Archeological Investigations at Boston Village, Boston Township, Summit County, Ohio, Part I: Inventory and Evaluation at the Boston General Store, 1991

By

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Making the report available to the public meets the criteria of 43CFR Part 7, Subpart A, Section 7.18 (a)(1).

Abstract

This report summarizes the results of a three-week-long archeological investigation of the grounds about the Boston General Store at Cuyahoga Valley National Recreation Area. This timber-frame structure has survived relatively intact since its construction in 1836. It exhibits elements of Classical and Greek Revival architecture combined with vernacular components. Located along the towpath (west side) of the Ohio and Erie Canal in the village of Boston, Summit County, Ohio, the structure is part of an early- and mid-nineteenth-century commercial development focusing on various milling activities and on the canal's transportation potential. The Store had minor impact on the regional economy, although some of its owners were successful, relatively notable figures in the nineteenth-century business community of nearby Akron, Ohio, and of the Western Reserve in general. The structure was a family residence for most of its long history, but it also functioned as a general merchandise store, post office, and warehouse throughout much of the nineteenth century.

The ongoing restoration of the canal towpath as a hiking trail through the Recreation Area led to the need for numerous access points and other visitor facilities. The Store's location and architectural significance made it a prime candidate for preservation and adaptive use. In 1991, a draft Historic Structure Report was completed, thus initiating the adaptive restoration process. The archeological investigation reported here is a separate component of that study. Archeological fieldwork focused on study of the condition of the original sandstone foundation and investigation of the structure's grounds to determine the nature of associated archeological features and artifact scatters. Limited test excavations revealed numerous archeological/architectural features preserved on the grounds and demonstrated the foundation to be in variable condition. Many of the archeological features are foundation elements from a two-story timber-frame warehouse that formerly had been attached to the south facade of the Store.

Artifacts spanning most of the plus-150-year history of the structure were recovered during evaluative testing. These materials support current interpretation of the historic record which argues that the Store's impact was local both in scale and in importance. The numerous, well-preserved features and stratified condition of the site indicate that the archeological deposits surrounding the structure are significant and should be carefully considered during future restoration.

Acknowledgments

Numerous individuals contributed to the brief field investigation and the more lengthy curation and analytical phase of the project. The field crew consisted of a core of four persons under my direction, supplemented on a short-term basis by members of William Hunt's Midwest Archeological Center team who assisted us while completing other field duties at Cuyahoga Valley National Recreation Area. The primary crew consisted of Tim Meade, Julie Schablitsky, Michael Stanley, and Rebecca Wallace. This crew worked 14 days at the site, toiling in unusual drought conditions that transformed the normally pliable Ohio loam into a baked and brick-hard obstacle to excavation. The members of Hunt's crew who augmented the primary team included Karen Archey (4 days), Lisa King (6 days), Ryan Wachter (4 days), Keith Richter (6 days), and Cherryl Busuttil (4 days). Without their assistance, the project excavation coverage goals could not have been met. Bill Hunt spent a day at the site and assisted in numerous ways, not the least of which was reopening a test unit dug by a Cleveland Museum of Natural History fieldschool team in 1985.

In addition to the paid National Park Service field crew, two volunteers contributed their time and energy to the project. Keith Peterson from the 1991 Cleveland Museum of Natural History fieldschool spent a full and tiring day helping with the excavation of Unit 7. Paul Jacobs, a visitor from England, worked with us for four days. Their efforts are gratefully acknowledged.

I appreciated on-site visits by members of the Cuyahoga Valley National Recreation Area staff too numerous to mention. I enjoyed interacting with personnel from the interpretive, enforcement, technical, and maintenance divisions. Assistant Superintendent Bob Martin was a frequent visitor, and his interest and support was appreciated by the entire crew. Dave Humphrey, Chief of the Technical and Professional Services Division (TAPS), found time in his busy schedule to help us complete the thankless backfilling process. His enthusiasm helped replenish our sagging energy. I especially appreciated separate on-site visits by archeologists Dave Brose and Stephanie Belovich who shared much useful information on their 1985 testing program at the site. Dave also showed me aspects of the nearby mill site that I had not previously seen.

The time-consuming analytical stage of the project was completed primarily by Todd Ahlman and Rebecca Wallace. They also contributed extensively to this report by developing the numerous artifact data summary tables. The Midwest Archeological Center editing and report production team added to the readability and utility of the report. Ken Gobber, John Andresen, and Wes Jackson edited the report. Figures were prepared by Carrol Moxham. I appreciate the efforts of everyone who helped produce this report.

Contents

Tables

Figures

Introduction

The Boston General Store is located within Boston Township Lot 45 on Boston Village Lot 56, in Boston, Ohio (Figures 1 and 2). Built in 1836, the Store owes its unusual trapezoidal shape to its position on Lot 56, the asymmetrical north edge of which conforms with the course of Boston Mills Road (Figure 3). Formerly known as State Road, Boston Mills Road angles from ENE to WSW as it passes Lot 56 toward its crossing of the Cuyahoga River. The remaining sides of the lot form a simple rectangle, causing the east and west lot lines to be of different lengths. The structure, which covers most of the lot, was designed and built in a manner to take advantage of the limited space available on the small, trapezoidal lot. In the past, the structure's shape has incorrectly been referred to as "rhomboid" (Quinn Evans/Architects 1992:4), a term reserved for equilateral parallelograms.

The east edge of Lot 56 is formed by the towpath of the Ohio and Erie Canal, the Cleveland to Akron segment of which opened for commerce in 1827. Lot 56 is flanked on the south and west by other small Boston Village lots. A large warehouse component, formerly attached to the south facade of the Boston General Store, extended onto adjacent Lot 55. The warehouse is no longer extant. All these small lots were established during the commercial development of the village of Boston, which had its initial economic florescence in the 1830s. The developmental roots of the village are from the 1820s, or possibly somewhat earlier.

The Boston General Store is located within the boundaries of Cuyahoga Valley National Recreation Area (CUVA). The archeological project described in this report was initiated as a result of a plan by CUVA to restore the structure adaptively for visitor use. That proposal is a component of a larger, multiyear adaptive restoration of the adjacent Ohio and Erie Canal towpath. Now in its final stages, the project has refurbished the towpath into a multipurpose trail that extends the length of the Recreation Area. Although the precise visitor-oriented future uses for the Boston General Store were not established when this project was completed, research was initiated to review its use, construction history, and its current physical condition. The 1991 archeological project at the Boston General Store is a separate component of those studies, most of which are subsumed in a Historic Structures Report (HSR). Quinn Evans/Architects completed a draft HSR in 1992 and a final version in 1995. According to National Park Service policy, an HSR

> is prepared whenever there is to be a major intervention into historic structures or where activities are programmed that affect the qualities and characteristics that make the property eligible for inclusion in the National Register. The report consists of the collection, presentation, and evaluation of anthropological/archeological, historical, architectural/engineering research findings on historic or prehistoric structures, and their setting, and makes recommendations for treatment consistent with their significance, integrity, condition, and programmed use. (National Park Service 1985:2–21)

These conditions apply to the plans being developed for treatment of the Boston General Store, necessitating the completion of the HSR.

Preliminary results of the archeological research in the form of line drawings, photographs, elevations, plan maps, and profiles were provided to the HSR contractor in 1991. From the onset of the project it was intended that the archeological research be reported separately from, and in more detail than, the summary of archeological findings to be developed by the contractor for the HSR. The current report serves that purpose. A similar approach was followed for the historic background component of the

project. Documentary research into the history and use of the structure was completed by CUVA Historian Jeff Winstel (1991). His findings are recapitulated in the HSR. Quinn Evans/Architects research for the HSR focused on documenting and interpreting the building's fabric, and on presenting adaptive restoration design recommendations. This included an extensive physical examination of the structure and an analysis that places the structure in an appropriate regional architectural and stylistic context.

The Boston General Store was constructed in 1836, a period of overlap between Classic and Greek revival architectural building styles in Ohio (Quinn Evans/Architects 1992:6). Elements of both styles, in addition to local vernacular influences, are reflected in the structure's form and detailing. The east and north facades have undergone the least modification, and the early-nineteenth-century decorative and structural elements are best seen in those components. The south facade is greatly altered owing to the 1928 removal of the formerly attached warehouse; it is now covered with asphalt shingles. The structure was listed on the National Register of Historic Places on December 11, 1979, under the incorrect name of the Jim Brown Tavern. Confusion regarding the structure's ownership history and function was resolved soon after the structure was placed on the National Register. Its listing results primarily from its association with historical events of the early and mid-nineteenth century. The detailed architectural research reported in the HSR clearly demonstrates that the structure also merits inclusion on the National Register of Historic Places because of its architectural elements. The results of evaluative archeological testing further document that the property is significant from a research perspective.

The early history of Boston and the Boston General Store relates to the transportation and commercial potential of the Ohio and Erie Canal and to the opportunities for generating water power on the Cuyahoga River. Boston is located on a low, flat riverine terrace above the river channel and the narrow floodplain of the Cuyahoga River. Uplands rise quickly east and west of the community. Since the economic potential of the river and canal were apparently never fully realized at Boston, the Store had minor economic impact through its history. The various individuals and company configurations that owned the Boston General Store and the other commercial properties and homes in Boston were only partly successful in creating a manufacturing center. The milling and other commercial operations remained of limited scale and soon gave way to other enterprises. Late-nineteenth- and early-twentieth-century commercial ventures were located west of the river, away from the village's original business center.

The process of decline of the milling and related businesses along the Cuyahoga River and Ohio and Erie Canal in Boston may have been hastened by the completion of the Valley Railroad line west of the river. This line and other rail lines quickly eclipsed the anachronistic canal transportation system. The nucleus of Boston slowly changed to residential, rather than commercial use. This pattern has continued until today, when no commercial activities occur in the center of the community. However, several of the original structures, including the Boston General Store, have survived the transition from small company milling town to residential community. The history of the Boston General Store and a discussion of a limited archeological testing effort by the Cleveland Museum of Natural History (CMNH) in 1985 are presented in the next section, entitled Historical and Archeological Background.

The primary goals of the archeological evaluative testing program at the Boston General Store included the following: inventorying the grounds surrounding the structure for the presence of artifact deposits and archeological evidence of former structural features; examining the extent and character of the foundation for the former attached warehouse; and studying portions of the sandstone building foundation to determine its configuration and condition. These goals were approached through excavation of a limited number of shovel tests and test excavation units, rather than through extensive block

excavations. The project was not geared toward extensive archeological data recovery but was instead focused on evaluating the nature, condition, and significance of the archeological deposits at the site. Following the Secretary of Interior's Standards for Rehabilitation (Hume and Weeks 1983:44), the overarching goal of the archeological project was to develop the archeological database for the project so that unnecessary disturbance to archeological deposits could be avoided during the future restoration of the structure. The Standards call for "preserving in place known archeological material wherever possible" (Hume and Weeks 1983:44). By surveying and evaluating the grounds, the field crew was able to give adequate consideration to any archeological deposits and features as planning for structural restoration advanced. In that manner, materials could be preserved *in situ*, or alternatively, the data from evaluative testing could be used to design strategies to mitigate any adverse impacts that might occur as a result of the restoration.

The Field Methods section of this report describes the methods used to achieve the project goals. The nature of the various artifact-bearing deposits and architectural features and the characteristics of the structure's foundation are described and analyzed in the Site Stratigraphy and Features section. Laboratory analysis of the recovered data, including a sizable artifact assemblage, stratigraphic information, and details regarding the numerous occupational and architectural features are discussed in several sections. These lines of study include an attempt to study independently the function of the structure through the nineteenth century. Archeological data are used to evaluate the conclusions of the historic documents research that indicated that the Boston General Store was of relatively little consequence from a commercial perspective. Further, the archeological data set is contrasted with other roughly contemporaneous sites within CUVA, including 33–Cu–314 (the Canal Visitor Center) and 33–Cu–341 (the Frazee–Hynton House). Those comparisons are made to evaluate further the functional question by comparing artifact assemblages from a known nineteenth-century tavern and from a prosperous nineteenth-century farm to material from the Boston General Store.

The results of the project are summarized in the Conclusions section; the site's significance is evaluated; and recommendations are made for avoidance and preservation of intact elements.

Historical and Archeological Background

The narrative to follow places the 1991 archeological project at the Boston General Store in historical and archeological perspective. Given the scope and purpose of the project, primary emphasis is placed on developing a summary of the ownership and functional history of the property. That discussion is framed within a broader overview of the settlement of the Connecticut Western Reserve in general, and the Boston Township and Boston Village areas in particular. A CMNH fieldschool undertook limited archeological testing at the Boston General Store in 1985, but that effort did not yield a completed report. The scope of the testing project is described below. Data from the 1985 field investigation are incorporated into the following sections.

Historical Background

Early Settlement History

The early-nineteenth-century settlement pattern of Boston Township and the Village of Boston reflects a unique system of land distribution and purchase. Prior to the 1780s, many of the original eastern seaboard states owned property outside their state boundaries. These lands were eventually sold and organized into other states. Connecticut held about 3 million of its extra-boundary lands until the 1790s, when it complied with congressional requests and disposed of a large strip along the south shore of Lake Erie. Since this land had been reserved by Connecticut during previous land sales, it came to be known as the Western Reserve. After the Indians released their claim to lands east of the Cuyahoga River through the Treaty of Greenville in 1795, plans for subdividing and selling the acreage were developed. The lands west of the Cuyahoga did not become part of the United States and open for settlement until after the 1805 treaty of Fort Industry. Only minimal settlement of the Western Reserve lands began before that date.

Survey of the Western Reserve lands east of the Cuyahoga River in 1796 and 1797 was accomplished through division of the large tract into five-mile-square townships. The system of square-mile sections and 36-square-mile townships, so well known for much of the United States, does not apply to the former Western Reserve lands. Instead, the townships were divided into a series of lots. A group of speculators and investors purchased the land from Connecticut and organized under the Connecticut Land Company.

The 49 shareholders in the Connecticut Land Company acquired a total of 34 land parcels by lottery. Not all of these owners ever saw their new property. Many shareholders subdivided their holdings and sold lots to farmers ready to start a new life on the Western Reserve frontier. The hardships faced by these first setters are well documented (Hatcher 1991). With these land-owning settlers came squatters who occupied and "improved," but did not own, other parcels. For many years, the isolated, scattered pattern of settlement and the complete lack of governmental and economic infrastructure resulted in little economic differential between the land owners and the squatters. There were few roads, and a true cash economy was not in place for several decades. Subsistence farming and a barter economy characterized the early years of settlement. A scattered settlement pattern resulted from the nature of the initial lottery system and subsequent subdivision of the Western Reserve lands (Scrattish 1985). Between 1800 and 1820, settlement was dispersed, with the population widely distributed in very small clusters. Only a few

minor concentrations of population occurred along rivers during this era (Hatcher 1958). Typically, early settlers of the Western Reserve had no neighbors closer than 20 miles away.

Settlement continued very slowly until the threat of hostilities had been removed with the end of the War of 1812. Even then, settlement proceeded at a sluggish pace for several more years. The years 1817 to 1825 marked a second phase of immigration that led to a more rapid, but still moderate, population increase. The start of construction of the Ohio and Erie Canal in 1825 spurred a major influx of settlers and marked the end of the initial, isolated frontier period (Brose et al. 1981; Unrau and Scrattish 1984). Approximately 1,500 workers toiled on the canal segment from Cleveland to Akron, bringing a much-needed influx of cash into the local economy. Difficulties were many, with rampant disease and primitive transportation systems.

After completion in 1827 of the canal's first segment, the economy began to diversify. Jobs were created, and a shift to cash-crop farming and to a local construction-related economy took place. Lumber production, stone quarrying, coal mining, and other commercial activities increased in scope and importance. Wheat and cattle raising replaced subsistence pig and corn production, and the canal opened the Cuyahoga Valley to U.S. and European markets. Local products (e.g., wheat, coal, flour, beef, and cheese) were shipped north on the canal, and general merchandise, salt, fish, and other goods were transported south. The availability of up-to-date British ceramics and other manufactured goods after 1827 contrasts markedly with the relative lack of such goods during the earlier decades of the nineteenth century (Miller and Hurry 1983). As other segments of the canal were completed, trade flourished and local crop prices and land values increased. During this period of optimism, growth, and relative prosperity the Boston General Store was built, flanking the bustling canal.

The boom era of the canal was brief, lasting only until about 1840, after which a steady downward spiral of importance is documented (Scrattish 1985; Unrau and Scrattish 1984). The tonnage shipped on the canal peaked in 1851, but even before that, serious infrastructure problems began to seriously erode its effectiveness. Upkeep of the complex hydraulic engineering systems became continuous and ever more costly. The canal's initial monopolistic role in local and regional transportation systems ended as competing canals were built. During the 1850s, extensive regional rail development drew considerable business away from the slow and ponderous canal. Between 1851 and 1853, four major railroads began operation in Cleveland, initiating a long-term decline in the importance of the canal. The canal fell into disrepair after the 1860s, but a bewildering series of repairs maintained it at a functional level through the remainder of the nineteenth century. It lingered as a quasi-effective transportation artery until the disastrous flood of 1913 ended the local canal era.

The Early History of Boston and Boston Township

Since there were no roads through the Western Reserve lands during the earliest years of settlement, riverways and a few Indian trails were the sole transportation routes. Connecticut Land Company shareholders and other settlers found their way to their isolated land parcels with great difficulty through the dense hardwood forests and semi-navigable streams. The Cuyahoga was one of the short rivers plied by the early settlers, often with extreme hardship (Hatcher 1991:52). Boston served as a boat landing early in Western Reserve settlement history. Benjamin Tappan, Jr. made his way to his father's parcel at Ravenna by landing at Boston by boat in 1799 (Hatcher 1991:51). He stored his goods there and began to cut a road toward his property. Other settlers followed similar routes to their isolated land holdings, with blazed township lines as their only guide.

Alfred Wolcott surveyed Boston Township in 1806. Hailing from Connecticut, he and Samuel Ewart from Ireland are among the first settlers of Boston Township (Tackabury, Mead, and Moffett 1874:24). James Stanford, another member of the Boston Township survey party, settled north of the current village (Perrin 1881:902–903). Legend has it that he suggested the name "Boston" for the township (Doyle 1908:854). Stanford, also from Ireland, brought his family to the Boston area on a 169-acre tract east of the Cuyahoga River in March 1806. Like so many other settlers in the Western Reserve, the Stanfords began their life in Boston Township in a humble log cabin, but, after their farm began to prosper, they were able to build a frame home. The Stanford family is still prominent in Boston, and George (James's son) Stanford's Greek Revival home was adaptively restored and is now used as a youth hostel within CUVA.

As in other areas of the Western Reserve, roads were either nonexistent or very poor during the early settlement era of Boston Township. In October 1811, John Melish traveled on horseback along the Cuyahoga to Boston and Cleveland hoping to visit Hudson, the most prosperous and well-established town in the region. The road was so bad, however, that he was unable to reach Hudson (Hatcher 1991:66); in Boston Township his horse sank to its knees in mud. Melish described his eight-mile trek through Boston Township as "the worst road I had ever seen in America" (Hatcher 1991:66). Melish saw only primitive log houses and widely scattered settlers sick with fever. Although impressions may have been more favorable had he reached Hudson, his narrative describes the generally poor living conditions on the Western Reserve frontier.

Along the Cuyahoga River, conditions improved rapidly after completion of the Ohio and Erie Canal in 1827. In Boston, a mill and hotel were built as the canal was being completed, and more extensive development followed in the 1830s. Summit County was not created until 1840, when it was carved out of the larger Portage County.

