864] Manufacture of Iron in Buffalo; A Paper Read by Invitation before the Buffalo Historical Society. Printing House of Wheeler, Mathews & Warren, Buffalo. Rpt: Making of America Books, University of Michigan Library, Ann Arbor. Electronic document, <http://www.hti.umich.edu/cgi/t/text/text-idx?c=moa;idno=AFT1331>, accessed April 6, 2011.

Zornick, Daniel

2002 The Belt Line Railroad: Its Influence on the Development of Buffalo's Neighborhoods. Buffalo Architecture and History Internet site, Buffalo History section, Buffalo. Electronic document, <http://ah.bfn.org/h/belt/index.html>, accessed April 6, 2011.



**Appendix A**  
**PHOTOGRAPHS**

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**Photograph 1. Western entrance of the South Lawn area (Study Area A) facing northwest (*Panamerican 2011*).**



**Photograph 2. The open cut-grass terrain shovel tested in the South Lawn area (Study Area A) facing north (*Panamerican 2011*).**



**Photograph 3. Utility building (c. 1991 valve house [Building 46]) on the south-central side of the south lawn, facing southwest (*Panamerican 2011*).**



**Photograph 4. Trees and lawn in the eastern part of Study Area A, facing north (*Panamerican 2011*).**



**Photograph 5. Gravel and utilities common along the south side of the historic buildings (Buildings #10, #44, #45) facing west-southwest (*Panamerican 2011*).**



**Photograph 6. Gravel and utilities common along the south side of the historic Building #44 [note: field technician in foreground is at positive STP 4.6], facing northeast (*Panamerican 2011*).**



**Photograph 7.** The western side of Study Area B where a new parking area is proposed, facing south (*Panamerican 2011*).



**Photograph 8.** The northern and central parts of Study Area B where a new parking area is proposed, facing east-southeast (*Panamerican 2011*).



**Photograph 9.** Grading in the southwestern part of Study Area B, facing southeast  
(Panamerican 2011).



**Photograph 10.** The northwestern part of Study Area C, facing southeast  
(Panamerican 2011).



**Photograph 11.** The western part of Study Area C showing existing drive and parking lot, facing east (*Panamerican 2011*).



**Photograph 12.** The eastern and central parts of Study Area C showing an existing parking lot, facing west (*Panamerican 2011*).



**Photograph 13. Rear elevation of Building #1 (c.1912) located just south of Study Area C, facing southeast (*Panamerican 2011*).**



**Photograph 14. A modern utility building (c. 1991 valve house [Building 47]) on the east side of Study Area C, facing southeast (*Panamerican 2011*).**





**Photograph 15. Close-interval shovel testing around positive STP 4.6 [note adjacent disturbances, facing north (*Panamerican 2011*).**