History of Ownership of Boston Village Lot 56 and HS 430

The Boston General Store occupies most of the Village of Boston Lot 56 within the larger Boston Township Lot 45. The general history of Lot 45, and the specific history of Lot 56 and the Boston General Store, have been investigated through three previous research efforts. The first endeavor occurred around 1980 as part of an initial investigation of numerous nineteenth-century properties recently acquired by CUVA. Research was of limited scope and consisted primarily of examining select tax records and a few surviving historic maps. This work resolved some basic issues, but also left many questions unanswered; documentation is limited to several memoranda in the CUVA research files. Perhaps the most important finding of this first research was the rejection of the widely held belief that the property was previously owned by Jim Brown. Although the memos are not signed or otherwise credited to an individual, there is little doubt that former CUVA Historian Chet Hamilton is their author.

At about the same time that Hamilton researched the county tax records, Brooslin and Ubbelohde conducted a broad-based historic document search as part of the CMNH parkwide archeological survey (Brose et al. 1981). They failed to uncover data sources for the Store other than general historical accounts (Perrin 1881; Upton 1910) and limited map records (e.g., 1856 Summit County map with inset of Boston Village).

In 1991, current CUVA Historian Jeff Winstel completed a more thorough search of pertinent historic documents and summarized his research, focusing upon the historic ownership and function of the Boston

General Store (Winstel 1991). Although this work filled many of the gaps left by Hamilton's preliminary work, it also revealed the many inadequacies of the surviving documentary record for the Boston General Store (Winstel 1991:1). Winstel determined that pertinent primary data are limited primarily to U.S. Census records, County Tax Auditor Records, scattered historic newspaper articles, and a few photographs of rather late vintage. Secondary data from county histories and other sources first listed by Brooslin and Ubbelohde complete the somewhat sketchy picture. Unfortunately, Winstel discovered no ledgers or other records specifically relating to the Boston General Store and found only limited information regarding its owners.

The following summary of the history of the Boston General Store is drawn largely from Winstel's and Hamilton's work. The brief summary of the architectural characteristics of the structure is taken primarily from the Winstel (1991) and the HSR (Quinn Evans/Architects 1992).

The Boston General Store remained an enigma in terms of ownership and function until recently. Locally, the structure was previously (and erroneously) called the "Jim Brown Tavern" or the "Jim Brown Store." This misidentification is even repeated in the National Register Nomination for the property. It was thought that the structure was owned and operated by the infamous local character Jim Brown. However, there is no evidence that Jim Brown ever owned the structure. He did own a structure that had been located across State (Boston Mills) Road from the Boston General Store, and his wife owned a hotel immediately west of the Store.

The Boston General Store has been designated by various numbering schemes. The building was recorded both as CPM 91 and SUM 54 during inventories of historic structures in CUVA, and it is currently listed as HS 430 on the CUVA List of Classified Structures.

Lot 56 and the other lots south of Boston Mills Road were subdivided from an original 50-acre segment of Boston Township Lot 45. Watrous and Hannah Mather obtained the 50-acre portion of Lot 45 from Jesse Thompson of Connecticut in 1826. Thompson quitclaimed the property to settle a debt with the Mather family. Watrous Mather constructed the first mill in Boston in that year. On an 1834 County Engineer's plat, a mill is depicted on the east bank of the river. This may be Mather's mill. The Mathers retained the Lot 45 parcel intact until 1831 when they sold a single lot to Lucy Brown, their daughter. Her husband, Jim Brown, gained notoriety for manufacturing and dealing in counterfeit money, occasionally in worldwide schemes. Brown spent much of his life evading law officers and serving time in jail. The 1831 sale included only what later (1834) was platted as Boston Village Lot 58, located adjacent to Lot 56 on the west. The Commercial Hotel stood on this lot. Its age is not known with certainty, but it is thought to have been built as early as 1827. The hotel, one of the first commercial buildings in Boston, is a precursor to the broader commercial development of Boston in the mid-1830s. The Boston General Store and other structures were built during that era. The Hotel, or more likely a store owned by Jim Brown immediately across State (Boston Mills) Road from Lot 56, later became confused with the structure on Lot 56, leading to the misnomer "Jim Brown Store" for HS 430.

In May 1835 the Mathers sold Lot 61, which adjoins Lot 58 on the west, to their daughter. Together, the two small lots totaled only ¼ acre. The Mathers sold the remainder of Boston Township Lot 45 (and Lot 44 north of Boston Mills Road) to Irad Kelley, Thomas M. Kelley, and Alanson Penfield in November 1835. This sale marks the initiation of expanded commercial development in Boston Village during the boom years of the canal era. Lot 56, soon to contain the Boston General Store, was included in this sale. No mention is made of "improvements" on Lot 56 at the 1835 sale, suggesting that the Boston General

Store had not yet been built. The 1836 Portage County tax records identify a "store" on Lot 56 and a "storehouse" on adjacent Lot 55; these are the Boston General Store and its attached warehouse, establishing that the two structures are contemporaneous (i.e., both date to 1836). The three men who purchased the Boston Village lots founded the Boston Land and Manufacturing Company, but their ownership was brief.

The three men constituting the Boston Land and Manufacturing Company owned the Boston General Store, grist mill, and saw mill through about 1840. It is likely that the mill complex is the one built by Mather in 1826. During those years, they owned 58 of the 60 village lots. Through most of the transactions over the next several decades, these 58 lots were transferred as a single unit. Hamilton's research indicates that, from 1841 to 1852, Arthur Latham owned all 58 lots. In one of several apparent contradictions, the 1850 U.S. Industrial Schedule for Boston Township lists the Edson Saw Mill and Edson Grist Mill, with no mention of Latham. Mills are also depicted with Edson's name on the 1856 plat of Boston. Tax records further indicate that Arthur Latham and Joseph Myers jointly owned the properties from 1853 to 1856, with Julius D. Edson having partial ownership with Latham and Myers from 1857 through 1859. Latham and Edson maintained ownership in 1860 and 1861, after which Edson owned the properties alone. The tax records are confusing at best, and they do not reflect the multiple owners shown in deed transfer records. For example, Thomas Kelley's family did not convey their company interest to Edson until 1860. Further clouding the issue are the notations on the 1856 plat, which appear to directly contradict the tax records.

The 1856 map indicates that Edson owned most of the significant businesses, including a grist and flour mill, saw mill, lath factory, turning shop, lumberyard, store (Boston General Store on Lot 56), and warehouse (Boston General Store on Lot 55) (Figure 3). Kelley is identified as owning a parcel south of the Boston General Store, whereas the names Latham and Myers do not occur on the map. One possible reason for this incongruity might be that there was a difference between the ownership and management of the Boston Land and Manufacturing Company and the actual ownership of the buildings and lots. The available information, however, is insufficient to resolve this problem. There can be little doubt of the importance of Edson's role in the company, as indicated in the names of the businesses in 1856. It appears that he began acquiring interest in the company as early as 1850, gaining complete ownership in 1862. Unfortunately for Edson, he was acquiring control of the company's interests as the canal began its long, slow decline. However, even as the importance of the canal decreased in the 1860s and later years, the surrounding cities of Cleveland and Akron were experiencing widespread industrial development. It appears that this growth did not substantially aid the business of the Boston Land and Manufacturing Company.

Edson appears to have owned the 58 lots until 1870, when the sheriff of Summit County ordered the sale of the lots to Lorenzo Hall and Philander Hall for $2,500. Edson owed the Halls over $700 and was apparently unable to repay the debt. The relatively low amount paid for the lots suggests that, by 1870, Edson's combined store, milling, and lumber interests were of limited worth. By comparison, the Frazee farm sold for $3,500 in 1860, suggesting that all the improvements at Boston were considered to be of less value than a single, partially cleared farmstead with a brick house and barn. An alternative interpretation is that the Halls obtained the properties and business at a bargain price.

The Halls continued to operate the company under the new name "Hall Brothers Company" with no major changes or improvements until 1891, when they greatly expanded their milling operation. It appears that the Boston General Store continued to serve as a store (operated by various individuals) throughout

the Hall ownership. The Hall heirs began selling company assets after the deaths of Lorenzo and Philander in the 1890s. Lot 56 remained in Hall ownership until 1903. By 1881, the tax value of the 58 lots in Boston was listed at $5,580, more than double the amount Lorenzo and Philander Hall paid for it ten years earlier. Winstel has documented that property values in Boston shifted dramatically up and down during the Halls' tenure, according to local and regional events. Winstel equates a major rise in Boston property values in 1881 with the 1880 construction of the Valley Railroad train depot in Boston. The value of Lot 56 also shot up in 1881. The precise causes for all the various shifts in value of the Boston Village lots are not known. By 1902, the tax value of Lot 56 had sunk to only $280 from a previous high of $940. The Hall heirs transferred Lot 56 to William Brady in 1903. By 1905, property values plummeted to only $60. Value rose to $160 when Stanislaus Kogut and Catherine Kogut purchased Lot 56 in 1908.

It is unclear whether or not the structure on Lot 56 served as a store from 1903 to 1908. However, it is certain that the store function ended by 1908, after which it served only as a residence. The Koguts owned the property until 1973, when they sold it to the last private owners, Thomas A. Rodhe and Claire L. Rodhe. The Store survived at least three major ownership changes and numerous operators during its circa-70-year history. The structure then served as a private residence until the National Park Service purchased it from the Rodhe family in 1980. Since 1980 it has stood empty, awaiting restoration and adaptive use.

The Function of the Boston General Store

There is relatively little direct confirmation for the function of the structure on Boston Village Lot 56. Tax records for 1836 provide one of the most specific available references, listing a store on Lot 56 and an attached warehouse on Lot 55. The 1856 map of Boston depicts the Store and warehouse under the ownership of J. Edson. No available documents specify the nature of goods sold at the Store or the materials stored in the warehouse. The Store's precise function must be interpreted indirectly from scanty data relating to the general business activities of its owners.

Little is known about roles played by the original three owners of the Boston Land and Manufacturing Company, none of whom appear to have resided in Boston. However, the Kelleys are an important family in the history of the Cleveland and Western Reserve area. Thomas M. Kelley's brother, Alfred, is credited with being the single most important force in the construction of the Ohio and Erie Canal (Hatcher 1991:92). At considerable personal financial loss, he supervised construction for eight years, resigning only after the canal was completed. In the late 1840s, Alfred Kelley was the key figure guiding the development of the Northern Ohio rail industry. A third brother, Irad Kelley, was involved in various land acquisitions, including Kelley's Island on Lake Erie, where timber harvest, limestone quarrying, and, later, vineyards provided an important economic base. Irad Kelley's residence at and development of Kelley's Island coincided with his ownership of the Boston General Store, suggesting that the latter was merely a sideline to his primary work and investment interests. Although the Kelley family participated in some of the most important economic developments of the early and mid-nineteenth century in the Western Reserve, the nature of Thomas Kelley's and Irad Kelley's involvement in Boston in general, and the Boston General Store in particular, is unknown.

Similarly sparse information is available for subsequent owners. The names Latham and Myers are absent from county histories and local census records. However, Arthur Latham is listed as Boston Postmaster from 1838 to 1840 and 1841 to 1846. The 1850 census lists Julius Edson as a resident of

Boston, which would seem to make him the only owner of Lot 56 who resided in the village. At that time his real estate was valued at $8,000, but as described earlier, it slipped in worth considerably over the next twenty years. Edson served as Boston Postmaster from 1854 to 1856 and for a short period in 1858. By 1859–1860, Edson lived in Akron, where he was engaged in both grocery and dry-goods merchant activities.

More is known about the Hall brothers, who developed and operated a well-known business concern in Akron. There the Hall brothers built a prominent commercial block. Through the 1870s, the Hall Brothers sold groceries and dry goods from their prestigious Market Street location. Inexplicably, they are not listed among the numerous businesses in Akron (or Boston) in the 1874 Atlas of Summit County. In 1885, business listings for their grocery and dry goods sales included their Boston operation, presumably located in the Boston General Store on Lot 56. Given Edson's similar sales background, there is some evidence that the Boston General Store served as a general store through much of its commercial life.

Little evidence indicates that the business interests of the various owners of the 58 lots in Boston were sufficient to warrant a "company store." Although about a thousand people lived in the Boston vicinity in 1850, most were apparently engaged in farming. Only four local persons were employed at the Boston Land and Manufacturing Company mills in Boston, and a few others listed as laborers may have worked for the company. Data from census records, industrial schedules, and other sources led Winstel to conclude that all the Boston industrial operations were of small scale, with boat builders and other firms the "largest" employers with no more than six men each. However, the mills were of obvious importance to the local farming community, and the annual product value for the mills in Boston is significant, even if employment was low. As the years passed, the milling operations declined in importance, further obviating the need for a company store. In 1891 the Hall brothers attempted a new approach by making a major capital investment to refit their mill to produce toy marbles. The Halls hoped to employ 20 to 30 people in their mill, which would be the first mill in the United States to grind toy marbles from stone. Previously, all such marbles were imported from Germany. There is considerable doubt that the mill ever functioned as a marble factory, and if it did, it had a short life span.

Although there is a considerable amount of data on the mills for which Boston is well known, again there is little information for evaluating the function of the structure on Lot 56. Given the occupations of Edson and the Hall brothers, it is reasonable to assume that groceries and a variety of dry goods were sold there at least from the 1850 era through the early 1890s. The Store probably served as the post office, given that two of its owners, Latham and Edson, were local postmasters. The structure probably functioned as post office and general store, rather than as a company store. Since postmasters were something of a political entity, and since they changed frequently, the Store was probably not a permanent location for the village post office. Neither was it the only store in the village; McBride's store was situated more favorably at the lock north of Boston Mills Road. By 1908, or perhaps somewhat earlier, the Boston General Store began a 70-year cycle as a private residence. In fact, the building likely served that function at some level from its inception, given the arrangement of the second-floor space.

History of Archeological Investigations

A single archeological project at the Boston General Store preceded the 1991 project reported here. In anticipation of future restoration actions, the CUVA staff entered into an agreement with the CMNH

under the direction of David Brose to conduct evaluative test excavations on the grounds around the structure. Documentation for the project consists of a proposal by the CMNH, an acceptance letter from CMNH, and an Archeological Resources Protection Act permit to conduct the work. The proposal defines likely test pit locations and a general methodology for the project. Fieldwork was undertaken in 1985 with a fieldschool from CMNH, with Stephanie Belovich directing the daily work. Excavations generally followed the proposal, although specific test unit locations varied somewhat from the initial plan. Most emphasis was placed along the east facade at the towpath. There, several contiguous units were excavated to examine a former door in the foundation that was subsequently blocked in. A single unit was placed at the southwest corner of the structure to search for evidence of the warehouse foundation. Finally, single units were placed in the northwest corner of the building's interior and on the grounds just southwest of the structure. The interior unit was intended to examine evidence for previous basement floors, and the exterior unit was positioned to potentially intersect more of the warehouse foundation.

The results of the project have not been reported. The recovered artifact assemblage was transferred to MWAC, where it was repackaged according to standard National Park Service procedures and entered into the Automated National Catalog. The excavation plan map, select stratigraphic profiles for excavation units on the east facade, and several color slide transparencies were transferred to MWAC in 1991 by David Brose and Stephanie Belovich. No additional field records for the project have been provided to the National Park Service. Where possible in the current report, data from the 1985 test excavations have been incorporated into the present analysis. Given the lack of field records in the National Park Service's possession, focus has been on examination of diagnostic ceramic sherds. Other materials from the 1985 project have not been analyzed beyond categorization for cataloging.

Summary

The Boston General Store is a landmark structure in Boston. It exhibits aspects of Classical and Greek Revival architecture, while also incorporating vernacular elements. Not surprisingly, settlers from New England who constituted the initial flush of immigrants into the Western Reserve area brought these national styles to northern Ohio. Classical Revival elements include the character of the two-story front porch, the plan of the east facade facing the canal, matchboard cladding, smoothly dressed sandstone foundation, front gable lunate, and the low-sloped gable roof. Greek Revival elements include the ionic pilasters remaining on the east and north facades and the narrow gabled end facing the street.

The early-nineteenth-century developers who envisioned a bustling company town might be surprised to return to Boston today to find a small residential community with no local industry. Initially, grist mills and saw mills along with a few stores, a boatyard, a brickyard, and other businesses were developed along the east side of the river and both sides of the canal. The canal lock and boat turning basin located a very short distance north of the Boston General Store provided both a natural stopping place for travelers and a setting where goods could be loaded and unloaded from the canal boats. A dam across the Cuyahoga furnished water power to turn the company mill. The Boston General Store was probably developed to capture commerce generated by travelers and the local milling and manufacturing economic base. However, historic research indicates that the nineteenth-century commercial enterprises were generally of small scope and of minor regional significance. Although the Store may have served the small number of company employees, it was probably more important to the surrounding farming community. To them it likely functioned as a general store where a variety of groceries and dry goods could be conveniently acquired. The Store may have received a temporary boost when the Valley Railroad placed a depot in

Boston in 1880, but major milling operations redeveloped in Boston only after 1900, by which time the former store was in private ownership and in use as a family residence.

Field Methods

The archeological field methods employed at the Boston General Store in 1991 addressed several basic goals. Fieldwork provided data for evaluating the distribution and significance of archeological resources on the grounds surrounding the structure. Such information is needed for future planning for structural restoration actions and on-site visitor facilities. Test excavations by the CMNH in 1985 demonstrated that artifacts and features were present at the site. However, no report was written to evaluate the significance of those remains. The 1985 testing program did not examine the distribution of archeological materials across the site but instead focused almost solely on the perimeter of the sandstone foundation.

Within the broader goal of evaluating the site deposit and providing data for future planning efforts, the 1991 project also addressed more specific targets. These were to: (1) study the condition of the sandstone foundation and the nature of cultural deposits directly associated with it; (2) survey the grounds south and west of the structure to search for the presence of artifact deposits and site features; (3) evaluate any features discovered through survey; (4) examine portions of the foundation of the former attached warehouse addition on Boston Village Lot 55; and (5) inspect the basement for evidence of former floors. Fieldwork and subsequent laboratory analysis met all but the final goal. Based upon the presence of extensively disturbed soil deposits in the basement, negative results of 1985 testing in the basement, on-site discussions with CMNH archeologists Brose and Belovich, and lack of time owing to discovery of numerous features on the grounds surrounding the structure, no fieldwork was undertaken inside the structure in 1991.

Excavations of 1985

The CMNH used small test excavation units of varying size to examine two specific areas of the site in 1985. Test Units 4, 5, 6, and 9 were positioned perpendicular to the east facade of the structure in a single, 5-m-long trench (Figure 4). Unit 4 was placed against the sandstone foundation where a former basement entry had been blocked in with sandstone. Units 4, 5, and 6 are all 1 by 1.2 m in extent, and Unit 9 is 2 by 1.2 m in size. These contiguous units yielded a sizable artifact inventory and exposed a deep series of historic fills. Test Units 1, 2, and 7 were oriented in an off-set T configuration at the southwest corner of the structure (Figure 4). Each unit measured 1.5 by 1 m. Small balks were left between Units 1 and 2 and between Units 2 and 7. The units were placed in this location to examine elements of the former warehouse foundation. Unit 3 was positioned in the corner of the basement to examine the potential for artifact yield and evidence of former floors. Results of interior excavation were essentially negative, with an insignificant number of artifacts recovered. The final unit opened in 1985 (Test Unit 8) was the only unit to be placed away from the existing structural foundation (Figure 4). The nature of deposits exposed in this unit, which measured 1.2 by 2 m, is not known. The total area excavated in 1985 is 12.5 m^2.

Excavations of 1991

A relatively simple set of field procedures addressed the 1991 project goals already described. Small test excavation units were placed at strategic locations to examine the condition of the foundation and the

cultural deposits associated with it. Units were similarly distributed across the grounds immediately south and west of the structure to examine archeological evidence of the foundation of the former warehouse and other structural features. Finally, shovel tests were dug on a 5-m grid pattern on the grounds south and west of the structure. This testing covered most of Lots 55 and 56 and portions of Lots 52, 53, 54, and 57. It appears that the Cuyahoga River has meandered to the northeast since the 1830s, removing portions of Lots 52 and 53. Disturbance to the east side of these lots also occurred through grading during twentieth-century bridge construction. The shovel test and test excavation grid was oriented parallel with the east and west facades of the Boston General Store. Therefore, the grid's "north" line, and the structure are oriented at 343 degrees. The front facade of the structure is oriented nearly east–west.

Test Excavation Units

A 1-x-2-m unit (Unit 1) was positioned near the southeast corner of the east facade (Figure 4). Oriented parallel with the wall, this unit exposed a 2-m length of foundation, a deep, stratified cultural fill zone, and a brick cistern. Placement of a second 1-x-2-m unit (Unit 3) adjacent to Unit 1 enlarged the excavation to a 2-x-2-m block. This allowed safer access to the deeply buried cistern. Unit 3 was excavated only to a depth of 30 cm to remove a zone of loose gravel and cinders that had been slumping into the deep Unit 1 as excavation of the upper portion of the cistern was underway. Unit 1 deposits were removed to a depth of 1.45 m below surface, exposing both the deeply buried original grade and the footing of the sandstone foundation.

Test Unit 2 served a purpose similar to Test Unit 1. Positioned parallel with the west facade, this 1-x-2-m unit exposed the west sandstone structural foundation and associated cultural fill zones. The stratigraphic profile exposed there was strikingly different from that seen in Unit 1. Unit 2 was excavated to a depth of 0.95 m below surface, again exposing original grade and the base of the foundation.

In investigating the former warehouse foundation, a rough approximation of the size of the warehouse was made in order to select the most efficient placement for test units. This was accomplished by comparing the size of the warehouse as rendered on the 1856 map of Boston to the core of the Boston General Store as depicted on the same map. The size of the existing structure as delineated on modern, measured architectural drawings served as a constant in developing an approximate scale for the 1856 map. The very small size of the structures on the 1856 map made this process problematical and only moderately accurate. However, based upon these calculations, the warehouse may have extended about 6.5 m west of the current west facade of the Boston General Store.

Based upon the estimate described above, the 1-x-1-m Unit 4 was placed about 6 m west of a "grid north" line formed by the west facade of the structure and about 4.5 m south of the south facade. A builder's trench for a large sandstone foundation support was exposed in the east edge of that unit, and the stone support was uncovered in adjacent Unit 5. Subsequently, 3 additional 1-x-1-m test units (Units 6, 9, and 12) were arranged north of Unit 4 to expose additional elements of the warehouse foundation (Figure 4). Features relating to the warehouse (sandstone supports, a post mold, and builder's trenches) were exposed in each of these 1991 test excavation units. Units 10 and 11 were placed south of Unit 4. A builder's trench (Feature 6) discovered in those units may relate to the warehouse or to some other structure. Unit 11 was excavated to a depth of 50 cm, whereas the other units were excavated to 40 centimeters below surface (cmbs). This contrasts markedly with the deeper excavations on the east and west facades of the structure.

The 1856 Boston plat depicts the east facade of the warehouse in line with the east facade of the Boston General Store. Test Unit 7 was positioned to straddle the likely location of the east facade of the warehouse, about 4 to 5 m south from the southeast corner of the Boston General Store (Figure 4). This 1-x-2-m unit exposed deep, extremely compacted fills to a depth of 1.1 m below the modern surface. Evidence of the former warehouse foundation was also recorded in this unit.

Two additional 1-x-1-m test units, (Units 8 and 13) were excavated near each other, about 18 m south of the south facade of the Boston General Store (Figure 4). They were placed in that location after Shovel Test 16 indicated a difference in fill and artifact yield in that area. Two features of apparently modern age were recorded in those two test units, both of which were excavated to a depth of 40 cmbs.

Seventeen m^2 were opened in the 13 individual test excavation units. Excavations followed cultural levels where those were apparent, or alternatively, arbitrary 10-cm levels where cultural layering was lacking or ambiguous. With the exception of Unit 3, already mentioned, all units were excavated into culturally sterile B horizon loam soils. Provenience was maintained separately for all cultural features. Occasionally, excavation of features (Features 1, 3, and 6) exceeded the depth excavated in the associated test unit. All of the substantial sandstone features associated with the warehouse foundation (Features 2, 7, and 9) were left in place after being exposed and pedestalled. Feature 1, a large brick cistern, was only partially excavated and was also left in place. With the exception of the recent, twentieth-century clay fill encountered in Unit 2, all excavated matrix was screened through quarter-inch hardware cloth.

Shovel Test Units

Interval shovel testing conformed to the excavation unit grid system in the west and south yards (Figure 4). The adjacent private property line marked the western limit of testing. To the south, testing continued until heavily disturbed deposits or the bank of the Cuyahoga River, or both, was reached. With two exceptions, the mowed turf portion of the grounds was examined through shovel tests excavated on a 5-m-interval grid. One exception is an area immediately south of the Boston General Store and along the western slope of the towpath. There, fills are too deep to be penetrated through shovel testing. This was clearly demonstrated in Test Unit 7, where over a meter of cultural fill covers original grade. The second area is a 5-m-wide strip along the west facade, where the presence of deep, recent clay fill also eliminated shovel testing as an effective survey tool.

The area south of the mowed turf zone was shovel tested less intensively than the turf area immediately flanking the structure on the south and west. Shovel testing, like the excavation of test units, was hampered by drought conditions before and during fieldwork. The desiccated and hard condition of the soil slowed excavation of all test units considerably, leaving little time for the shovel test survey to be completed. Discovery of numerous structural features further reduced the pace of excavation. For those reasons, a single row of tests was excavated south from the mowed turf area into the wooded thicket that flanks the towpath (Figure 4). Dense weeds and undergrowth further impeded testing efforts in that area. The test transect passed west of the wooden outbuilding south of the Boston General Store. Increasing the testing interval to 10 m provided broader, but less intensive, coverage.

Five-meter-interval testing was initiated in one area in the thicket south of the outbuilding, centered about 80 to 90 m south of the Boston General Store. This area was selected for more careful study based upon examination of the 1856 plat of Boston. A structure is depicted on Lot 52 on the map, flanking the towpath south of the Boston General Store. No structures are currently extant on that lot. Scaled

measurements from the 1856 map calculated in a similar manner to the prediction of the likely "footprint" of the warehouse indicated that the structure's north facade formerly stood about 80 m south of the current south facade of the Boston General Store. This structure, measuring about 6.5 by 6.5 m in size, is of undetermined function. The date of its removal is also unknown. The shovel testing effort in the suspected location of the former structure yielded a few artifacts, including a cut nail, glass, and brick. The final two shovel tests excavated at the site, numbers 40 and 41, may have intersected the former structural location. Since time did not permit additional investigation of this area, the precise location of the structure and the nature of its archeological remains are still undetermined.

The area where a second structure formerly stood, south of the first structure on Lot 53, appears to have been lost through the combined forces of riverbank erosion and extensive grading related to the construction of a nearby highway bridge. A large segment of the towpath has been obliterated in that area.

In all, 41 shovel tests were excavated in 1991. The 26 shovel tests in the mowed turf area all yielded significant numbers of artifacts from the sheet midden that surrounds the building. Some of the units yielded large numbers of artifacts. The 15 tests in the overgrown thicket had a much lower artifact density, with 7 of the tests containing no cultural material. Within the 41 shovel tests, 2.9 m^2 were excavated. Coverage of 19.9 m^2 was obtained through excavation of shovel tests and test units in 1991. Within those units, 12.85 m^3 of matrix were excavated.

Site Stratigraphy and Features

This and following chapters summarize the results of the combined field and laboratory phases of the project. Separate discussions are offered in this chapter for site stratigraphy, the sandstone structural foundation, and occupational/architectural features. Material culture and site function and economy are discussed in subsequent chapters. Analytical approaches used to process the artifact inventory and evaluate other aspects of the archeological record are summarized in several corresponding sections and subsections. To reduce the length of this report, the verbal description of the rather large artifact assemblage has been limited; emphasis is instead placed upon synthesis of available data, with artifact counts and descriptive information presented through a series of tables.

Stratigraphy

The cultural deposits encountered across the grounds adjacent to the Boston General Store vary considerably according to location. Not surprisingly, deep, well-stratified deposits are found along the east facade of the structure adjacent to the towpath, whereas more shallow and less complex layering is seen in the yard farther away from the structure. Stratigraphy along the west facade is intermediate in complexity and depth to the other two areas. In the following paragraphs, the cultural deposits across the site are summarized by area, rather than solely by individual excavation unit. The profiles exposed in individual units are used in this manner as representations of broader site patterns. Since the test units are scattered across the site, and since there are no profiles over 2 m long, it is difficult to correlate all the strata recorded in 1991. However, the primary cultural deposits are described and correlated. The designations used in this discussion (e.g., Stratum 7a) were not employed during excavation but were instead applied during analysis of excavation profiles. A correlation of field designations and the subsequent designations is maintained with the field excavation records.

The East Facade

The relatively complex stratigraphic profile along the east facade of the Boston General Store was exposed in 1985 Units 4, 5, 6, and 9 and within 1991 Units 1 and 3. Given the paucity of data from the 1985 project, it is difficult to meaningfully compare the results of testing in this area for the two projects. The following discussion is based primarily on the profile exposed in 1991 Unit 1. Excavation of Unit 1 followed cultural rather than arbitrary vertical proveniences. A deep cultural deposit consisting of cinders, a buried midden, a thick loam fill zone, and other layers cover original grade along the east facade. Here, as across the remainder of the site, the A and B components of the original soil profile constitute the only true horizon recorded through site testing. This horizon (Strata 7a and 7b) occurs wherever it has not been subsequently removed through various construction (or other) activities. Stratum 7a is the original humus or ground surface present prior to construction of the canal and Boston General Store. This stratum consists of a loam with a color described as 10YR3/2 (very dark grayish brown) in the Munsell color system. In Unit 1, it varies in thickness from 8 to 15 cm, and grades into Stratum 7b, the B horizon of the paleosol. All excavations at the site were taken into Stratum 7b to insure that any cultural features occurring within the excavated units were discovered. Stratum 7b is a loam containing small amounts of pea gravel. Stratum 7b appears to contain more sand than Stratum 7a. According to the Munsell Book of Color, it is 10YR6/4, or light yellowish brown.

The surface of Stratum 7 is flat, as is the terrain surrounding the site, with the exception of manmade alterations such as the towpath and canal. The soil is defined as FCA–Fitchville silt loam, occurring on slopes of 0 to 2 percent. Formed through weathering of alluvial deposits on a low riverine terrace of the Cuyahoga River, this soil was exposed as the surface soil over the entire area of Boston prior to historic construction activities. A few artifacts occur in Stratum 7a, but Stratum 7b is devoid of artifacts across the entire site. Artifacts would have become incorporated in Stratum 7a through various activities occurring around the structure during its construction and early occupational history. The very sparse artifact yield from Stratum 7a in Unit 1 strongly suggests that the original ground surface was covered with fill after a brief period of exposure during or soon after construction of the Boston General Store.

In test Unit 1, a thick layer (90+ cm) of light yellowish brown loam (10YR6/4) overlies original grade. This deposit is very similar to the undisturbed 7b horizon but differs in that it contains small amounts of sandstone fragments and is mottled with gray and brown silt. Stratum 7b is more uniform in content than is Stratum 6a. The sandstone fragments occur primarily in a band about midway within the thick Stratum 6a. They are particularly numerous in and below a lens of darker soil (Figure 5). This lens is a dark grayish brown (10YR4/2) loam that is generally similar in texture to the remainder of Stratum 6a. It has not been awarded a separate designation but is seen instead as a lens of variably colored loam within the broader Stratum 6a. This lens, and the arrangement of sandstone fragments within and below it, indicate the presence of a sloping surface during deposition. The lens slopes down from east to west toward the foundation. The west edge of the lens is nearly 40 cm lower in elevation than the east edge, as exposed in Unit 1. This contrasts markedly with the flat original ground surface of Stratum 7a. Stratum 6a fills the narrow builder's trench that was cut through Strata 7a and 7b for setting of the bottom course of the stone foundation. This may partially account for the sloping aspect of the lenses within Stratum 6a.

Like Stratum 7a, Stratum 6a yielded a very limited array of artifacts. Stratum 6a represents redeposited loam from Stratum 7b, into which a few artifacts and sandstone fragments were incorporated. Its origin could be spoil from excavation of the basement, the nearby cistern, or other activities that cut through original grade during or very soon after construction of the Boston General Store. It would appear that it is not spoil from canal dredging, since it lacks characteristic materials, including bivalve shells, common in canal dredge spoil recorded elsewhere on the site.

Stratum 5 is perhaps the most interesting component of the soil profile exposed in Unit 1 from an archeological perspective. A midden deposit, it contains a dense accumulation of artifacts. Although the layer is somewhat irregular in thickness and color, typically it is a dark grayish brown (10YR4/2) loam about 10 cm thick. It is thicker in the southwest portion of Unit 1 and somewhat lighter in color in the northeast quadrant of that unit. Numerous large sandstone fragments occur within this Stratum (see Figure 5). These are irregularly shaped and are 30 cm or more in diameter. They appear to be waste from forming sandstone foundation blocks. This stratum is not continuous in the east wall profile of Unit 1, having apparently been removed during installation or later modification of a cistern (Feature 1). Comparison of its positions in the south and north wall profiles of that unit indicates that Stratum 5 slopes dramatically to the south. Moreover, it slopes toward the foundation from east to west (see Figure 5). Therefore, its surface ranges from 45 to 80 cm below the modern ground surface, depending upon its location in Unit 1.

Despite its limited thickness, Stratum 5 contains a large number of artifacts of many different functions, including food remains, domestic and personal artifacts, and architectural items. This midden

represents a former stabilized surface. As such, it marks a level at which the ground surface stood for a considerable length of time. Cultural material discarded from the use of the Boston General Store accumulated at this level, apparently for many years. The age of the deposit and the other strata will be addressed in a later section of this report.

Overlying the Stratum 5 midden is a deep fill of coal cinders. The cinder zone was excavated as two separate layers, since in some portions of the unit it was subdivided by a lens of yellowish brown loam. The loam also occurs in small pockets within the thick cinder layer. This loam contains bivalve shells and appears to represent canal dredge spoil. In profile (Figure 5), there is no apparent division of the cinders, other than a shift in color, through the thick deposit. For that reason, the cinder zone is recorded here as Strata 4a and 4b to account for the color shift. Stratum 4b consists of cinders of varying size, including numerous large cinders along with unburned chunks of coal. Numerous artifacts occur within this deposit, including a variety of personal, domestic, and architectural items. Since few, if any, of these artifacts are burned, it appears that they reflect primary household/store trash disposal accompanying cleanout and discard of cinders from a coal-burning furnace. The thick cinder Stratum 4b is generally very dark gray (10YR3/1).

The cinder deposit also consists of an upper layer (Stratum 4a) of predominately light yellowish brown (10YR5/4) cinders. Combined, the cinder substrata range from about 30 to 50 cm in thickness. Stratum 4a consists of the upper 7 to 12 cm of the deposit. This stratum has an artifact inventory generally similar to, but less profuse than, the thicker Stratum 4b. Stratum 4a artifacts include fauna and other household trash items. Like the underlying layers, Stratum 4 slopes down toward the structure. The accumulation of the entire Stratum 4 deposit must correlate with the installation and use of a coal-burning furnace in the Boston General Store. Unfortunately, the date for such installation is unknown. Later in this report, the artifacts associated with the deposit are used to provide an approximate age for cinder deposition.

The most recent deposit exposed in Unit 1 is Stratum 1, a very dark gray (10YR3/1) loam that forms the modern surface. This deposit contains a mixture of modern items (recent roofing nails) and domestic and architectural items discarded from the structure. In Unit 1, this loam deposit, which has characteristics of a soil humus zone, also contains heavy concentrations of angular limestone gravel. This gravel originated off-site and was likely brought in during the recent private ownership era to fill a surface depression above the adjacent cistern, to reduce muddy conditions along the roof drip line adjacent to the foundation, or to do both. The gravel may also have been laid as a surface on the adjacent towpath, assuming the towpath was used for local motorized vehicular traffic late in its history.

The West Facade

The stratigraphic profile in this area is summarized based upon profiles of 1991 Unit 2 and 1985 Unit 1. The latter unit was reopened in 1991, at which time the east wall profile was mapped. The stratigraphic profile exposed along the west facade of the Boston General Store is similar in most respects to that on the east wall, but is somewhat less complex, and less deep. Strata 7a, 7b, 6a, 5, and 1 occur along both the east and the west facades. Stratum 7 is identical in both areas, as one might expect for the original soil surface. However, on the west facade, this surface is buried under about 85 cm of cultural fills, while it is about 140 cmbs on the east facade. Along the west wall of the Boston General Store, Stratum 6a varies from about 20 to 25 cm in thickness, whereas it is much thicker on the east facade. As on the east, it contains only a few artifacts and a scattering of sandstone fragments. Stratum 5 is the

primary artifact-bearing deposit on the west facade, consisting of a dark loam which was a former stable ground surface. The deposit is more compact on the west facade and more loose and dry along the east wall. On the west wall, it averages about 10 cm in thickness.

The primary differences between the deposits on the two facades are the presence of Stratum 3 and the absence of Stratum 4 on the west wall (Figure 6). Stratum 3 is a very dense gray clay, brought from off-site and deposited in a circa-5-m-wide strip along the west wall and in an undetermined area along the south facade. The previous owner of the Boston General Store, Thomas Rodhe (personal communication 1991), explained that the material was brought to the site as fill along the walls to channel water away from the foundation. The deposit is thickest adjacent to the west wall and thins toward the west. He indicated that the clay was spoil from road construction. Unfortunately, it has not served the intended purpose. Even during the dry year of 1991, the dense clay was very moist. The excavation team primarily used picks to remove it in large blocks, since it is of glue-like consistency and nearly impossible to excavate with shovel and trowel. It was not screened. Rather than carrying water away from the foundation, it retains large amounts of water through the year and pushes against the already weak and bowed western foundation wall. Stratum 4 is notably absent from the west facade, indicating that furnace cinder waste was discarded from the former doors in the east basement foundation or on the east facade's first floor.

Stratum 1 is similar along east and west facades, containing angular limestone gravel in a dark loam. It is thick (up to 38 cm) along the west wall and must be the result of very recent deposition, since it overlies the tight clay of Stratum 3. It is possible that Stratum 1 on the east wall has more time depth than the similar deposit on the west, with the gravel becoming imbedded in it.

Unit 7

This unit was positioned 4 to 5 m south of the southeast corner of the Boston General Store, where it would intersect the former east facade of the warehouse. The profiles exposed here are unique, even though the unit is near Unit 1. Owing to the irregular nature of the fill zones, this unit was excavated in arbitrary 10-cm-thick levels. Therefore, the recovered artifacts cannot be fully sorted relative to the strata identified in the wall profiles. However, the bulk of the deposit consists of a series of similar loam fills that appear to have a consistent origin.