**Appendix B**  
**SHOVEL TEST LOG**

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### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
1.1	1	0-32	10YR 4/1	DK GR	SI LO	Disturbed - gravel, cinders
1.1	2	32-42	10YR 5/2 10YR 6/8	GR BR BR YL	SI CL	NCM
1.2	1	0-24	10YR 4/1	DK GR	SI LO	Disturbed 0-15cm - gravel, cinders
1.2	2	24-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
1.3	1	0-22	10YR 4/1	DK GR	SI LO	NCM
1.3	2	22-32	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
1.4	1	0-26	10YR 4/2	DK GR BR	SI LO	Concentration of gravel and cinders 16-26 cm
1.4	2	26-36	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
1.5	1	0-28	10YR 4/2	DK GR BR	SI LO	Small amount of gravel; 1 modern clear glass shard (discarded)
1.5	2	28-38	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
1.6	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM
1.6	2	23-33	5YR 4/4	RD BR	CL	NCM
2.1	1	0-18	10RY 4/2 5YR 5/2	DK GR BR RD GR	SI LO	NCM: Disturbed - mixed strata; Water filled the pit
2.2	1	0-15	10YR 4/2	DK GR BR	SI LO	NCM; water filled the pit
2.3	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
2.3	2	20-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
2.4	1	0-18	10YR 4/2	DK GR BR	SI LO	NCM
2.4	2	18-30	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
2.5	1	0-20	10RY 4/2 5YR 4/4	DK GR BR RD BR	SI LO	Disturbed - mixed strata; 2 small brick frags (discarded)
2.5	2	20-35	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
2.6	1	0-18	10YR 4/2	DK GR BR	SI LO	NCM
2.6	2	18-30	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
2.7	1	0-17	10YR 4/2	DK GR BR	SI LO	Disturbed - gravel
2.7	2	17-32	5YR 4/4	RD BR	SI CL	NCM
3.1	1	0-27	10YR 4/2	DK GR BR	SI LO	1 modern clear bottle shard (discarded)
3.1	2	27-38	10YR 5/6	YL BR	SI CL	NCM
3.2	1	0-30	10YR 4/2	DK GR BR	SI LO	2 modern green bottle shards (discarded)
3.2	2	30-40	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
3.3	1	0-29	10YR 4/2	DK GR BR	SI LO	1 styrofoam (discarded)
3.3	2	29-39	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
3.4	1	0-28	10YR 4/2	DK GR BR	SI LO	NCM
3.4	2	28-39	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
3.5	1	0-29	10YR 4/2	DK GR BR	SI LO	NCM
3.5	2	29-39	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
3.6	1	0-27	10YR 4/2	DK GR BR	SI LO	NCM
3.6	2	27-39	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM

### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
3.7	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
3.7	2	20-32	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
3.8	1	0-24	10YR 4/2	DK GR BR	SI LO	NCM
3.8	2	24-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
<b>Key</b>	<b>Soil Color:</b> BR = brown, DK = dark, GR = gray, LT = light, YL = yellow, BL=Black					
	<b>Soil Description:</b> CL = clay, LO = loam, SA = sand, SI = silt					
	<b>Comments:</b> NCM = no cultural material					
4.1	1	0-28	10YR 4/2	DK GR BR	SI LO	NCM
4.1	2	28-42	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
4.2	1	0-30	10YR 4/2	DK GR BR	SI LO	1 modern amber bottle shard (discarded)
4.2	2	30-41	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
4.3	1	0-32	10YR 4/2	DK GR BR	SI LO	plastic debris at 10cm (discarded)
4.3	2	32-43	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
4.4	1	0-31	10YR 4/2	DK GR BR	SI LO	minor amount of cinders or slag
4.4	2	31-45	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
4.5	1	0-27	10YR 4/2	DK GR BR	SI LO	minor amount of cinders or slag
4.5	2	27-37	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
4.6	1	0-42	10YR 4/2	DK GR BR	SI LO	Disturbed topsoil- plastic toy piece, poker chip, <b>prehistoric flake fragment; scraper (retouched chert shatter)</b>
4.6	2	42-52	5YR 4/4	RD BR	CL	NCM
4.6+1mN	1	0-30	10YR 4/2	DK GR BR	SI LO	Disturbed - gravel, brick frag, slate tile fragments (discarded)
4.6+1mN	2	30-40	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
4.6+3mN	1	0-27	10YR 4/2	DK GR BR	SI LO	Disturbed - gravel, coke bottle fragment (discarded)
4.6+3mN	2	27-40	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
4.6+1mS	1	0-28	10YR 4/2	DK GR BR	SI LO	Disturbed - gravel
4.6+1mS	2	28-40	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
4.6+1mE	1	0-29	10YR 4/2	DK GR BR	SI LO	Disturbed - gravel
4.6+1mE	2	29-39	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
4.6+4mE	1	0-33	10YR 4/2	DK GR BR	SI LO	Disturbed - cinders, concrete chunk, 1 UFMO, 2 wire nail fragments (discarded)
4.6+4mE	2	33-44	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
4.6+1mW	1	0-36	10YR 4/2	DK GR BR	SI LO	Disturbed - 10-20% slate roofing fragments
4.6+1mW	2	36-46	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
4.6+3mW	1	0-35	10YR 4/2	DK GR BR	SI LO	Disturbed - gravel, brick frag, slate tile fragments (discarded)
4.6+3mW	2	35-45	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM

### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
5.1	1	0-21	10YR 4/2	DK GR BR	SI	NCM
5.1	2	21-36	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
5.2	1	0-23	10YR 4/2	DK GR BR	SI	NCM
5.2	2	23-38	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
5.3	1	0-22	10YR 4/2	DK GR BR	SI	NCM
5.3	2	22-35	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
5.4	1	0-25	10YR 4/2	DK GR BR	SI	NCM
5.4	2	25-36	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
5.5	1	0-21	10YR 4/2	DK GR BR	SI	NCM
5.5	2	21-37	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
5.6	1	0-23	10YR 4/2	DK GR BR	SI	NCM
5.6	2	23-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
5.7	1	0-28	10YR 4/2	DK GR BR	SI	NCM
5.7	2	28-40	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
6.1	1	0-24	10YR 4/2	DK GR BR	SI	NCM
6.1	2	24-36	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
6.2	1	0-22	10YR 4/2	DK GR BR	SI	NCM
6.2	2	22-35	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
6.3	1	0-21	10YR 4/2	DK GR BR	SI	NCM
6.3	2	21-35	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
6.4	1	0-20	10YR 4/2	DK GR BR	SI	Disturbed - small amount of cinders at 5cm
6.4	2	20-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
6.5	1	0-25	10YR 4/2	DK GR BR	SI	NCM
6.5	2	25-37	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
6.6	1	0-15	10YR 4/2	DK GR BR	SI	Disturbed - small amount of coal
6.6	2	15-31	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
6.7	1	0-30	10YR 4/2	DK GR BR	SI LO	Disturbed - 40% gravel
6.7	2	30-41	10YR 4/4	DK YL BR	SI CL	NCM
7.1	1	0-28	10YR 4/2	DK GR BR	SI LO	1 modern clear bottle shard, several small brick fragments (discarded)
7.1	2	28-38	5YR 4/4	RD BR	CL	NCM
7.2	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM
7.2	2	23-33	5YR 4/4	RD BR	CL	NCM
7.3	1	0-24	10YR 4/2	DK GR BR	SI LO	Disturbed - 1 clear glass shard, several medina sandstone fragments (discarded)
7.3	2	24-34	5YR 4/4	RD BR	CL	NCM
7.4	1	0-28	10YR 4/2	DK GR BR	SI LO	NCM
7.4	2	28-35	5YR 4/4	RD BR	CL	Rock impasse at 35 cm
7.5	1	0-21	10YR 4/2	DK GR BR	SI LO	NCM
7.5	2	21-31	5YR 4/4	RD BR	CL	NCM
7.6	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM

### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
7.6	2	23-33	5YR 4/4	RD BR	CL	NCM
8.1	1	0-16	10YR 4/2	DK GR BR	SI LO	Disturbed - 1 possible loose building stone at interface: expanded test
8.1	2	16-26	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
8.2	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
8.2	2	20-31	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
8.3	1	0-25	10YR 4/2	DK GR BR	SI LO	NCM
8.3	2	25-35	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
8.4	1	0-18	10YR 4/2	DK GR BR	SI LO	Disturbed - high gravel content
8.4	2	18-32	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
8.5	1	0-30	10YR 4/2 5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	Disturbed - mixed strata
8.6	1	0-15	10YR 4/2	DK GR BR	SI LO	Root impasse - near large tree
9.1	1	0-25	10YR 4/2	DK GR BR	SI LO	NCM
9.1	2	25-37	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
9.2	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM
9.2	2	23-36	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
9.3	1	0-33	10YR 4/2	DK GR BR	SI LO	NCM
9.3	2	33-43	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
9.4	1	0-28	10YR 4/2	DK GR BR	SI LO	Disturbed - gravel
9.4	2	28-39	5YR 5/2 5YR 4/4	RD GR RD BR	CL	Disturbed - under 5% gravel
9.5	1	0-29	10YR 4/2	DK GR BR	SI LO	Disturbed - disintegrated steel beverage can (discarded)
9.5	2	29-42	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
9.6	1	0-20	10YR 4/2	DK GR BR	SI LO	Disturbed - plastic (discarded)
9.6	2	20-30	5YR 4/4	RD BR	CL	NCM
9.7	1	0-20	5YR 5/2 5YR 4/4	RD GR RD BR	CL	Disturbed - Stratum I stripped
9.8	1	0-18	10YR 4/2	DK GR BR	SI LO	Disturbed - small brick and slate tile fragments
9.8	2	18-30	5YR 4/4	RD BR	CL	NCM
10.1	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
10.1	2	20-32	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.2	1	0-22	10YR 4/2	DK GR BR	SI LO	NCM
10.2	2	22-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.3	1	0-19	10YR 4/2	DK GR BR	SI LO	NCM
10.3	2	19-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.4	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM
10.4	2	23-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.5	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
10.5	2	20-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.6	1	0-22	10YR 4/2	DK GR BR	SI LO	NCM

### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
10.6	2	22-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.7	1	0-25	10YR 4/2	DK GR BR	SI LO	NCM
10.7	2	25-39	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.8	1	0-24	10YR 4/2	DK GR BR	SI LO	NCM
10.8	2	24-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
10.9	1	0-32	10YR 4/2	DK GR BR	SI LO	Disturbed - Dr. Pepper can and a few wire nails (discarded)
10.9	2	32-45	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
10.10	1	0-20	10YR 4/2	DK GR BR	SI LO	Disturbed - minor brick and coal fragments
10.10	2	20-33	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
11.1	1	0-34	10YR 4/2	DK GR BR	SI LO	NCM
11.1	2	34-44	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
11.2	1	0-22	10YR 4/2	DK GR BR	SI LO	NCM
11.2	2	22-32	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
11.3	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM
11.3	2	23-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
11.4	1	0-27	10YR 4/2	DK GR BR	SI LO	Disturbed - brick fragments (discarded)
11.4	2	27-37	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
11.5	1	0-29	10YR 4/2	DK GR BR	SI LO	Disturbed - brick fragments (discarded)
11.5	2	29-40	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
11.6	1	0-24	10YR 4/2	DK GR BR	SI LO	NCM
11.6	2	24-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
12.1	1	0-19	10YR 4/2	DK GR BR	SI LO	Disturbed - some medina sandstone fragments
12.1	2	19-32	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
12.2	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
12.2	2	20-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
12.3	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
12.3	2	20-31	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
12.4	1	0-24	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI CL	Disturbed - mixed strata; cinder and asphalt impasse
12.5	1	0-20	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI CL	Disturbed - mixed strata; cinder and asphalt impasse
12.5	2	20-26	10YR 5/1	GR	cinders	asphalt / slag (cinders)
12.6	1	0-17	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI CL	Disturbed - asphalt
12.6	2	17-30	5YR 4/4	RD BR	CL	NCM
12.7	1	0-17	10YR 4/2	DK GR BR	SI	Disturbed - brick fragments (discarded)

### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
12.7	2	17-32	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
13.1	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
13.1	2	20-31	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
13.2	1	0-33	10YR 4/2	DK GR BR	SI LO	NCM
13.2	2	33-43	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
13.3	1	0-27	10YR 4/2	DK GR BR	SI LO	NCM
13.3	2	27-37	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
13.4	1	0-28	10YR 4/2	DK GR BR	SI LO	Disturbed - asphalt, brick, gravel, pull-tab
13.4	2	28-38	5YR 4/4	RD BR	CL	NCM
13.5	1	0-24	10YR 4/2	DK GR BR	SI LO	NCM
13.5	2	24-34	5YR 4/4	RD BR	CL	NCM
13.6	1	0-27	10YR 4/2	DK GR BR	SI LO	Disturbed - high gravel content
13.6	2	27-37	5YR 4/4	RD BR	CL	NCM
13.7	1	0-27	10YR 4/2	DK GR BR	SI LO	Disturbed - high gravel/asphalt content
13.7	2	27-37	5YR 4/4	RD BR	CL	NCM
13.8	1	0-35	10YR 4/2	DK GR BR	SI LO	Disturbed - high gravel/asphalt content: mixed strata
13.8	2	35-45	5YR 4/4	RD BR	CL	NCM
13.9	1	0-38	10YR 4/2	DK GR BR	SI LO	Disturbed - high gravel/asphalt content: mixed strata
13.9	2	38-50	5YR 4/4	RD BR	CL	NCM
13.10	1	0-17	10YR 4/2	DK GR BR	SI LO	Disturbed - possibly stripped
13.10	2	17-27	5YR 4/4	RD BR	CL	NCM
14.1	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM
14.1	2	23-35	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
14.2	1	0-12	10YR 4/2	DK GR BR	SI LO	Disturbed - cinders and brick fragments throughout
14.2	2	12-23	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
14.3	1	0-25	10YR 4/2	DK GR BR	SI LO	NCM
14.3	2	25-38	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
14.4	1	0-23	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel and mixing of strata
14.4	2	23-36	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
14.5	1	0-17	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel and mixing of strata
14.5	2	17-33	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
14.6	1	0-15	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel
14.6	2	15-30	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
14.7	1	0-24	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel
14.7	2	24-37	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
14.8	1	0-16	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel
14.8	2	16-35	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM



### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
14.9	1	0-20	10YR 3/2	VERY DK GR BR	SI LO	Disturbed - 40% gravel
14.9	2	20-31	5YR 4/4	RD BR	CL	NCM
15.1	1	0-18	10YR 4/2	DK GR BR	SI	Disturbed - cinders, medina sandstone fragments
15.1	2	18-30	5YR 5/2	RD GR	CL	NCM
15.2	1	0-28	10YR 4/2	DK GR BR	SI	Disturbed - some mixing of strata
15.2	2	28-38	5YR 5/2	RD GR	CL	NCM
15.3	1	0-18	10YR 4/2	DK GR BR	SI	Disturbed - construction debris
15.3	2	18-28	5YR 5/2	RD GR	CL	NCM
15.4	1	0-19	10YR 4/2	DK GR BR	SI	Disturbed - cinders, plastic (discarded)
15.4	2	19-32	5YR 5/2	RD GR	CL	NCM
15.5	1	0-12	10YR 4/2	DK GR BR	SI	Disturbed - some mixing of strata, slag, ash
15.5	2	12-30	5YR 5/2	RD GR	CL	NCM
15.6	1	0-19	10YR 4/2	DK GR BR	SI	Disturbed - 3cm thick layer of cinders/ash at base
15.6	2	19-31	5YR 5/2	RD GR	CL	NCM
15.7	1	0-23	10YR 4/2	DK GR BR	SI	NCM
15.7	2	23-33	5YR 5/2	RD GR	CL	NCM
16.1	1	0-48	10YR 4/2	DK GR BR	SI LO	Disturbed - some mixing of strata, cinders, brick fragments, roofing tile
16.1	2	48-50	5YR 4/4	RD BR	CL	NCM
16.2	1	0-20	10YR 4/2	DK GR BR	SI LO	Disturbed - fill, asphalt, rock
16.3	1	0-23	10YR 4/2	DK GR BR	SI LO	Disturbed - some mixing of strata, gravel
16.3	2	23-35	5YR 4/4	RD BR	CL	NCM
16.4	1	0-18	10YR 4/2	DK GR BR	SI LO	Disturbed - high gravel, asphalt, concrete content
16.4	2	18-30	5YR 4/4	RD BR	CL	NCM
16.5	1	0-20	10YR 4/2	DK GR BR	SI LO	Disturbed - fill: rock, brickm concrete, asphalt
17.1	1	0-22	10YR 4/2	DK GR BR	SI	Disturbed - small brick fragments
17.1	2	22-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
17.2	1	0-23	10YR 4/2	DK GR BR	SI	Disturbed - small brick fragments
17.2	2	23-33	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
17.3	1	0-22	10YR 4/2	DK GR BR	SI	Disturbed - small brick fragments, plastic
17.3	2	22-32	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
17.4	1	0-12	10YR 4/2	DK GR BR	SI	Disturbed - hard packed gravel fill
18.1	1	0-28	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI CL	Disturbed - mixed strata
18.1	2	28-40	10YR 5/1	GR	gravel	Disturbed - compact gravel
18.2	1	0-28	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI CL	Disturbed - mixed strata
18.2	2	28-40	10YR 5/1	GR	gravel	Disturbed - compact gravel
18.3	1	0-24	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI CL	Disturbed - mixed strata
18.3	2	24-35	10YR 5/1	GR	gravel	Disturbed - compact gravel
19.1	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
19.2	2	20-30	5YR 4/4	RD BR	CL	Disturbed - coal, brick fragments near interface

### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
19.2	1	0-13	10YR 5/4	YL BR	CL LO	Disturbed - 40% rock and gravel
19.2	2	13-30	10YR 6/3 10YR 5/4	PALE BR YL BR	CL LO	NCM
19.3	1	0-8	10YR 5/4	YL BR	CL LO	Disturbed - 40% rock and gravel
19.3	2	8-28	10YR 6/3 10YR 5/4	PALE BR YL BR	CL LO	NCM
20.1	1	0-22	10YR 4/2	DK GR BR	SI LO	Disturbed - moderate amount of gravel
20.1	2	22-32	10YR 4/1	DK GR	SI	NCM
20.2	1	0-30	10YR 4/2	DK GR BR	SI LO	Disturbed - moderate amount of gravel
20.2	2	30-40	10YR 4/1	DK GR	SI	NCM
20.3	1	0-26	10YR 4/2	DK GR BR	SI LO	Disturbed - moderate amount of gravel
20.3	2	26-36	10YR 4/1	DK GR	SI	NCM
21.1	1	0-50	10YR 4/2	DK GR BR	SI LO	Disturbed - fill: gravel, brick fragments, rock, asphalt, mixed with clay lenses
21.2	1	0-50	10YR 4/2	DK GR BR	SI LO	Disturbed - fill: gravel, brick fragments, rock, asphalt, mixed with clay lenses
21.3	1	0-50	10YR 4/2	DK GR BR	SI LO	Disturbed - fill: gravel, brick fragments, rock, asphalt, mixed with clay lenses
22.1	1	0-10	10YR 4/2	DK GR BR	SI LO	Disturbed - mixed strata and gravel
22.1	2	10-13	5YR 4/4	RD BR	SI CL	Disturbed - mixed strata and gravel
22.1	3	13-28	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI CL	NCM
22.2	1	0-10	10YR 4/2	DK GR BR	SI LO	Disturbed - mixed strata and gravel
22.2	2	10-22	5YR 4/4	RD BR	SI CL	Disturbed - mixed strata and gravel
22.2	3	22-28	10YR 5/1	GR	SI CL	Disturbed - layer of gravel
22.3	1	0-22	10YR 4/2 5YR 4/4	DK GR BR RD BR	SI LO	Disturbed - high gravel content; gravel impasse at 22 cm
23.1	1	0-18	10YR 4/2	DK GR BR	SI LO	Disturbed - 30% rock and gravel
23.1	2	18-31	5YR 4/4	RD BR	CL	NCM
23.2	1	0-21	10YR 5/4	YL BR	SI LO	Disturbed - 30% gravel
23.2	2	21-35	10YR 5/1 10YR 6/3 5YR 6/8	GR PALE BR BR YL	SI CL	NCM
23.3	1	0-11	10YR 5/4	YL BR	SI LO	Disturbed - 30% gravel
23.3	2	11-25	10YR 5/1 10YR 6/3 5YR 6/8	GR PALE BR BR YL	SI CL	NCM
24.1	1	0-23	10YR 4/2	DK GR BR	SI	brick fragments
24.1	2	23-34	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
24.2	1	0-25	10YR 4/2 5YR 5/2	DK GR BR RD GR	CL	Disturbed - mixed strata; asphalt, styrofoam (discarded)
24.3	1	0-20	10YR 4/2	DK GR BR	SI	NCM
24.3	2	20-31	5YR 5/2 5YR 4/4	RD GR RD BR	CL	NCM
25.1	1	0-24	10YR 4/2	DK GR BR	SI LO	NCM
25.1	2	24-34	5YR 4/4	RD BR	CL	NCM
25.2	1	0-20	10YR 4/2	DK GR BR	SI LO	NCM
25.2	2	20-33	5YR 4/4	RD BR	CL	NCM
25.3	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM

### Shovel Test Log for Richardson Complex, Phase I

Transect/ STP	Stratum	Depth (cm)	Munsell	Soil Color	Soil Description	Comments
25.3	2	23-34	5YR 4/4	RD BR	CL	NCM
26.1	1	0-25	10YR 4/2	DK GR BR	SI LO	NCM - Disturbed
26.1	2	25-35	5YR 4/4	RD BR	CL	NCM
26.2	1	0-23	10YR 4/2	DK GR BR	SI LO	NCM - Disturbed
26.2	2	23-35	5YR 4/4	RD BR	CL	NCM
26.3	1	0-21	10YR 4/2	DK GR BR	SI LO	NCM - Disturbed
26.3	2	21-36	5YR 4/4	RD BR	CL	NCM
27.1	1	0-23	10YR 4/2	DK GR BR	SI LO	1 whiteware fragment (collected)
27.1	2	23-33	5YR 4/4	RD BR	SI CL	NCM
27.2	1	0-25	10YR 4/2	DK GR BR	SI LO	NCM
27.2	2	25-35	5YR 4/4	RD BR	SI CL	NCM
27.3	1	0-30	10YR 4/2	DK GR BR	SI LO	some ash at interface
27.3	2	30-40	5YR 4/4	RD BR	SI CL	NCM
27.4	1	0-25	10YR 4/2	DK GR BR	SI LO	graphite rod, 2 clear glass (discarded)
27.4	2	25-33	GLEY 2 3/10B	VERY DK BLUISH GRAY	ash/cinders	Disturbed - ash, cinders, small brick fragments
27.4	3	33-43	5YR 4/4	RD BR	SI CL	NCM
28.1	1	0-23	10YR 3/2	VERY DK GR BR	SI LO	Disturbed - 30% gravel
28.1	2	23-31	GLEY 2 3/10B	VERY DK BLUISH GRAY	coal	Disturbed - slag, cinders, small brick fragments
28.1	3	31-41	10YR 4/2 5YR 4/4	DK GR BR RD BR	CL	NCM
28.2	1	0-26	10YR 3/2	VERY DK GR BR	SI LO	Disturbed - 30% gravel
28.2	2	26-32	GLEY 2 3/10B	VERY DK BLUISH GRAY	coal	Disturbed - slag, cinders, small brick fragments
28.2	3	31-45	10YR 4/2 5YR 4/4	DK GR BR RD BR	CL	NCM
28.3	1	0-12	10YR 3/2	VERY DK GR BR	SI LO	Disturbed - compact gravel and asphalt
29.1	1	0-13	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel fill
29.1	2	13-27	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
29.2	1	0-20	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel fill
29.2	2	20-32	5YR 5/2 5YR 4/4	RD GR RD BR	SI CL	NCM
29.3	1	0-10	10YR 4/2	DK GR BR	SI LO	Disturbed - some gravel fill
29.3	2	10-25	5YR 4/4	RD BR	CL	Disturbed - gravel and asphalt found 10-25 cm