At the base of the deposit is the original soil profile, Strata 7a and 7b. This horizon differs from its exposure along the east and west facades of the structure only in the uneven surface of Stratum 7a across the eastern two-thirds of the unit (Figure 7). The surface is quite contorted and uneven in that area. This is the portion of the surface that would have been outside (east of) the east facade of the warehouse. The uneven surface was caused by activities occurring prior to the deposition of the deep loam fills over it. Given the location at the towpath, treading by mules or other draft animals might explain the uneven surface. Regardless of the origin of this uneven surface, the base of the stratum and the underlying Stratum 7b is undisturbed. This indicates that the east warehouse foundation was not continuous, or that it was not excavated into original grade, or both.

The stratum overlying Stratum 7a appears to be functionally equivalent to Stratum 6a, although it differs from Stratum 6a in consistency and content. It is designated Stratum 6b. It is a light yellowish brown loam (10YR6/4) mottled with brown and other colors. It differs from Stratum 6a in the absence of sandstone fragments and in the presence of tiny fragments of charcoal. This stratum is very compact

and exhibits evidence of old rodent burrows through it. None of the burrows have been in recent use. The rodents apparently burrowed through this deposit when the warehouse was still standing. Within this stratum occurs a wide builder's trench oriented at 343 degrees. The trench is about 90 cm wide and does not appear to extend above Stratum 6b into the overlying strata. A single, large sandstone rock was present in this trench. This is a trench for construction of the foundation of the east facade of the warehouse.

Above Stratum 6b is the dark grayish brown (10YR4/2) Stratum 5 midden. It averages about 10 cm in thickness. In Unit 7, this layer contrasts markedly with the other strata, since it is of very loose texture. Other strata in Unit 7 are extremely compact, unlike Stratum 5. As elsewhere on the site, Stratum 5 in Unit 7 contains relatively large numbers of artifacts. Pieces of coal are also present in the deposit. Stratum 5 extends across the entire unit, indicating that it was deposited both outside and under the former warehouse.

Figure 7 illustrates the profile of the south wall of Unit 7. Above Stratum 5 there appear to be a rather complex series of fills extending to the modern ground surface (Stratum 6c). However, all of these "layers" consist of the same basic matrix, a very compact light yellowish brown (10YR6/4) loam. A few artifacts are scattered throughout this broad stratum. Excavation followed arbitrary 10-cm levels through it, extending to a maximum depth of 70 cmbs. In addition to color and texture consistency, bivalve shells are present through the deposit, having been recovered from arbitrary excavation Levels 1 through 7 within the light yellowish brown loam. Many of these shells are still articulated, indicating that they are not food refuse from humans or animals. Instead, they are a strong indicator of the origin of the deposit. This loam fill is spoil dredged from the adjacent canal. The color matches the original soil B horizon (7b) and the redeposited B horizon (6a) recorded in Units 1 and 2. It is another, more specific, example of redeposited B horizon loam. The artifacts within it were probably initially discarded in the canal, later to be dredged and redeposited on and adjacent to the towpath. Stratum 6c extends all the way to the modern surface, where it is capped by a thin sod layer.

Grounds: Mowed Turf Area

Across the remainder of the mowed turf area south and west from the Boston General Store, every test unit exposed architectural features excavated into the original soil profile (through Strata 7a and 7b). Although these features add complexity to the soil profile, aside from the features, the layering is relatively straightforward. The base of the deposit is the undisturbed Stratum 7b recorded across the entire site. However, the 7a buried humus stratum is not present (in undisturbed form) in all of the excavated units. It is intact in Units 8 and 13, but elsewhere it has become blended with a sheet midden. Therefore, across most of the mowed yard, a dark brown layer (Stratum 2) caps the undisturbed 7b deposit and constitutes the bulk of the cultural deposit. This deposit is the original Stratum 7a blended with materials discarded over the long occupation of the Boston General Store. It ranges in thickness from about 15 to 30 cm. The deposit contains a wide range of artifacts, dating from the 1830s into the early twentieth century. No internal layering is seen in the deposit. It contains numerous fragments of coal, along with a wide variety of artifacts.

Stratum 2 is capped across the yard by a brown loam devoid of artifacts. This appears to be a thin modern fill, comparable in age to Strata 1 and 3. It is designated here as Stratum 3, even though it differs in texture somewhat from the Stratum 3 deposit along the west facade.

Grounds: Thicket South of the Boston General Store

In this area a simple profile consisting of Strata 7a and 7b is present. Exposed only through shovel tests, this deposit is minimally altered through use, with small numbers of artifacts distributed throughout Stratum 7a. Given the limited nature of shovel testing in this area, the full range of soil strata remains to be determined. Given the probable presence of at least one nineteenth-century structure in the area of Shovel Tests 40 and 41, layers other than the original soil profile are probably present.

Site Stratigraphy Summary

The activities related to the construction, maintenance, and alteration of the Boston General Store and the adjacent canal and towpath, coupled with trash discard activities, have resulted in deep, well-stratified deposits across large portions of the site. As one might expect, the deepest and most complex deposits occur adjacent to the foundation and towpath. The stratified nature of these deposits adds considerable significance and interpretive potential to the site that would be lacking if all the artifact-bearing deposits were blended like the Stratum 2 midden. On the grounds, a large number of features are found, all of which are well preserved under various fill episodes. The fills, both accidental and purposeful, have sealed both features and nineteenth-century artifact deposits, thus helping to maintain their integrity and interpretive potential.

Condition of the Sandstone Foundation

The exterior of the massive sandstone foundation of the Boston General Store has been exposed in a few short segments through excavation of test units on the east and west facades of the structure (Figure 4). The south and north foundations remain archeologically unstudied. The north foundation is currently inaccessible because of the presence of a large front porch with a concrete slab surface, whereas the south foundation is unobstructed but unsampled. The foundation is in variable condition; in certain areas it has suffered serious damage but remains intact in others. This section references only those segments exposed through archeological testing. As such, focus is placed on construction methods, condition, and alignment. Questions of structural stability, loading, etc., are beyond the scope of the current report.

East Foundation Wall

Segments of this wall were exposed in the 1985 CMNH Unit 4 and 1991 MWAC Unit 1. There is no specific information regarding the nature of the foundation in the 1985 unit, although it is known that the unit exposed the former basement door opening that is now blocked in. More information is available for the 2-m length of foundation exposed in 1991 Unit 1. This portion is in surprisingly good condition, although mortar is absent from most of the below-grade portion of the foundation. The deep fills described above cover most of the foundation. The lower 180 cm of the foundation is buried under various fills, with only about 22 cm of the foundation exposed to view below the first course of modern clapboard siding. The base of the foundation consists of a sandstone footing that is wider than the remaining foundation wall. The base of the footing was placed in a builder's trench excavated about 35 cm below original grade. The lowest block lies on a clean surface cut into the compact loam (Stratum 7b) B horizon of the paleosol. Although the foundation is now deeply buried, it appears that, earlier in the history of the Boston General Store, a considerable portion of the foundation was exposed. The exterior stone surfaces are well dressed to over a meter below the current ground surface. Further, the age of the fill

layers indicate that the foundation was exposed to a depth of about 120 cm below the modern ground surface during the very early history of the Boston General Store.

The presence of the stabilized soil and midden zone, Stratum 5, at 65 to 75 cm below the current ground surface strongly suggests that the upper 87 to 97 cm of the foundation were still exposed through the mid-nineteenth century. Only as discarded cinders piled up along the foundation did the wall take on its current, buried configuration.

The configuration of blocks in the segment of the sandstone foundation exposed in Unit 1 is seen in Figure 8. Although the pattern cannot be considered "random," neither does it reflect a carefully organized series of superimposed courses as seen on some of the better constructed early- and mid-nineteenth-century foundations in the area. The upper 125 cm of the foundation below the lowest clapboard is essentially plumb (Figure 9). Below that, the foundation widens and flares to the east, gradually expanding about 20 cm. This does not seem to be the result of movement or displacement, but rather is a purposeful widening to provide added support. Given that 157 years have passed since the foundation was constructed, it is in remarkably good condition in the area of Test Unit 1. The loss of mortar through erosion (and replacement with loam soil) appears to be the single substantial change in the foundation since its initial construction.

West Foundation Wall

This wall is in deteriorated condition compared with the east wall. Displacement of stones has occurred at the southwest corner, especially along a window opening. Significant settling, cracking, and bowing is obvious above grade in that area. A profile of the foundation at the corner of the building (1985 Unit 1) drawn in 1991 contrasts somewhat with the foundation profile on the east wall. At the southwest corner, the foundation slightly "overhangs" the footing, suggesting that movement has occurred or is occurring. The exposed portion of the south wall is parged with a 5-cm-thick layer of Portland cement. Moreover, Portland cement has been used to replace missing mortar between sandstone blocks on the west wall. The use of this inappropriate material has probably hastened foundation deterioration in this area. As with the east wall, the recent fill zones at the west foundation wall indicate that more of the foundation was originally exposed to view. At least 140 cm of the wall was originally revealed, whereas currently about 80 cm is exposed. About 60 cm of fill was added recently (1970s), probably in an attempt to stabilize the wall. The fill does not serve that purpose, and it actually appears to have caused more harm than good owing to its shrink–swell characteristics and its tendency to trap water against the foundation.

A 2-m-long segment of the west wall was exposed in 1991 Unit 2. At this location, the wall was drawn to scale and photographed (Figures 10 and 11). The irregular coursing of the blocks is clearly seen in these views. Blocks of greatly varying size are used, with many small pieces fitted next to large, rectangular blocks in some areas. A few bricks have been added around the perimeter of the old window opening, in which a vented wooden sheet is now installed. In addition, Portland cement "mortar" is present to a depth of about 50 cm below current grade or to the ground level prior to the addition of the Strata 3 and 1 fills. The cement repair predates the addition of these fills, since there are no access trenches cutting through those deposits. In several areas the Portland cement is used as a combination of mortar and parging, having been veneered over existing sandstone blocks. Unlike along the east wall, where the foundation is in good condition, here the foundation slopes inward from top to bottom, causing the upper portion to overhang the footing by more than 20 cm. At this location it appears that at least

140 cm of the wall was exposed through most of the life of the structure. Only recently has fill covered the foundation, leaving about 80 cm revealed.

Features

Numerous features, many of which are structural remnants of the attached warehouse, were recorded through limited test excavations in 1991. These features lend considerable complexity to the archeological deposits on the grounds surrounding the Boston General Store. They also add to the significance of the deposits, since they demonstrate the high level of integrity of the archeological remains. Since such small excavation units were opened, exposing only limited portions of the features, the precise function and extent of some of the features remain unresolved. Other features are interpreted with considerable confidence. The form and extent of the features are documented primarily through tabular and graphic presentation of data, rather than by verbal description. In the following section, the features are grouped and summarized relative to form and function. The distribution of features across the site is seen in Figure 4.

Cistern, Feature 1

This large, brick feature was discovered deeply buried in 1991 Test Unit 1. The cistern was filled with loam, cinders, broken bricks, mortar, and gravel when it was discovered in 1991. The cinders and the recent limestone gravel appear to have fallen in to fill a void near the top of the feature. This void was caused by settling and compaction of the loam that constitutes the primary fill. The gravel occurs at the ground surface above the opening and appears to have been placed there to fill a depression left by the settling process. The gravel and the cinders that occur above, but adjacent to, the feature are very loose and form an unstable fill zone. These materials can easily migrate into a void below them and, in the case of the cistern, appear to have done so.

The cistern was first encountered in Stratum 6a of Unit 1, where a portion of the brick, dome-shaped top and accompanying builder's trench was recorded in the floor plan excavation map. The floor plan at the base of Stratum 5, the midden, further reveals that the builder's trench was present at the top of Stratum 6a. The intrusion of the builder's trench through Stratum 6a reveals that the large pit for the cistern was excavated after Stratum 6a was deposited. The profile of the east wall of Unit 1 helps clarify the relationship of the cistern and its associated builder's trench to the strata described earlier in this section. The builder's trench for the cistern cuts through Strata 5, 6a, 7a, and 7b. The relationship of the builder's trench to the soil strata indicates that the cistern postdates the deposition of the Stratum 5 midden. The cistern appears to predate the cinder strata, since cinders accumulated over it.

The cistern is constructed of soft orange-colored brick and soft sandy mortar. Its full size is undetermined. Figure 12 depicts the extent of the feature that was exposed in 1991. Seventeen courses of brick are present in the 85-cm segment of the cistern exposed during excavation. The dome shape of the feature's top is obvious in profile. It appears that interior excavation nearly reached the area where the domed top would give way to the expected cylindrical body of the feature. Excavation of about 85 cm of fill within the feature revealed no artifacts of interest, although a broken but otherwise complete twentieth-century one-gallon wine bottle was recovered from the loose fill immediately above the cistern opening. This bottle appears to have been discarded during final filling of the upper portion of the feature with gravel and other fill. The cistern is at least 2 m in diameter, measured 85 cm below the upper course

of brick. Given the position of the cistern adjacent to the foundation wall, it cannot be much wider than 2 m. The depth of the cistern is unknown. Excavation was terminated at a level comparable to the base of the house foundation. This is about 180 cm below the modern ground surface. Given the wide diameter of the feature, a large portion probably lies buried below the furthest extent of the 1991 excavations. There is a high potential for the presence of cultural material to occur in the remaining fill of this large feature.

Sandstone Foundation Supports—Features 2, 7, and 9

The most common feature recorded in 1991 is the remains of foundation elements of the former warehouse. Feature 2 in Units 4 and 5, Feature 7 in Unit 9, and Feature 9 in Unit 12 are examples of this functional feature type. Although each of these features have different configurations, they all occur at the same depth and all have flat sandstone upper surfaces. All occur under a layer of mixed midden materials (Stratum 2). Further, the features are oriented in a line at 343 degrees, which is the orientation of the west facade of the former warehouse. As described earlier, the western facade of the structure formerly extended to, or slightly beyond, these features. Historic photographs in the Historic Structures Report (Quinn Evans/Architects 1992) suggest that the west facade served as the front of the warehouse. Massive doors are clearly visible on the ground level. The photographs further indicate that the warehouse was imposing, and of two-story height. The upper level may have served as a storage area for hay and other products, as indicated by the barn-style block-and-tackle hoist mechanism and by the gable door visible in at least one photograph. The photographs do not depict the foundation. However, Mr. Boodey, a long-time resident of Boston now in his 80s, recalls playing *under* the warehouse as a child. He remembers the structure being supported on a series of piers (perhaps wooden), allowing access under the entire building. He also recalls seeing, when the warehouse was dismantled in the 1920s, that massive log timbers formed its frame.

Mr. Boodey's remembrances, the position of the sandstone features, and their even, flat surface together suggest that the features are supports for piers that braced the large warehouse. The full pattern of these supports has not been exposed, and there must be other supports distributed beneath the fills under the area formerly covered by the warehouse. As one moves east, the features may be covered in ever-deeper, modern fill. Inspection of the four existing photographs of the Boston General Store indicates the need for a foundation system similar to the piers that apparently supported the warehouse. The east facade of the warehouse stood adjacent to the towpath, and the terrain dropped off considerably to the west. The piers would have been an efficient method of compensating for the change in elevation across the building site and would have been easier and less costly to install than a continuous stone foundation.

Feature 2 consists of a sandstone pier support and the builder's trench in which the stones were placed (Figures 13 and 14). The rock portion is a stack of three large sandstone blocks. They are irregularly shaped, with the largest placed at the bottom of the stack. The blocks were placed in a trench excavated into Stratum 7b. The surface of the upper block is flat, oriented horizontally, and positioned 20 cm below ground surface. The largest of the three rocks is about 66 cm long and 16 cm thick. The rock is quarried Berea sandstone, the common local building material constituting the foundation of the Boston General Store. The feature was left intact at the close of excavations in 1991.

Feature 7 consists of a horizontal arrangement of four sandstone blocks connected with large amounts of sandy mortar (Figures 15 and 16). The blocks are arranged in a roughly square pattern, with mortar filling the interstices between the widely spaced rocks. Mortar extends around each of the blocks. Mortar

also covered most of the rock surfaces, but some of this mortar was removed to expose the rocks. The largest of the three blocks is about 40 cm in diameter. The flat surface of the rocks was exposed at about 30 cm below the modern ground surface. The feature was not further excavated, so its total depth is not known. However, it appears that the blocks were set in a trench excavated into Stratum 7b.

Feature 9 consists of a concentration of irregularly shaped sandstone rocks surrounded with soft sandy mortar. Limited excavation into the feature indicates that the exposed rocks may rest on a lower tier of sandstone. The upper surface of the rocks varies from about 28 to 32 cmbs, while the surface of the underlying rocks ranges from about 50 to 60 cmbs. Although the feature was left intact, it appears that these rocks were placed in a trench or pit dug into Stratum 7b. The full depth of the feature is unknown.

Post Mold, Feature 3

A single post mold was recorded in 1991. Feature 3 is about 20 cm in diameter and was first recognized at 40 cmbs. There, the circular stain contrasted with the surrounding Stratum 7b loam. The feature was bisected and the west half removed in a small (25-x-40-cm) test pit within the larger Test Unit 6. This small test exposed a profile of the east half of the feature. The walls of the feature are straight and regular, and the base ends abruptly at 70 cmbs. No artifacts were recovered from the feature fill. When the position of the feature is examined relative to the Boston General Store, an interesting association is apparent. Feature 3 is aligned precisely with the south facade of the structure, 6.5 m west of the southwest corner. It is possible that the post formerly present in Feature 3 was part of the support system for the former warehouse. It may not be a coincidence that the 6.5-m distance matches the estimated extent of the projection of the warehouse west from the west facade of the Boston General Store. Feature 3 may mark the northwest corner of the warehouse. However, project architects favor an interpretation of the post having been a utility pole.

Feature 4

This irregularly shaped feature was recorded in Unit 10. Covering most of that unit, the feature consists of charcoal and burned debris positioned about 15 to 18 cmbs. It overlies the Stratum 2 midden and is of very recent age. A similar deposit was recorded in adjacent Unit 11 at 13 to 18 cmbs. The presence of a piece of plastic sheeting at the base of the feature confirms its modern age.

Feature 5

This feature was recorded in Test Unit 8 located in the south yard near the frame outbuilding. The feature was first recognized at the base of arbitrary Level 4 at 40 cmbs. Outside the feature, Stratum 7b had been reached at that level. However, the feature consisted of a brown loam and a series of small pieces of sandstone in a basin-like configuration. The brown loam was screened separately, but few artifacts were recovered. In places, it appeared that the basin was lined with small flat sandstone fragments, but that lining was not continuous. The irregularly shaped basin had a maximum dimension of 80 cm (east–west) by 70 cm (north–south). The feature extends into the north wall of Unit 8. Otherwise, it is contained within the unit. On the west edge of the feature was a concentration of compact yellowish brown clay. The function of this feature is unknown.

Feature 6

This feature was recorded in Units 10 and 11. The feature consists of a linear, somewhat irregularly shaped trench excavated into Stratum 7b and filled with Stratum 2 midden materials and occasional pieces of Berea sandstone. Feature 6 is oriented east–west and extends across both Units 10 and 11. Its total length is unknown but is more than 2 m. First recognized at about 35 cmbs, the feature extends to about 50 cmbs in Unit 11. Several sandstone rocks up to 25 cm in diameter occur in the trench, along with a scattering of artifacts. A diagnostic ceramic vessel (teacup) was recovered from the feature in Unit 11. The feature, which is troughlike in form, is shown in Figures 17 and 18. The feature's function is undetermined, although it has the appearance of a wall trench for a former structure. It may relate to the former warehouse, but it appears to be positioned too far to the south to have been part of that structure. It may be a remnant from a small structure adjacent to the south side of the warehouse that is visible on at least one historic photograph. Other functions are equally plausible. The feature would need to be more fully traced and excavated in order to make a confident assignment of function.

Feature 8

This shallow alignment of sandstone blocks was recorded in Unit 13, near the frame outbuilding on the southern portion of the mowed turf grounds. The surface of the rocks was exposed at less than 10 cm below the modern surface, and they extend to a maximum of 28 cmbs. A single "course" of stone constitutes the feature. Although four blocks appear to constitute a line, probing outside the unit failed to reveal any additional blocks. Further, modern materials, including tar paper and shingles (apparently discarded when the adjacent outbuilding was roofed), were present to at least 20 cm below the surface throughout the unit. The rocks appear to be a fortuitously organized discard pile, possibly related to the construction or repair of the stone foundation of the outbuilding. Despite the linear arrangement of the four blocks, there is no indication that these sandstone blocks are part of a foundation or other purposefully constructed feature. Their shallow position in the soil profile (within Stratum 1) suggests a recent date for their deposition.

Summary of Site Features

Features were recorded in each of the units excavated in 1991. Features 4 and 8 are of recent, twentieth-century age and are inconsequential in terms of historic activities on the grounds surrounding the structure. Further, their shallow positions in the soil profile indicate that they have not disturbed earlier underlying deposits. For example, Feature 6 lies intact under Feature 4. The age and function of Feature 5 are unknown. The position of the feature within the paleosol (Stratum 7b) suggests a nineteenth-century age, but that determination cannot be made with certainty. The nature of the activities that led to formation and filling of the basin are unknown.

The remaining site features date to the nineteenth century. Most appear to be associated with the construction of the warehouse in 1836. The discovery of such a large number of features in limited test excavations suggests that numerous other features occur on the grounds south and west of the Boston General Store. There are undoubtedly several additional sandstone supports and other features related to the foundation of the warehouse. In addition, privies and other types of features not currently represented in the site inventory must certainly occur in that area. The numerous, well-preserved features indicate that the site is essentially undisturbed and can be expected to yield considerable data regarding both the structural and occupational history of the Boston General Store.

Material Culture

As expected, excavation of 13 test units and 41 shovel tests yielded a large historic artifact inventory. However, relatively few of the artifacts are directly associated with site occupation features, in part because the nature of the features (sandstone foundation supports, etc.) generally precludes accumulation of artifacts. Most artifacts were recovered from midden Strata 5 and 2, although a scattering of artifacts occurred in nearly all of the excavated strata. Only Stratum 3, the recent clay fill exposed in Unit 2, and Stratum 7b, the paleosol B horizon, were devoid of artifacts.

After the materials were returned to the MWAC laboratory in Lincoln, they were washed and sorted. Most artifacts were washed in water with soft brushes, although a few delicate items such as fish scales and bivalve shells were not washed or brushed. After drying, the artifacts were sorted into functional and material groups by provenience. They were analyzed as subsets within general functional groupings (e.g., bottle glass, ceramic sherds, etc., within the Domestic Group). Identifying individual vessels and items rather than merely generating counts of fragments was the goal of analysis for artifacts amenable to that level of study. Where possible, analysis focused on temporal placement of the items. In a few cases, the manufacturer's name could be determined through the presence of identifying marks or through comparison with other published examples. Several thousand artifacts were examined in this manner.

Following is a summary of the results of several related analytical efforts. Given the large artifact assemblage, materials are described only minimally. Tables are used extensively for data presentation. A synthetic accounting of the various artifact groups is developed in order to help construct a comparative database. Since several projects have examined nineteenth-century sites of varying function within CUVA over the past several years, and since additional studies are anticipated to occur in the near future, it is deemed important to summarize the artifact data in a manner useful for site comparisons. It is hoped that this approach will enable comparison of artifact assemblages from sites of varying function and age. Data from the sites can then be used to address questions of site function, economy, status, and other issues.

Not all classes of recovered material are given equal emphasis. Select functional groups are analyzed through detailed methods, whereas others are summarized only very generally. This unequal treatment is intentional. Since time is not available to study all aspects of all recovered materials, emphasis is placed on the most diagnostic items. Given the goal of examining the nature of the store function of the Boston General Store, particular attention is paid to ceramic vessels and other artifact groups that can contribute to functional studies. In general, Personal and Domestic Groups of artifacts are emphasized, whereas Architectural and other groups are analyzed less intensively. For example, the generally poor condition of recovered iron nails, and the lack of specific architectural research questions that might be addressed through their study, led to minimal analysis, even though they are numerous.

Domestic Group

Artifacts reflecting various household activities, including food preparation and service, are well represented at the Boston General Store. Within this group, primary analytical emphasis is placed upon the large ceramic and bottle-glass sherd inventories. These materials have considerable temporal and functional specificity, accounting for the analytical and reporting emphasis.

Ceramic Sherds and Vessels

A total of 1,106 ceramic sherds was recovered in 1991; an additional 907 sherds were recovered during CMNH test excavations in 1985, for a total of 2,013 (Table 1). The distribution of the sherds across the excavated proveniences is summarized in Table 2. For the purposes of the following presentation, the 1985 and 1991 materials are examined as a single data set. Since analysis focused on identifying minimum numbers of vessels within ware groups and decorative types, the sherds were all labeled and examined as a large group. The items were arranged on tables in a pattern paralleling their excavated distribution. Initially, attempts were made to match or mend items within individual levels of excavation units. Then matches were attempted between levels of single units. Finally, items were compared across all levels and units. By these methods, a minimum of 218 fragmentary, individual vessels were identified among the 2,013 sherds. Vessels were conservatively defined, usually based upon the presence of diagnostic rim fragments or uniquely decorated body sherds, or both. The actual number of vessels represented in the assemblage is probably considerably larger than the 218 identified vessels. These vessel counts provide a much better basis for comparison with other sites than would simple sherd counts.

The analysis of ceramic sherds in the current report generally follows methods used for the large assemblage from site 33–Cu–314. A lengthy description of manufacturing techniques, typological definitions, and analytical methods presented in that report will not be repeated here. Readers are encouraged to consult the report on that important site (Richner 1992:45–70) for additional information on the subdivision and analysis of the ceramic sherds applied to the Boston General Store assemblage.

Whiteware. Numerous decorative types and patterns were identified among the 1,129 whiteware sherds. The large number of vessels (n = 125) within this group of predominately tea- and table-service-related items attests to the significant scope of food-serving activities at the structure through the nineteenth century. Given the presence of numerous cutlery marks and footrim wear on the vessels, there is no evidence that a significant number of these items represent broken and discarded store stocks. Instead, they reflect food preparation and service. Eight decorative types are included in the large whiteware assemblage.

Transfer-Printed Whiteware. Various patterns of transfer-printed designs constitute the second most numerous decorative type recovered from the Boston General Store (Table 3). A total of 143 sherds representing a minimum of 43 individual vessels was recovered in 1985 and 1991. Unfortunately, the assemblage is highly fragmentary, since most sherds were recovered from sheet midden proveniences. Transfer-printed sherds represent only about 13 percent of all whiteware sherds from the site, but transfer-printed vessels constitute 35 percent of identified whiteware vessels. The reason for this apparent discrepancy is the highly diagnostic nature of the transfer-printed designs, which allow for considerable discrimination of individual vessels. Even if a transfer-printed design occurred only on a single sherd, it was occasionally possible to define a vessel on the basis of that sherd, given the diagnostic nature of the design. A similar approach was not possible with edge-decorated or plain, undecorated whiteware sherds.

Thirty-seven transfer-printed designs are present in the whiteware assemblage. Most of the designs occur on very small sherds and could not be identified relative to pattern name or maker. However, five patterns and four makers were identified (Table 4). All of the makers are represented in a larger collection of transfer-printed sherds from site 33–Cu–314, now known as the Canal Visitor Center, a former nineteenth-century tavern and residence (Richner 1992:170–176). As expected, all makers are from the

Staffordshire area of England. The underglaze mark of Alonzo S. Gardner, a Cleveland importer, occurs on examples of the Lucerne pattern. This situation is mirrored at nearby site 33–Cu–314. Gardner appears to have had an arrangement with the Joseph Clementson firm, since all patterns with Gardner marks recorded to date (Lucerne, Antique Vases, and Siam) were produced by Clementson. The presence of a similar mark at the Frazee–Hynton House, site 33–Cu–341 (Noble 1992), suggests that many businesses and residents along the canal obtained their ceramic tablewares from Gardner's Cleveland store, in operation by 1839. Lucerne is a romantic pattern typical of the mid-1840s through 1850s era.

Four of the patterns from the Boston General Store are also present at 33–Cu–314, with Corinth, by J. Edwards the only *identified* pattern unique to the Boston General Store transfer print assemblage. The patterns identified at the Boston General Store all date to the boom era of the canal, circa pre-1860 (Table 5). Although the firm W. Adams & Sons had a long manufacturing history, its Cyrene pattern dates to the 1840s or 1850s, similar to the other four identified patterns. These five patterns, and most of the remaining unidentified 32 patterns, were used at the site prior to about 1860, when transfer-printed wares waned in popularity. Canova, a very popular mid-nineteenth-century pattern, occurs in both red and blue transfer colors, while the other identified patterns are all in various shades of medium blue, the most popular of all transfer print colors.

Table 5 summarizes the transfer-printed sherds and vessels by pattern and vessel form. As expected, blue dominates the sherds and vessels, with 75 sherds in 16 patterns from a minimum of 20 vessels present. Red is also well represented, with 26 sherds, 7 patterns, and 9 vessels. Brown, black, green, and dark blue are present in smaller quantities. Note that most of the dark blue sherds are from flow blue vessels. These probably date to the very late 1800s or first decade of the twentieth century. Only a few sherds and vessels are printed in the deep cobalt "Old Blue" or "Staffordshire Blue" color that was popular in the 1820s. The scarcity of these sherds in the assemblage is expected, given the 1836 initial date for the Boston General Store.

The highly fragmented character of the transfer-printed sherds hinders attempts to determine vessel forms. However, several vessels could be categorized, at least in general terms, according to form and function. Cups, saucers, and plates dominate the assemblage, with a few other forms occurring in very small numbers (Table 5).

Edge-Decorated Whiteware. Only 27 edge-decorated sherds were recovered from test excavations in 1985 and 1991 (Table 3). A minimum of 12 vessels, all plates and platters, are represented by these sherds (Table 6). The low number of edge-decorated sherds may be a partial reflection of the nature of the plates and platters which constitute forms commonly decorated with edge-molded and painted designs. The majority of those vessels are plain, with decoration, as indicated by the name, limited to a narrow band on the rim. Broken vessels would include very few sherds exhibiting decoration. In the current analysis, if plain sherds could be mended to edge-decorated rims (an uncommon occurrence), only then could they be firmly associated with an edge-decorated vessel. Therefore, the undecorated whiteware category must contain numerous body sherds that actually derive from edge-decorated vessels.

Edge-decorated vessels constituted between about 10 to 30 percent of all ceramic wares made from 1830 to 1860 (Miller and Hunter 1990:110). Through the 1850s, edge-decorated vessels comprised about 40 percent of all tablewares. They make up only 3 percent of the sherds and 10 percent of the vessels from the Boston General Store. This representation would be considerably greater if it were possible to "screen out" post-1860 sherds and vessels from the artifact totals. Many such late-nineteenth-century

sherds are certainly present in the "undecorated" decorative category. As with transfer-printed vessels, popularity waned after 1860, although some variants (unembossed and unscalloped edge) were manufactured into the 1890s. One such late example (Vessel 24), a large platter, is present in the Boston General Store collection. Although 12 distinct patterns are present in the small assemblage, 9 are variants of the popular "shell edge" style. These embossed rims are covered with a narrow band of blue paint.

Two other edge-decorated patterns and vessels are worthy of additional discussion. One is well molded in the "dot and plume" pattern. This is one of a series of specially embossed edge decoration patterns popular after about 1820. Some remained in use until about 1840, but the dot and plume pattern was probably manufactured prior to about 1835. Vessel 85, a green-painted shell edge rim fragment, is also early in the site assemblage, dating to circa pre-1836. Both vessels were certainly among the tablewares in use at the structure immediately after its construction in 1836.

None of the edge-decorated vessels could be attributed to a particular maker. This is not surprising, since, with the notable exception of the "fancy" embossed forms, very few edge-decorated vessels were marked by their makers. However, there can be little doubt that these items were made in the Staffordshire district of England.

Sponge-Decorated Whiteware. This decorative type is very poorly represented at the Boston General Store (Table 3). Only 13 sherds representing three amorphous patterns and three vessels are present (Table 6). The sherds reflect only 1 percent of the total site whiteware sherd assemblage, and the vessels comprise only 2 percent of all identified whiteware vessels. The sherds are very small, and vessel forms have not been determined. The decoration is applied as an amorphous "all over" surface treatment, not a highly patterned cut sponge decorative embellishment. The paucity of sponge-decorated sherds matches the assemblage at site 33–Cu–314, where an even smaller portion of the whiteware assemblage consists of similar sponge-decorated sherds and vessels.

Annular-Decorated Whiteware. Annular-decorated whiteware is represented by 40 sherds, 11 patterns, and 11 vessels. Although the vessels are all fragmentary, all are hollowware forms. Most, if not all, are probably mixing bowls in the "London" shape. A partially reconstructed example of such a bowl is illustrated in Richner (1992:Figure 41b). These items were popular from about 1820 to 1850. Several of the patterns identified from the Boston General Store collection are variants of annular ware featuring a polychrome trailed ("earthworm") design within a wide color (typically green or blue) band. Narrow black annular lines on a clear glazed white background occur near the rim and under the wide decorative panel. From Table 7, it can be seen that many of the annular patterns and vessels from the Boston General Store contain this attractive decorative treatment.

A single vessel has a dendritic "mocha" decorative treatment. This decorative treatment was also applied to yellowware vessels in the mid-nineteenth century.

Hand-Painted Whiteware. Hand-painted whiteware is another of the common mid-nineteenth-century decorative types imported from England. Like annular-decorated, transfer-printed, and edge-decorated types, it occurs in most 1820 to 1860 archeological ceramic assemblages. The 36 hand-painted sherds represent 12 vessels and patterns (Table 8). A cup, two plates, and a saucer are the few vessel forms that could be identified.

Decal-Decorated Whiteware. Unlike the decorative types discussed previously, decal-decorated whiteware is a very late-nineteenth-century and early-twentieth-century decorated whiteware type. This decoration often occurs on inexpensive porcelain bodies. Lithographic decorations on paper-backed sheets were used in the production of decal-decorated ware. The sheets were cut and pressed on the completed vessel and the paper was sponged off, leaving the decal in place (Savage and Newman 1985:180). Unlike the mid-nineteenth-century decorated types described earlier, decals are placed over the glazed vessel surface and are therefore subject to wear. The decal designs are polychrome and appear in numerous patterns. All the examples from the Boston General Store are floral varieties. For many years, decals were produced in Europe (often in Germany) and were applied to vessels made both there and in the United States (Newcomb 1947:199). Not until the mid-twentieth century were the decals made in the United States.

Decal-decorated whiteware is fairly well represented at the Boston General Store, with 36 sherds from a minimum of six vessels (Table 9). Each vessel appears to exhibit a unique pattern. Plates and a serving dish are present in this group. The decal-decorated whiteware was probably in use at the site during the last days of store operation or, more likely, through the first two decades of private residential use of the structure. Note that decal-decorated sherds are as common in the assemblage as all of the mid-nineteenth-century decorative types except transfer-printed whiteware. This indicates considerable continuity in trash disposal on the grounds from the 1830s into the second decade of the twentieth century.

Mold-Decorated Whiteware. Mold-decorated vessels generally lacking colored embellishments began to supplant transfer-printed whiteware and other mid-nineteenth-century decorative types in the 1850s. By the 1860s, these wares were dominant. Initially produced primarily in England, they were also manufactured by a variety of firms in the United States, particularly in the East Liverpool area of Ohio. The molded designs that replaced the fancy, detailed transfer prints, and the utilitarian edge, hand-painted, annular, and other decorative treatments initially consisted of designs intrinsic to the basic shapes of the vessels. Many of these rectilinear, paneled, or other molded shapes first occurred on transfer print-decorated vessels in the 1840s and early 1850s. By the 1860s, raised, molded designs were applied to the white vessels. A wide variety of such patterns were registered, often consisting of various "harvest" themes. One of these, the Ceres Shape or Wheat Pattern, has been manufactured with slight variations by at least 23 potteries from 1859 to the present. This common design is one of the molded shapes that occurs at the Boston General Store. A variety of foliage and floral designs became popular, and these are also among the mold-decorated whiteware sherds from the Boston General Store.

All of these wares were intended for the North American market, and they appear to have been fostered by the Staffordshire potters as a replacement for and "improvement" over the proliferation of embellished transfer designs of earlier years. Mold-decorated whiteware does not appear in England, where large numbers of patterns and vessels were manufactured (Sussman 1985:7).

Mold-decorated whiteware is well represented at the Boston General Store, with 50 sherds representing a minimum of 15 separate vessels (Table 10). Nearly all of the identified vessels are plates of various sizes, including a single serving dish and one hollowware shape. The molded decorations include both "vessel shape" varieties (paneled) and several raised floral and foliage motifs. These wares, along with accompanying, and more numerous, undecorated whiteware would have dominated the table service at the Boston General Store from 1860 until at least 1880, if not later.

Undecorated Whiteware. Undecorated whiteware was available through the entire nineteenth-century era of occupation of the Boston General Store. Through the mid-nineteenth century, it was identified in Staffordshire potters' sale lists as "cc" or cream color ware. Until the 1850s, because it completely lacked decorative embellishments, it was the least expensive type of whiteware. Through changing consumer tastes, and a degree of market manipulation by Staffordshire potters, plain whiteware was slightly altered into a thicker-bodied variant and marketed under a bewildering variety of recipes and names after the 1850s. Perhaps the potters thought that these simple wares, with their thick forms and durable, tough-sounding recipes (e.g., stone china, ironstone china, and imperial white granite) would appeal to working-class Americans and result in increased sales. Regardless of the manufacturers' goals, the plain wares were a huge success and were imported in enormous quantities. The plain (and mold-decorated) wares soon became the most expensive whitewares available and were manufactured by most of the Staffordshire potters into the 1880s. Various U.S. firms also manufactured vast quantities of these vessels. By the 1890s, the plain ware had become passé and was the least expensive dinnerware offered in various mail order catalogs. Decal-decorated and other forms replaced undecorated whiteware in popularity.

The very large plain whiteware sherd assemblage from the Boston General Store certainly contains plain fragments from decorated wares (i.e., body sherds from broken edge-decorated vessels) as well as numerous pieces from undecorated vessels. The large number of sherds (n = 784) indicates the importance of undecorated whiteware in the artifact assemblage. These sherds comprise 69 percent of all whiteware sherds recovered from the site. Unfortunately, given the scattered nature of the test units, limited temporal assignment of excavated strata, and mixed-sheet midden deposits such as Stratum 2, it is not possible to distinguish between the pre-1860 and post-1860 sherds in this group. A catchall, the plain whiteware category incorporates vessels from a lengthy time span (1830 to 1890+). A conservative estimate of 23 undecorated vessels was achieved through careful sorting of the plain whiteware sherds (Table 11). Although plates are the most common form, numerous vessel shapes are represented.

Porcelain. Porcelain sherds and vessels are surprisingly well represented in the ceramic assemblage from the Boston General Store. They are not expensive, fine wares, but instead are rather common late-nineteenth-century items. Four decorative treatments are applied to the porcelain vessels from the site (Table 12). Four undecorated vessels were identified from 38 sherds. The vessel forms of these vessels were not determined. Decal-decorated porcelain vessels are relatively numerous, with 12 vessels and 34 sherds present (Table 9). It is likely that many of these were made in Germany, since inexpensive German porcelain vessels were often decorated with decal patterns (Newcomb 1947:199). All but one of the decal-decorated porcelain vessels exhibit polychrome floral patterns. Included in this group are two vessels that also have a single gilt line at the rim and one on which the floral decal is combined with a raised, molded rim design. The remaining vessel has a monochrome, purple floral design. These floral decal patterns are all characteristic of very late-nineteenth- or early-twentieth-century manufacture.

Molded designs occur on four porcelain vessels that lack decal or other colored embellishments (Table 10). Two patterns are floral varieties, but the others are too fragmentary for identification. The four vessels are represented by 16 sherds. Hand-painted decorations occur on 3 porcelain sherds and on a minimum of 3 vessels (Table 8). Two cups have simple gilt fine lines at the lip, and the third is a highly fragmentary polychrome design of unknown motif.

Yellowware. Yellowware has a buff-yellow to yellow-gold paste, usually sealed with a colorless glaze. It has primarily been used for common tablewares, kitchen, and chamber wares. In production by the 1830s, it was mass-produced in Pennsylvania, New York, Ohio, and other states by the 1840s

(Leibowitz 1985:9). Its zenith of popularity during the 1860s and 1870s was followed by a slow decline in importance. Although still in production until about 1930, it was little used after about 1900. Enormous quantities of yellowware were produced in Ohio after about 1839. Early forms are usually plain, and plain examples continued to be made through about 1900. Early yellowware was decorated by simple banding or annular decorations, but molded designs soon followed, becoming popular in the 1860s and later. Some of the mold-decorated designs repeat patterns used on whiteware, whereas others are unique to yellowware. The most common decoration applied to yellowware is probably "Rockingham" glaze. This brown manganese glaze was spattered or dripped on a revolving vessel, yielding an irregularly mottled brown surface. Nearly all firms made this type of ware by about 1870. Dendritic mocha and cut-sponge decorations were also applied to yellowware.

Given the large regional yellowware industry, it is not surprising that 84 sherds representing a minimum of 11 yellowware vessels are present in the Boston General Store ceramic assemblage (Table 13). Appropriately for the utilitarian nature of this ware, most of these vessels are bowls or other hollowware forms.

Stoneware. Stoneware was used to manufacture a variety of heavy, utilitarian forms used primarily for food storage, preparation, and occasionally, food service. Fired at a very high temperature, stoneware clay becomes nonporous and an effective medium for storage purposes. Stoneware vessels were manufactured in large numbers in the region surrounding the Boston General Store after the 1830s. Akron was an important stoneware manufacturing center, and stoneware potteries were also present in Cleveland. The local industry developed immediately after 1827, when transportation of the heavy ware became feasible after the first segment of the Ohio and Erie Canal was completed. Later rail development provided an even more efficient method of shipping the ware, which was often sold as entire train car loads during the mass production era of the mid- to late nineteenth century. Even given the local importance of stoneware manufacture, a surprisingly large number of stoneware sherds and vessels were recovered from test excavations in 1985 and 1991 at the Boston General Store.

Stoneware is represented by 694 sherds from a minimum of 55 vessels. The great majority of these have Albany slip on the interior surface and a salt-glazed exterior (Table 14). Albany slip, a dark brown clay wash, was applied to the vessels in a slurry–like consistency. It coated the interior of the vessels and made them more hygienic and easier to clean by providing a smooth, uniform surface. Salt glaze was applied simply by adding salt to the kiln during the firing process, causing a chemical reaction on the exposed vessel surfaces. This resulted in an uneven, pebble-textured glaze. A second large group has Albany slip on both interior and exterior surfaces. This application is thought to have begun about 1848. The relatively few remaining sherds are unglazed or bristol slipped. Unfortunately, the stoneware sherds, like all the ceramic sherds from the site, are badly fragmented. Despite this, general vessel forms could be determined for several of the identified vessels (Table 15). A few jugs (to hold molasses or similar products) are present, but most of the vessels are crocks of various sizes. These were used for a wide variety of purposes, especially for preserving meat and other food products.

Bottle Glass Sherds and Vessels

Bottle glass was sorted and mended in the same manner as were ceramic sherds. However, this was accomplished only for the 1991 assemblage. A cursory examination of the 1985 material suggested that inclusion of those sherds would not add appreciably to the overall study. Analysis emphasis was placed upon diagnostic elements of the sherds (i.e., finish and mold technique, and presence of embossed lettering

or marks) that might help place the items in appropriate temporal and functional perspective. It proved possible to identify the maker and/or likely content of numerous bottles. However, like the ceramic assemblage, the fragmented condition of the sherds hindered reconstruction and identification efforts.

The large bottle glass sherd assemblage consists of 1,503 sherds from a minimum of 33 vessels (Table 16). The low number of identified vessels compared with the large number of sherds exemplifies the analytical difficulties already mentioned. Many of the sherds are very small and lack both functionally and temporally diagnostic landmarks. Only 220 sherds could be ascribed with certainty to individual vessels, with the remaining 1,283 fragments unassociated with any individual vessel. The sherds are tabulated by color in Table 16. Overall, color is not a highly useful indicator of sherd or vessel age or function, but it does provide a simple device for tabulating the materials. An exception is the amethyst tint. This tint develops in certain vessels containing magnesium, which was used to create colorless glass vessels. Over time, the metal imparts to the glass an amethyst tint that is readily visible and highly diagnostic. Supplies of magnesium were unavailable during World War I, after which the material was no longer used in bottles. Therefore, sherds and vessels with amethyst tint have rather tight chronological parameters (circa 1880 to 1916). A small percentage (4.1 %) of the bottle glass sherds from the Boston General Store bear this diagnostic coloration.

Despite the small size of the sherds, fragments from individual bottles were occasionally identified (sometimes mended) across horizontal and vertical proveniences (Table 17). Such matches are useful for examining the ages of various strata at the site. For example, the distribution of sherds from Vessel 2, an amber paneled bottle, indicates that essentially all the excavated levels in Units 10 and 11 are analytically equivalent. More specifically, the "blended" midden deposit there (Stratum 2) is mixed through various activities and contains artifacts of varying age throughout the deposit. The midden covers structural remnants of the warehouse foundation. Cross-match data for several artifact classes are summarized in the concluding section of this report.

The 33 identified glass bottles are summarized in Table 18. Information on the portion of the bottle, its shape, construction technology, and approximate age is included for the fragmentary bottles. A few manufacturers could be determined from embossed lettering on these bottles. Vessel 11, recovered from the fill in Unit 3 overlying the Feature 1 cistern, is nearly complete. Reconstructed from 54 colorless glass sherds, this bottle is a screw top wine jug embossed with "ONE GALLON" on the shoulder. An embossed design consisting of grapes, grape leaves, and horizontal bands circles the body of the jug. The maker's mark on the base of this vessel indicates that it was manufactured by the Owens Illinois Glass Co. of Toledo, Ohio. This style of mark was in use from 1929 to 1954 (Toulouse 1971:403–408). The base is stamped with a code, probably for the year of manufacture ("8"), but information is not available to decipher the code.

Vessel 20 is a complete, aqua bottle, 8.3 cm tall. It is round, with a post bottom mold scar on the base. The finish is a prescription form, applied with a lipping tool. The base is marked "L&W," which may be the mark of Lorenz and Wightman, of Pittsburgh, Pennsylvania (Toulouse 1971:338–339).

Vessel 28 is represented by 48 colorless body and base fragments of a large flask. The embossed "F" on the base suggests that the bottle may have been made by William Frank & Sons, of Pittsburgh, Pennsylvania. If that assignation is accurate, the bottle would date from about 1866 to 1876. The fragments are from Level 5, Test Unit 7. That arbitrary excavation level is within Stratum 6c, the canal dredge spoil.

Vessel 30 consists of two amber sherds from a paneled bottle with embossed lettering that reads "JACOB..." This may be a portion of the more complete entry (Fike 1987:41; Ring 1980:407–408)

ROSENBAUM'S/BITTERS//SAN FRANCISCO//N.B. JACOBS & CO.

This product is one of a large number of "stomach bitters" preparations that were sold as cure-alls. In 1867, this product was reputed to cure dyspepsia, diarrhea, jaundice, liver complaint, indigestion, fever, ague, and all other bilious diseases (Watson 1965:190). The contents of bitters usually included ample levels of alcohol, which would have been dangerous for those with liver ailments.

Vessel 31 is a partially complete, colorless bottle base with a maker's mark for the Hazel-Atlas Glass Company of Wheeling, West Virginia (Toulouse 1971:239–242). This company used the mark on the Boston General Store specimen from 1920 to 1964. The sherd was recovered from Level 1 of Unit 6. This indicates the continued discard of items on the grounds surrounding the Boston General Store well into the twentieth century.

Glass Canning Jar Sherds

In contrast to the large number of stoneware sherds and vessels in use at the Boston General Store, glass canning jars are very poorly represented. It appears that stoneware vessels were used extensively for food storage, whereas small glass jar storage containers were of relatively little importance. A total of 11 sherds from glass canning jars were recovered from the Boston General Store in 1991. Eight of the eleven are from the midden (Stratum 5, arbitrary excavation Levels 7 and 8) in Unit 7. This small number of sherds could represent a single vessel. The presence of the canning jar sherds in this context indicates that midden deposition was still underway after 1858, when the "mason jar" patent was granted.

Canning jars are also represented by "opal glass" jar lid inserts. These glass disks were developed to prevent zinc screw lids from imparting a metallic taste to the canned contents. Ten glass lid insert sherds are present in the collection. No makers could be specifically identified

Tumbler Sherds

Sherds attributable to colorless drinking-glass tumblers are rare in the domestic assemblage. Only 11 tumbler sherds, widely scattered across the site, are present; no concentrations of sherds occur. The small number of sherds, their fragmentary condition, and their distribution make it impossible to determine the minimum number of vessels present.

Pressed-Glass Sherds

Pressed-glass sherds are somewhat better represented than glass fragments of tumblers or canning jars but are still infrequent. Only 25 pressed-glass sherds are present, but they are widely distributed across the site. No specific pattern names or manufacturers could be identified from this small sample. One group of patterns represented by 9 sherds from Units 1, 2, 6, 11, 12 and Shovel Test 30 includes a simple diamond configuration. This is one of the more popular geometric devices applied to pressed-glass vessels, and occurs in a large number of specific patterns (McCain 1979:126–207). It appears that most of the pressed-glass vessels in use at the Boston General Store exhibit a design based upon diamond shapes.

Pressed-glass vessels enjoyed widespread popularity from the mid-1800s through about 1920. Since no specific patterns or makers have been identified among the Boston General Store sherds, there is limited opportunity to provide refined dating of these items. However, 6 pressed-glass sherds have developed an amethyst tint, indicating manufacture between about 1880 and 1916. These were recovered from the midden (Stratum 5) in Unit 2, the sheet midden (Stratum 2) in Unit 12, and from Shovel Tests 10, 18, and 25. The presence of these late-nineteenth- or early-twentieth-century items in the Stratum 2 and Stratum 5 middens is expected, given the nature of these deposits.

Lamp Chimney Fragments

Fragments from the thin-glass chimneys of oil-burning lamps are numerous at the site (n = 122). The relatively few rim sherds from these chimneys indicate that both hand-finished "pie crust" and machine-made chimneys are present. For example, both hand- and machine-finished rims from separate chimneys occur in Unit 10, Level 3. This is within midden Stratum 2. Lamp chimney fragments are widely distributed across the site, with Unit 3 the only test unit devoid of chimney sherds.

Faunal Remains

Numerous faunal remains were collected from the 1991 test excavation program. These items have not yet been analyzed.

Domestic-Group Artifact Summary

The Boston General Store has yielded a typical array of mid-nineteenth- through early-twentieth-century domestic items. The distribution of these items across the excavated portions of the site is summarized in Table 19. Sherds from glass bottles and ceramic vessels dominate this assemblage, with relatively small numbers of fragments from tumblers, canning jars, pressed-glass vessels, and other items. The significance of the numbers and distribution of these artifacts are discussed in a later section of the report.

Personal Group

This broad group of artifacts includes a variety of items used by individuals. It includes various clothing and clothing maintenance materials, clay tobacco pipes, writing implements, and coins. Low numbers of items are present for most of the artifact types within this broad group. Tobacco pipe fragments are the most numerous, but even that common artifact type is present in relatively limited quantities.

Clothing

Clothing is represented by various fasteners (rivets, buttons, eyelets), cloth and leather fragments, and a bead. Very small numbers of these items are present, effectively precluding detailed analysis of this artifact class. The artifacts are listed by excavated provenience in Table 20. Buttons are the second-most numerous of these artifact types, with only eight specimens present. The buttons include two 4-hole small white "china" shirt buttons from Unit 7 (Strata 6c and 5), a small, cream-colored "china" button from Unit 1 (Stratum 5), a shell button with metal shank from Unit 2 (Stratum 1), a small brass button stamped with

"orange gilt" on the back from the builder's trench of Feature 2, a 2-hole, black hard rubber specimen from Unit 13 (Stratum 1), and a fragmentary white china from Unit 13 (Stratum 2). The hard rubber button appears to be of relatively recent age. The glass buttons, often called small chinas, are typical of the mid- and late nineteenth century. The most diagnostic button is the brass "gilt" specimen from Feature 2. These stamped buttons often exhibit stamped lettering such as "treble gilt standard colour" and "gilt." Buttons of this type date from the early 1800s to about 1865, although it would appear that the Boston General Store specimen is of early-nineteenth-century age, since it lacks decorative embellishments such as wreaths or other devices (South 1964:121). A mid-1830s date for this item is strongly indicated by its presence in the Feature 2 builder's trench.

The single glass bead from the site is a bright yellow specimen from Unit 7, Level 3. This is from Stratum 6c, the redeposited canal spoil.

Tobacco Pipes

Fifty-seven fragments of clay tobacco pipes were recovered from the Boston General Store in 1991 (Table 20). Few of the fragments contain maker's marks or other manufacturing information. Pipe sherds occur in nearly all test units and are also scattered in several shovel tests. There are no major concentrations of pipe sherds, although Units 1 and 12 each yielded 10 fragments. These numbers are not large enough to suggest activity areas related to pipe smoking.

A few of the pipe bowl fragments can be characterized by decorative treatment. In Unit 1, Level 6 (Stratum 6a), a nearly complete pipe bowl was reconstructed from two large sherds. This pipe has a large bowl typical of the post-1850 era. The entire bowl is plain and vertically burnished, a characteristic typical of pipes made in Gouda, Holland (Humphrey 1969:18). Similar pipes are present in considerable number at site 33–Cu–314 and are identified as Type D, Variety 2 (Richner 1992:94 and Figure 58a). The presence of this post-1850 style in Stratum 6a indicates that the overlying midden Stratum 5 must date to the mid-nineteenth century at the earliest. Similar burnished, plain-bowl fragments were also recovered from Unit 2 (Stratum 5), Unit 8 (Stratum 2?), Unit 12 (Stratum 2), Shovel Test 3, and Shovel Test 6. The stems on these pipes are round and are stubby, rather than elongated.

Two fragmentary round stems are marked by the maker. These are not directly associated with the plain-burnished bowls, so the decorative treatment on their bowls is unknown. One from Unit 5, Stratum 2 contains the fragmentary lettering "...NERMAN" on one side and "GLASGOW" on the other. A stem from Unit 11 (Stratum 1) bears the fragmentary lettering "BANNER." It is likely that both are from one of the Bannerman firms known to have operated in Glasgow. A. C. Bannerman is listed in Glasgow in 1842, Carrick Bannerman from 1862 to 1865, and John Bannerman from 1856 to 1860 (Oswald 1975:204–205). These are the only marked examples in the tobacco pipe assemblage.

In addition to plain bowls and marked, round stems, several other decorative types are present in the small tobacco pipe assemblage. In Unit 5, Level 3 (Stratum 2), a fragment from a cockled pipe bowl was recovered. Two bands of differentially sized cockles are separated by a plain band. Humphrey codes this as Class V (Humphrey 1969:23 and Figure 19) in his report on the pipes recovered from an 1852 context at Old Sacramento. This variety of cockled pipe bowl is not present in a large sample of tobacco pipe sherds from site 33–Cu–314 within CUVA.

A variety of cockled small-bowl pipes is also represented at the Boston General Store. A single decorated sherd was recovered from Unit 7, Level 6 (Stratum 5 or 6c). This pipe is apparently of English manufacture and is of a style popular from about 1820 to 1850. A complete example has been illustrated by Richner (1992, Figure 57b). This variety is well represented at site 33–Cu–314 and is designated as Type A, Variety 2 (Richner 1992:90). An oak-leaf design masks the front mold seam on these pipes. A small fragment of a pipe bowl from Shovel Test 3 may be from the same small-bowl cockled variety, or a more highly decorated variety known as "cockle, oval, and dumbbell" (Richner 1992:90, Figure 57a). This fragment shares the oak leaf over mold seam treatment with the simple cockled variety. The oak leaves are present on the Boston General Store specimen, but the upper, diagnostic portion of the bowl is missing.

A single, small-bowl fragment from Unit 7, Level 5 (Stratum 6c) bears a fine "ribbed" pattern, above which occurs a sunburst design. This pipe is thought to have been made in England like the small-bowl cockled varieties already described; complete examples are illustrated in Hanson (1971:96, Figure 3a). An identical single fragment was recovered from site 33–Cu–314 in CUVA (Richner 1992:94, Figure 57i).

A small decorated pipe bowl fragment was recovered from Unit 9, Level 2 (Stratum 2). This fragment appears to be a portion of an effigy or figurine style of bowl, with a portion of a hand present on the Boston General Store specimen.

The final identifiable, decorated white clay pipe bowl fragment from the Boston General Store is a rim fragment from Unit 12, Level 3 (Stratum 2), bearing the likeness of a sailing ship. Although the specimen is highly fragmentary, it appears to match a published example (Davey 1980:211–212). The complete bowl probably exhibited a large anchor on the side opposite the sailing ship, with leaves masking the mold seam, similar to the treatment of the small-bowl cockled pipes described above. The "sailing ship" pipe was probably made in Chester, England, about 1850 (Davey 1980:212).

In addition to the white clay tobacco pipe fragments, a single terra-cotta pipe is also represented. The pipe has a cockled design over the entire surface, with a single raised band at the rim. A complete example is illustrated in Richner (1992, Figure 58d). Another fragmentary example was recovered during test excavations at Everett Village (Hunt 1986:Figure 11e). These pipes had a detachable reed stem, in contrast to the one-piece stem and bowl of the white clay pipes previously described. Major centers for the manufacture of these pipes were nearby Akron–Mogadore and Point Pleasant, Ohio, where enormous quantities were made after the invention of a terra-cotta pipe-making machine in 1847. After 1850, huge volumes of terra-cotta pipes were manufactured by the E. H. and J. C. Merrill Company and its successors in Akron (Sudbury 1979:184; 1980). The Akron firms produced more pipes than the Point Pleasant companies. The example from the Boston General Store bears closest resemblance to a type produced in Point Pleasant (Sudbury 1979:Plate 10–6; 1980), but this simple style was likely copied by all the local Ohio pipe makers of the mid- and late nineteenth century. Given the enormous local production of terra-cotta pipes, it is surprising that so few examples are present in the nineteenth-century sites excavated and tested to date at CUVA. In the huge inventory of smoking-pipe fragments from site 33–Cu–314, only two terra-cotta bowls are present and only single specimens have been recorded through testing at Everett and the Boston General Store. None are present in the archeological assemblage from the Frazee–Hynton House (33–Cu–341) (Noble 1992).

Other Personal Items

Very few other items attributable to personal use were found at the Boston General Store (see Table 20). A single coin is of some interest from a perspective of providing refined dating of a single provenience. An 1864 "Indian Head" cent was recovered from Unit 7, Level 8, in the Stratum 5 midden deposit. This clearly documents that the midden, now buried deeply under Stratum 6c fill interpreted as redeposited canal dredge spoil, was still accruing at least as recently as the mid-1860s. The remaining personal items are unremarkable and consist of fragments from lead pencils, a scissors, and a thermometer.

Activities Group

Like the personal group, this set of artifacts is poorly represented at the Boston General Store (Table 20). Only cartridge cases and a few toys are present. The toys include a single miniature pressed-glass plate that is included in the tabulation of domestic artifacts. It should probably be included here under toys, since it appears to be part of a toy tea service. Two marbles were recovered from Unit 12, Level 1 in a modern context (Stratum 1). One is a machine-made glass marble with an amber and milky white swirl pattern, and the other is a handmade unglazed common clay marble. The glass marble is of twentieth-century age (1927 to 1950?), whereas the clay marble was made between 1860 and 1910. A terra-cotta marble from Shovel Test 12 probably dates from 1888 to 1916 (Cohill, personal communication:January 14, 1992). Another common, unglazed clay marble from Shovel Test 25 matches the one from Unit 12. Other toys include a porcelain doll leg from Unit 4, Level 2 (Stratum 2), and a hard rubber toy pistol grip from Unit 5, Level 3 (Stratum 2).

A few cartridge cases are present in the collection. A .32-caliber rimfire case was recovered from Unit 1 within the Stratum 6a fill zone. A rimfire .22 from the Stratum 5 midden has a "U" head stamp for the Union Metallic Cartridge Company and dates not earlier than 1867. This is a further indication that the midden was accruing through the 1860s and probably later. An identical specimen was recovered in Unit 5, Level 2 (Stratum 2). A .45-caliber centerfire cartridge case was recovered from Unit 7, Level 4 (Stratum 6c). The maker of this round is undetermined. A .22-caliber rimfire cartridge from the sheet midden (Stratum 2) (Unit 11, Level 2) and an identical specimen from Shovel Test 7 are also by an undetermined manufacturer.

Architectural Group

This group of artifacts includes various structural components (brick, mortar, shingle, slate, and window glass fragments), fasteners, and hardware (cut and wire nails, bolts, hinges, etc.).

Bricks, Mortar, and Miscellaneous Construction Materials

Fragments of bricks, mortar, asphalt shingles, and slate were present in many excavated proveniences at the Boston General Store (Table 21). These materials were not counted or weighed, but were instead recorded according to presence or absence for each excavated provenience. Brick fragments are rather widely scattered across the grounds (Table 21). The source for this material is unknown, since brick is little used in the Boston General Store. The only visible bricks appear to be relatively recent additions to the foundation around select window openings. A large number of bricks were used to construct the

cistern (Feature 1) exposed in Unit 1 along the east facade. Some of the discarded brick fragments (especially those from Unit 1) may derive from construction of that large feature. It is unknown if brick was used in the foundation of the warehouse or for components of a building of undetermined function that formerly stood adjacent to the southwest corner of the warehouse. The brick fragments from the site include soft orange and slightly harder red examples. A single red brick from Unit 2, Level 2 (Stratum 3), contains manufacturing information. This brick is stamped "METROPOLITAN/AKRON – OHIO." Since the item is within recent twentieth-century fill transported to the site, it is unrelated to construction of site structures and features and was not further researched.

Mortar is also well represented at the site (Table 21). Samples of the mortar have been submitted for analysis of the sand–lime mix and to determine approximate age. The results of that study are not currently available. Mortar is present in considerable quantities in the units where features related to the warehouse foundation were recorded.

Asphalt shingle fragments were also recovered from several excavation units (Table 21). These are made from felt saturated and coated with asphalt, then covered with rolled-in surfacing of colored minerals. Several of the examples from the Boston General Store have a dark green surface and appear to match the existing shingles on the frame outbuilding south of the Boston General Store. The examples from Unit 13, adjacent to the outbuilding, clearly match the existing shingles on the outbuilding. Asphalt shingles (apparently applied in the late 1920s) also cover the entire south facade of the Boston General Store, and many of the fragments found during excavation could derive from that application event. It is assumed that all of the asphalt shingle fragments in the archeological assemblage date to the twentieth century.

Although they are tabulated under construction materials, the function of the slate fragments recovered from Units 7 and 12 is undetermined. Initially, it was thought that they were fragments from roofing slates. However, since none of the local buildings are known to have had slate roofs, the initial identification may be in error. None of the fragments bear nail holes or other features diagnostic of roofing slates. The small fragments may be from writing slates, in which case they might better be included within the group of toys described above. Such writing slates were in common use until they were replaced by paper tablets and pencils during the first decade of the twentieth century.

Window Glass

Since a variety of studies have shown that window glass thickness can be used for dating because window glass has generally increased in thickness over time (Moir 1982; Roenke 1978; Schoen 1985; and Walker 1971), the window glass from the Boston General Store was the focus of more intensive analysis than other architectural items. The initial construction date of the Store is not in question, but it was anticipated that stages of structural renovation might be reflected in shifts in glass thickness through the strata identified at the site. If such shifts could be identified, it might then be possible to associate select strata and features with particular, brief segments of site occupation. Perhaps more importantly, it was anticipated that the distribution of thickness values in various excavated proveniences might yield clues to the duration of discard activities in certain deposits or to the degree of postdepositional mixing which might have occurred. Since chronology developed through examination of window glass thickness values is essentially a relative dating technique, it was not anticipated that specific dates could be assigned to these deposits based solely upon study of window glass thickness.

The thickness of each glass sherd was measured to the nearest 0.01 mm. The data were compiled on a computer data storage program (PC–File) for ease of manipulation. Emphasis was then placed upon select proveniences where relatively large sample sizes (minimum of 30 sherds) are present and where relative dating of the strata would aid the analytical goals of the project.

Since about 1970, numerous studies have examined the relationship between window glass thickness and date of manufacture (Chance and Chance 1976; Demeter and Lowrey 1977; Grosscup and Miller 1968; Moir 1982; Roenke 1978; Schoen 1985; Walker 1971; and Whelan 1985). Although there is a lack of comparability between studies for providing the same calendrical date for a unique glass thickness value, all of the studies have documented a trend toward increasing thickness through the nineteenth century. This direct relationship holds until about 1911, when production became automated. Several different approaches and methodologies have been applied to these window glass thickness studies, resulting in a variety of formulae and other dating schemes.

Window glass dating schemes can generally be divided into two groups, since researchers have relied on two different measures (mean or mode) in developing chronologies from window glass collections. These approaches have examined initial construction date, modal occupation dates, and construction staging. Both mean and modal values are utilized in the current study. More importantly, the distributions of thickness values are displayed in graphs (Figures 19 to 26) summarizing the window glass data.

A large number of window glass sherds (n = 2,220) were recovered from 1991 test excavations at the Boston General Store (Table 21). Window glass sherds occur in nearly all excavated levels of the 13 test units, and are relatively common in the shovel tests, as well. The average thickness of the entire data set is 1.83 mm. However, sherds from a widely varied group of proveniences are present, and the mean masks the variability that is actually present. Subsets of the total window glass assemblage offer better samples for analytical treatment.

In Unit 1, sample sizes are large enough to permit examination of window glass thickness by individual stratum, or groups of strata. Excavation levels 1 to 4 include Stratum 1, the modern surface, and 4a and 4b, the cinder layer. The mean for 96 window glass sherds from this analytical block is 2.18 mm. Glass of that thickness probably dates to the very late nineteenth century (Richner 1992:198). As expected, a thinner average value (mean = 2.03) was obtained for 355 sherds from the Stratum 5 midden. However, the mean value masks the considerable variation present in that large sample of sherds. In Figure 19, the distribution of thickness values is graphed in 0.05-mm increments. From this graph it is apparent that at least two distinct construction/rehabilitation actions are represented by the window glass. The distribution is bimodal, or perhaps trimodal. One very strong mode occurs at 1.45 to 1.49 mm, a weaker mode at 1.90 to 1.94 mm, a very weak mode at 1.25 to 1.29 mm, and an additional strong mode from about 2.25 to 2.50 mm (Figure 19). The weak, lowest mode certainly reflects the window glass installed during the initial construction of the Boston General Store. Similarly, the 1.45 to 1.49 mode must be from glass used early in the site sequence. The other peaks represent later replacement panes. Most importantly, they indicate that the midden contains original pane fragments in addition to broken panes from a considerably later era.

At the nearby Canal Visitor Center site (33–Cu–314), thought to have been constructed by the early to mid-1820s, a lower mode of 1.0 mm, with means from about 1.1 to 1.3 mm, were consistently recorded for the earliest, unmixed deposits. Equally consistent at that site is the presence of a secondary mode and mean at about 1.6 mm, dated through associated artifacts to about 1853. Since window glass thickness

is known to have increased rather dramatically after about 1845 (Roenke 1978:116), these results are consistent with earlier studies. The secondary mode in Unit 1, Stratum 5 at the Boston General Store appears to represent glass that postdates the 1845 thickness shift by several years. It is considerably thicker than the glass (1.6 mm mode, 1.63 mm mean) at 33–Cu–314 believed to date to about 1853. According to Roenke's summary of modal values, the 1.90 to 1.94 mm mode would date to about 1850 to 1860 (Roenke 1978:72, Table 12), although local research indicates a somewhat more recent age for glass of that thickness. The upper mode in Unit 1, Stratum 5 would appear to date to the late nineteenth or early twentieth century. Alternatively, it could represent double-strength glass from various store uses that could date as early as 1850. Regardless of the age of the glass from Unit 1, Stratum 5, the apparent trimodal distribution of glass thickness values clearly indicates that glass from the original construction era is mixed with glass from the middle and late nineteenth century. Old glass could be broken and incorporated in the archeological deposit at any time after construction, but the presence of the thicker glass indicates that the midden formed the ground surface for many years in the mid-nineteenth century.

A generally similar pattern is seen for a smaller sample (n = 30) from Strata 6a and 7a from Unit 1 (Figure 20). There the trimodal distribution is again present. The modal values are essentially the same as those in Stratum 5, although only five sherds constitute the very weak, upper mode. The mean for this analytical group is 1.74 mm. Depending upon the dating scheme used, that mean has been dated from 1844 to 1871. It appears that the entire east wall deposit contains glass from initial construction and from later glass replacement episodes. However, the possible presence of double-thick panes and/or glass from store fixtures such as display cases casts some doubt on that interpretation. The fact that mean values decrease with depth indicates that these deposits are intact, with the newer glass concentrated in the upper levels.

Analysis of window glass from Unit 2 provides somewhat different results than Unit 1. A large sample of sherds (n = 283) from Stratum 5 is available for analysis. A unimodal distribution of thickness values contrasts with the pattern recorded in the Stratum 5 deposit in Unit 1 (Figure 21). However, the span of values is essentially similar to Unit 1, and there are hints of modes at 1.50 to 1.54 mm, 1.80 to 1.84 mm, and 2.0 to 2.04 mm, suggesting that several glass replacement episodes may also be reflected in this data. The mean for the deposit is 1.57 mm, while the strong primary mode is 1.25 to 1.29 mm. This value, roughly equivalent to .050 inches, falls exactly between the 1830 to 1840 and 1835 to 1845 age values represented by thickness modes of 1.14 and 1.39 mm, respectively (Roenke 1978:72, Table 12). This very accurately matches the 1836 initial construction date of the Boston General Store.

Units in the mowed turf area are grouped according to location. Window glass samples are combined by strata in these groups to provide adequate samples for analysis. Units 4, 5, and 9 comprise one group. Materials from the lower portion of Stratum 2 and Features 2 and 7 constitute the sample portrayed in Figure 22. The mean value is 2.0 mm for 160 sherds. Like Unit 1, multiple modes are present. However, a very strong mode at 1.80 to 1.84 mm dominates this data set. Other modes (1.20 to 1.34 mm, 1.50 to 1.54 mm, 2.0 to 2.24 mm, and 2.75 to 2.79 mm) are weaker, but present. The 1.80 mm mode fits between Roenke's 1840 to 1850 and 1850 to 1860 intervals (Roenke 1978:72, Table 12). The lower mode represents glass from the initial construction of the Boston General Store. The other modes probably represent late-nineteenth- or early-twentieth-century window glass. Most importantly, the multiple modes indicate that the deposit includes material both early and late in the site occupation. Very similar results are obtained when the sherds from the lower excavation levels (Stratum 2 and Features 3 and 9) are graphed for Units 6 and 12 (Figure 23). Essentially the same modes are present in those units, although the mean value is lower at 1.7 mm.

The final analytical unit chosen for analysis of window glass thickness is excavation Unit 7. There, samples are sufficient to examine glass thickness in several excavated levels and cultural strata. The lower portion of the canal dredge spoil of Stratum 6c yielded the multiple modes described for other analytical units (Figure 24). Three modes (1.20 to 1.24 mm, 1.55 to 1.59 mm, and 1.90 to 1.94 mm) very closely match results from other units where early- and late-nineteenth-century glass occur together. The mean for Stratum 6c is 1.7 mm. The midden (Stratum 5) underlying the spoil stratum is dominated by a mode at 1.25 to 1.34 mm, but other, weaker modes are present at 1.80 to 1.84 mm, and 2.20 to 2.24 mm (Figure 25). The mean is equivalent to that of Stratum 6c at 1.7 mm. A similar pattern holds for Stratum 6b under the midden, although there, the mode at 1.25 to 1.29 mm is clearly dominant (Figure 26). The mean is slightly lower at 1.6 mm.

It appears that the glass used at the site during the initial 1836 construction phase has a modal thickness value of about 1.25 to 1.29 mm. This mode occurs consistently across the site, and, not surprisingly, is dominant in the lower excavated levels, including Strata 6a and 6b, and to some degree, Stratum 5. However, in every analytical unit, there is evidence of additional modes. Some are weak, but they occur consistently. This indicates that, to date, no "pure" deposits relating only to the initial decade of occupation of the site have been exposed at the Boston General Store. Glass thickness is known to have increased dramatically after 1845, and it appears that all excavated strata span that change. The Stratum 5 midden may have accrued over a long time period, since multiple thickness modes are present in the three studied Stratum 5 samples. The deposit may have accrued through much of the mid-nineteenth century. This is somewhat surprising, given the relative thinness of the deposit. As expected, the Stratum 2 sheet midden appears to exhibit the greatest time depth of all the excavated deposits, containing materials from the 1830s through the early twentieth century.

Nails

Nails are very common in the artifact collection from the Boston General Store. This is not surprising, since about ten thousand nails are required to build a typical frame house. Very large numbers must have been used at the Boston General Store and its attached warehouse and in any support structures that formerly stood on the grounds. Cut nails are very well represented, with 642 specimens. They are widely distributed across the site, occurring in nearly all excavated proveniences (Table 21). Cut nails would have been solely used during the construction of the Boston General Store and in any other structures on the grounds predating circa 1880. Wire nails were used more commonly after that date, dominating the market (75 percent share) by 1895. After that date, cut nails served primarily for special functions, and wire nails dominated most construction activities. At the Boston General Store, 186 wire nails are present (Table 21). They are distributed widely across the site as are cut nails, but they do not occur in all the vertical proveniences where cut nails appear. In addition to losses during initial construction, many cut nails would have become incorporated in the deposit when the warehouse was demolished. Replacement of the Boston General Store roof would have also been a source for cut nails to be lost on the grounds. Various interior demolition and refurbishing activities are a further source for cut nails. Depending upon the date of these activities, they would also be a source for deposition of wire nails at the site.

The occurrence of wire nails is useful for confirming the age, or duration of discard, of select site strata. As has been noted in various preceding discussions, the Stratum 2 sheet midden is considerably mixed, and this is exemplified by the presence of wire nails in the lower excavated levels of Units 4, 5, 8, 9, 11, and 13 (Table 21). The demolition of the warehouse was probably one of several activities that

led to the mixing of the sheet midden that extends across most of the mowed turf grounds. Of particular interest is the presence of wire nails in Stratum 5 in Units 2 (Level 3) and 7 (Level 7). This confirms the observations made above regarding the occurrence of middle- and late-nineteenth-century window glass in that midden stratum.

Several roofing nails are present in the assemblage; many of these occur in the sheet midden, Stratum 2. A few bolts and other fasteners are also present in small numbers (Table 21). Large numbers of unidentified "blobs" of ferrous metal are also present (Table 21). These have been included under the architectural group, even though their function is unknown. Much of the iron from the site is in very poor condition, having corroded into unrecognizable lumps. They are tabulated under unidentified miscellaneous metal in Table 21. This group probably contains many nails that are corroded beyond recognition.

Prehistoric Artifacts

Eight pieces of prehistoric chipped-stone debitage were recovered from the Boston General Store in 1991. Debitage occurs in Units 6, 7, and 12, and from Feature 2 in Units 4 and 5. With the possible exception of the single piece from Unit 6, Level 4 (Stratum 7b?), all of the debitage is from nineteenth-century deposits. The material has been removed from primary context in Strata 7a or 7b and redeposited along with nineteenth-century artifacts. The debitage from Unit 6 may derive from the paleosol Stratum 7b, or it may also be from the Stratum 2 sheet midden like many of the other pieces of debitage. The position of the site on the first, flat terrace above the floodplain makes it a likely location for prehistoric activity. Although no sites are recorded in the immediate vicinity, several are documented on this terrace north of the Boston General Store. Since the debitage from the Boston General Store is not in original context, it has little interpretive or research value. However, its presence suggests that an intact prehistoric site may exist nearby.

Site Chronology, Function, and Economy

Chronology

The analysis of cultural strata and the artifacts they contain unfortunately suggests that most of the primary artifact-bearing deposits contain material spanning much of the nineteenth century. Only a few features (e.g., Feature 2) and select deposits such as Stratum 6a represent relatively short-term, primary-context depositional events. Those deposits contain very few artifacts. The most dense accumulations of cultural material occur in Stratum 5, which spans circa 1836 to the late nineteenth century, and Stratum 2, a sheet midden with an even longer depositional history stretching into the early twentieth century. This depositional pattern makes it difficult to subdivide the assemblage into smaller temporal subsets. Clearly, this hampers archeological examination of possible shifts in economic status and function at the site through time. It is likely that these shortcomings could be overcome through excavation of additional site features such as privies, where more finely stratified deposits are likely to occur. Despite the relatively long time depth of the primary artifact-bearing deposits, the recovered materials are still useful for more gross comparative purposes. For example, even though a long time depth is present, the important Stratum 5 is primarily associated with the "store era."

As described in this report, numerous temporally diagnostic items were recovered during site testing. These were collected from various arbitrary and cultural levels that were then recombined into a smaller number of strata. Those strata were identified based upon soil characteristics and stratigraphic relationships in addition to the mending of select artifact types (primarily ceramic and bottle glass sherds) across certain excavated levels.

Site Function and Economy

There are relatively few clues in the archeological record to the precise character of the store operation that apparently existed at the Boston General Store from its inception in 1836 to the end of the nineteenth century. Although the historical record offers little to indicate that the Store was an important enterprise, its existence over a circa-70-year span suggests that, minimally, it was of considerable local significance. If it were of the minimal scale suggested in the historical record, why would it have survived at least three major ownership changes and nearly three-quarters of a century of operation? Unfortunately, like the historical accounts, the archeological record pertaining to the actual function and importance of the Store is rather limited.

There are several reasons why the archeological testing failed to clearly isolate the Store's function. One important factor is that sampling was limited across the site. In addition, the layout of the Boston General Store strongly indicates that it always served as a residence, even during its heyday as a store. This is indicated by the configuration of the second floor rooms. Domestic material would have been continually discarded through the nineteenth century, along with any broken "store stock." This would tend to mask the nature of the store discards, since they cannot now be easily separated from the domestic material. An additional component may be the propinquity of the former Commercial Hotel on the adjacent lot to the west. Backyard trash from that structure is almost certainly incorporated in the sheet midden in the narrow southwest yard of the Boston General Store, further masking any Store-related items.

Despite these factors, there are aspects of the artifact assemblage from the Boston General Store that do not match other local sites and that may reflect Store-related activities.

Since the deposits from the Boston General Store currently cannot be neatly subdivided relative to store and post-store eras, or into temporal blocks comparable to extensively studied sites such as 33–Cu–314, the entire assemblage is used for comparative purposes. Values based upon sherd and vessel frequencies per excavated area and volume of matrix are used in these comparisons. The amount of excavated matrix at the sites is an important constant that must be used to balance the raw frequencies relative to differential levels of sampling. The primary site used for comparison is 33–Cu–314, a nineteenth-century tavern–inn that also served as a residence through its history.

Since ceramic sherds from the 1985 and 1991 seasons at the Boston General Store are combined in the totals, and since the volume of matrix excavated in 1985 is unknown, only areal values are calculated for those materials. Overall, the ceramic sherd densities are quite comparable between the Boston General Store and 33–Cu–314. Several ceramic decorative types within the whiteware group occur in almost identical ratios at the sites (Table 22). However, the few areas of diversion between the sites are notable. For example, stoneware, both sherds and vessels, is present in strikingly different amounts at the two sites. Stoneware is about three times more dense at the Boston General Store than at 33–Cu–314 per m^2, considering either sherds or minimum numbers of vessels. The reason for this difference could relate to site function. Since at least two of the owners of the Boston General Store are known to have been grocers, it is possible that they were preserving meats (through pickling) in considerable quantity for sale at the Store, or for shipment on the canal. Another explanation for the high density of stoneware sherds and vessels would be that stoneware was being sold at the Store to the local farming community, which would have needed many such vessels for food storage. Breakage of materials from either of these sources may account for the high contribution of stoneware to the archeological record of the Boston General Store.

Plain and molded whiteware is also much more densely distributed at the Boston General Store than at 33–Cu–314. This could also reflect breakage of store stocks, although much of the whiteware at the site shows evidence of use through the presence of scratches and cutlery marks. Since these marks were not consistently recorded, this premise cannot be further evaluated with available data.

Bottle glass sherds and vessels are more numerous per unit of area at the Boston General Store than at 33–Cu–314. Again, this could reflect the "store versus the tavern–inn" functional difference at the two locations. Liquor and beer at the tavern would have been decanted from wooden barrels, and at the Store, various products (patent medicines, etc.) would have been sold in individual bottles. This could account for the differential densities at the two sites. Following this argument, it is not unexpected that tumblers are rare at the Boston General Store but common at site 33–Cu–314. There is a striking difference in density in these items at the two sites, with much higher numbers per area and volume of site deposit at 33–Cu–314.

The different use of tobacco pipes at the two sites is also striking. Again, numbers are dramatically higher at the former inn–tavern compared with the Boston General Store. Extensive use of pipes at the tavern would be anticipated, with a more modest, household use at the Boston General Store accounting for the few pipes in that deposit. A final divergence in the two assemblages is seen in the ratio of coins to excavated matrix. One might have expected that two commercial sites would be more similar in this artifact occurrence. However, nearly all the coins from 33–Cu–314 were recovered from a very small

activity area within the site. Perhaps such an area exists at the Boston General Store, but it has not yet been located. It may also be possible that tavern-goers were more apt to drop and lose the small denomination coins that dominate the assemblage at 33–Cu–314, whereas fewer accidental losses may occur at a general store.

Although there a few possible lines of evidence reflecting activities relating to a general store function at the Boston General Store, overall, the archeological record from limited test excavations is not sufficient to address the precise function of the structure or the nature of transactions at the Store through the nineteenth century.

Since temporal and analytical blocks comparable to those developed for site 33–Cu–314 cannot not yet be generated for the Boston General Store, economic comparisons can be drawn only in a very broad manner. The general congruence of makers and patterns in the transfer-printed whiteware assemblages suggests that both sites were supplied by the same source. This was likely A. S. Gardner's firm in Cleveland, since his import mark occurs in both assemblages. The much larger representation of transfer-printed types within the whiteware assemblage at 33–Cu–314 compared with the Boston General Store suggests a higher economic status for the owner/occupants of the tavern–inn. In terms of densities of whiteware decorative types, annular, hand-painted, and edge-decorated types are essentially equivalent at the two sites, in considerable contrast to the transfer-decorated types. However, since the important 1860 horizon cannot be defined in the deposits at the Boston General Store given available data, stronger comparisons are not possible.

Conclusions

The Boston General Store was constructed at an opportune time and location to capitalize on the transportation potential of the Ohio and Erie Canal and the growth of the milling community of Boston, Ohio. Its founders were families of considerable importance in the Western Reserve, but the Store, and the entire commercial development in Boston, appears to have been secondary to their main interests. Later owners were also successful local businessmen, but little is known about their operation of the Store. Its longevity suggests a measure of successful operation, but the historic record contains little direct evidence for the Store's role in local and regional economies. Unfortunately, the limited archeological test excavations in 1985 and 1991 have added little additional data for further examining the Store's function. Certain artifact ratios appear to support the conclusion drawn from historic documentation that the business was a general store, serving the local milling and farming community. Dry goods and groceries were the basis for the business, and the structure probably served as a post office at various times through the mid-nineteenth century.

Although the archeological testing program has offered relatively little data regarding site function, it should be remembered that the scope of excavations was limited and that additional, functionally specific data may exist at the site. Large numbers of domestic and architectural items are present, and these have considerable utility for examining the structural history of the Boston General Store and the lifestyle of the occupants and proprietors of the structure from 1836 through 1910 to 1920. These materials also provide a useful comparative base for ongoing studies of other nineteenth-century sites at CUVA. Some of the areas of study to which the data from the Boston General Store can contribute include regional patterns of commerce, local subsistence practices, and general stylistic trends of the nineteenth century. In addition, the archeological project has yielded considerable information that should be relevant to planners as restoration of the property begins.

Limited test excavations have revealed that numerous architectural and occupational features are preserved on the grounds surrounding the Boston General Store. These are invariably in a good state of preservation. They range from the large brick cistern on the east facade to a series of foundation elements from the former warehouse. The "footprint" of this warehouse can now be estimated based upon the distribution of these features. Many other features from the warehouse, and from other structures and occupational activities, are certainly preserved in the south and west yards adjacent to the structure. It is also likely that evidence of additional features that may be useful for structural restoration, including foundation elements for the original front porch, are preserved at the site. Other important features, such as privies, are certainly present and remain to be discovered.

The archeological deposits at the Boston General Store are significant since they are well stratified, and they contain a large number of intact features. Primary context deposits were recorded in all areas of the site investigated in 1991. These deposits contain a variety of data relevant for study of the history of this site and other contemporary sites at CUVA. In addition, they contain data that can aid the restoration of this significant early-nineteenth-century structure.

The following observations and recommendations are offered for consideration by park and regional staff in developing plans for the restoration of the Boston General Store:

1. The sandstone foundation is in variable condition, but it appears to be well preserved on the east facade and poorly preserved on the west. Intact, stratified deposits occur on both of the studied facades and probably occur on the north and south walls, as well. If major foundation repair or replacement is anticipated, attempts to limit the scope of ground disturbance along the walls are strongly advised. If exterior foundation trenching is required, additional archeological investigations are recommended, since only a small portion of the deposits flanking the foundation has been archeologically investigated. Where sampling has occurred along the foundation, well-stratified and extensive cultural deposits and intact features have been recorded.

2. Consideration should be given to removal of Stratum 3 along the west facade. This modern (1970s), redeposited road construction spoil appears to be a contributing factor to the continued deterioration of the west foundation wall. If the deposit were to be removed, a thin layer of appropriate fill should be added to the area to protect the important Stratum 5 midden that is positioned under Stratum 3.

3. If practical from a logistical perspective, consideration should be given to routing any new underground utility services from Boston Mills Road into the west facade of the structure near its northwest corner. In this manner, the utility trench or trenches would disrupt only a minimal amount of the site deposit. Any other route would intersect much larger segments of the site. The proposed route would avoid the dense accumulation of features and the thick sheet midden that occurs in the west and south yard areas. This approach would also avoid disturbing the deeply stratified and significant archeological deposits along the east facade and towpath.

4. If trails or other visitor access routes are developed on the site, consideration should be given to constructing these above existing grade on thin pads of fill.

5. In general, attention should be given to minimizing ground disturbance on the current mowed turf grounds, since extensive archeological deposits, including numerous intact features, occur over most of that area.

6. Depending upon final determination of the use or uses for the Boston General Store, a small collection of cultural materials or other data recovered from the testing program could be developed for an interpretive display in the building.

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TABLES

Table 1. Ceramic vessels and sherd counts.

Ceramic Type	Sherds 1985	Sherds 1991	Total	Minimum Number of Vessels
Whiteware	541	588	1,129	125
Stoneware	291	403	694	55
Yellowware	33	51	84	11
Redware	8	7	15	4
Porcelain	32	59	91	23
Total	907	1,106	2,013	218

Table 2. Ceramic sherd counts by level.

Year	Provenience		Count
	Unit	Level	
1985	1	1	1
		2	3
		3	57
		4	7
Subtotal	–	–	68
	2	1	3
		2	2
		3	11
		4	44
Subtotal	–	–	60
	3	1	6
Subtotal	–	–	6
	4	1	171
		2	38
		3	20
		4	1
Subtotal	–	–	230
	5	–	6
		1	33
		2	5
		3	7
Subotal	–	–	51
	6	1	96
		3	1
Subtotal	–	–	97

Table 2. Continued.

Year	Provenience		Count
	Unit	Level	
1985, continued	7	–	1
		1	1
		2	25
Subtotal	–	–	27
	8	1	105
Subtotal	–	–	105
	9	–	3
		1	159
		2	12
Subtotal	–	–	174
	1, 7 balk	–	2
	4, 5 balk	–	20
	5, 6 balk	–	1
		2	11
			12
Balk Subtotal	–	–	34
	Unknown	Unknown	12
	Surface	Surface	43
1985 Surface Subtotal	–	–	43

Table 2. Continued.

Year	Provenience		Count
	Unit	Level	
1991	1	1	9
		2	8
		3	3
		4	36
		5	11
		6	9
		7	6
		9	3
Subtotal	–	–	85
	2	1	7
		3	64
		4	1
Subtotal	–	–	72
	3	2	2
		3	3
		4	3
Subtotal	–	–	8
	4	1	5
		2	80
		3	27
		4	2
Subtotal	–	–	114
	4 and 5	902	3
Subtotal	–	–	3

Table 2. Continued.

Year	Provenience		Count
	Unit	Level	
1991, continued	5	2	36
		3	28
Subtotal	–	–	64
	6	1	14
		2	61
		3	44
		4	20
		6	1
Subtotal	–	–	140
	7	1	11
		2	18
		3	22
		4	24
		5	4
		6	11
		7	27
		8	8
		9	11
		10	2
Subtotal	–	–	138
	8	1	4
		2	3
		3	15
		4	8
		905	3
Subtotal	–	–	33

Table 2. Continued.

Year	Provenience		Count
	Unit	Level	
1991, continued	9	1	2
		2	13
		3	8
		7	1
Subtotal	–	–	24
	10	2	11
		3	18
		4	2
Subtotal	–	–	31
	11	1	1
		2	6
		3	25
		4	16
		5	8
Subtotal	–	–	56
	12	2	18
		3	49
		4	19
		909	27
Subtotal	–	–	113
	13	1	3
		2	5
		3	14
		4	2
Subtotal	–	–	24

Table 2. Concluded.

Year	Provenience		Count
	Unit	Level	
1985	1	–	3*
1991	ST01	1	32
	ST02	1	11
	ST03	1	13
	ST04	1	19
	ST05	1	5
	ST06	1	14
	ST07	1	6
	ST08	1	1
	ST10	1	10
	ST11	1	12
	ST12	1	1
	ST13	1	2
	ST15	1	4
	ST16	1	7
	ST17	1	11
	ST18	1	13
	ST19	1	11
	ST20	1	7
	ST21	1	3
	ST22	1	2
	ST24	1	3
	ST26	1	6
	ST30	1	5
Total	–	–	2,013

Key to special provenience designations:

1, 7 = Balk between 1985 Units 1 and 7.
4, 5 = Balk between 1985 Units 4 and 5.
5, 6 = Balk between 1985 Units 5 and 6.
902 = Feature 2 located in 1991 Units 4 and 5.
905 = Feature 5 located in 1991 Unit 8.
909 = Feature 9 located in 1991 Unit 12.
* = Sherds recovered in 1991 from 1985 Unit 1 backdirt.
ST = Shovel test.

Table 3. Whiteware decorative types and vessels.

Decorative Type	Minimum Number of Patterns	Minimum Number of Vessels	Sherd Count
Transfer-Printed	37	43	143
Edge-Decorated	12	12	27
Decal-Decorated	6	6	36
Hand-Painted	12	12	36
Mold-Decorated	15	15	50
Annular-Decorated	11	11	40
Sponge-Decorated	3	3	13
Undecorated	1	23	784
Total	97	125	1,129

Table 4. Identified transfer-printed patterns.

Number	Name	Maker, Importer	Dates	Reference	Color
1	Florentine	T. J. and J. Mayer	1843 to 1855	Williams 1978:261	Blue
7	Corinth	J. Edwards	1842 to 1851	Williams 1978:242	Blue
12	Cyrene	W. Adams and Sons	1819 to 1864	Williams 1978:248	Red
22	Canova	T. Mayer	1834 to 1848	Williams 1978:214	Blue, Red
23	Lucerne	J. Clementson, A. S. Gardner (importer identified from mark)	1839 to 1864	Williams 1978:320; Richner 1992:53	Blue

Table 5. Whiteware transfer-printed patterns and vessels.

Pattern		Sherd Count	Vessel	
Number	Description		ID Number	Form
	Blue			
1	Florentine	1	7	Cup
		4	19	Cup
		1	–	Hollow
		3	192	Cup
		1	29	Saucer
		1	95	Cup
		1	–	Cup
5	Undetermined romantic	1	40	Flatware
6	Undetermined floral	1	41	Flatware
7	Corinth	6	42	Cup
11	Undetermined	1	55	Flatware
14	Undetermined romantic	1	70	Cup
17	Undetermined	15	98	–
22	Canova	1	124	Saucer
23	Lucerne	1	125	–
24	Undetermined romantic	1	126	Cup
25	Undetermined	1	132	–
26	Undetermined geometric	2	138	Flatware
27	Undetermined geometric	1	140	Flatware
32	Undetermined	2	175	–
36	Undetermined romantic	1	193	Cup
38	Undetermined floral	4	200	Cup
	Sherds not ascribed to a specific pattern or vessel	24	–	–
Subtotal		75		

Table 5. Continued.

Pattern		Sherd Count	Vessel	
Number	Description		ID Number	Form
	Red			
12	Cyrene	1	107	Pitcher
		1	–	Hollow
		1	216	Cup
		1	–	–
		1	–	Cup
		2	56	–
		1	–	Cup
21	Undetermined	1	57	–
22	Canova	2	190	Plate
29	Undetermined	1	152	Saucer
31	Undetermined	1	173	–
33	Undetermined	2	184	Flatware
39	Undetermined floral	2	209	Flatware
	Sherds not ascribed to a specific pattern or vessel	9	–	–
Subtotal		26		
	Black			
43	Undetermined floral	1	51	Flatware
	Sherds not ascribed to a specific pattern or vessel	2	–	–
Subtotal		3		
	Brown			
4	Undetermined floral	1	39	–
28	Undetermined floral	3	151	–
	Sherds not ascribed to a specific pattern or vessel	2	–	–
Subtotal		6		

Table 5. Concluded.

Pattern Number	Pattern Description	Sherd Count	Vessel ID Number	Vessel Form
	Green			
8	Undetermined	1	43	–
15	Undetermined floral	1	71	–
18	Undetermined	2	99	–
30	Undetermined floral	1	171	–
	Sherds not ascribed to a specific pattern or vessel	1	–	–
Subtotal		6		
	Mulberry			
16	Undetermined	1	90	–
37	Undetermined floral	1	196	–
	Sherds not ascribed to a specific pattern or vessel	2	–	–
Subtotal		4		
	Dark/Old Blue			
2	Undetermined romantic	1	30	Cup
3	Undetermined romantic	1	31	Hollowware
10	Undetermined flown	2	53	Plate
19	Undetermined flown	1	100	–
34	Undetermined flown	8	185	Cup
	Sherds not ascribed to a specific pattern or vessel	10	–	–
Subtotal		23		
Total		143		

Table 6. Whiteware edge- and sponge-decorated patterns and vessels.

Pattern		Sherd Count	Vessel	
Number	Description		ID Number*	Form
Edge-Decorated				
1	Blue scalloped dot and plume	1	23	–
2	Blue plain edge	1	24	Large platter
3	Blue shell edge	1	46	Flatware
4	Blue shell edge	1	96	–
5	Blue shell edge	1	111	–
6	Blue shell edge	1	180	Soup plate
7	Blue scalloped shell edge	1	181	–
8	Blue shell edge	2	182	Plate
9	Blue shell edge	2	73	–
10	Blue shell edge	1	74	–
11	Blue shell edge	2	82	–
12	Green shell edge	2	85	–
Sherds not ascribed to a specific pattern or vessel		11	–	–
Subtotal		27		
Sponge-Decorated				
1	Green amorphous	1	89	–
2	Blue amorphous	3	137	–
3	Blue amorphous	3	127	–
sherds not ascribed to a specific pattern or vessel		6	–	–
Subtotal		13		
Total		40		

*Minimum number of edge-decorated vessels = 12; minimum number of sponge-decorated vessels = 3

Table 7. Whiteware annular-decorated patterns and vessels.

Pattern		Sherd Count	Vessel	
Number	Description		ID Number*	Form
1	Polychrome	2	27	Hollowware
2	Polychrome earthworm	1	32	Hollowware
3	Dendritic mocha	3	31	–
4	Blue	5	54	–
5	Polychrome earthworm	1	101	–
6	Polychrome	1	104	Hollowware
7	Polychrome earthworm	1	106	–
8	Blue	1	135	Bowl
9	Blue	4	146	Hollowware
10	Blue	11	183	Hollowware
11	Polychrome	2	191	Hollowware
Sherds not ascribed to a specific pattern or vessel		8	–	–
Total		40		

*Minimum number of annular-decorated vessels = 11

Table 8. Whiteware and porcelain hand-painted patterns and vessels.

Pattern		Sherd Count	Vessel	
Number	Description		ID Number*	Form
	Whiteware			
1	Gilt fine line	1	12	Cup
2	Polychrome sprig	2	35	–
3	Polychrome floral	2	36	–
4	Polychrome floral	1	37	Plate
5	Polychrome floral	1	38	Hollowware
6	Gilt fine line	2	67	Plate
7	Polychrome sprig	2	86	–
9	Green floral	2	97	Saucer
10	Polychrome sprig	1	105	–
11	Red floral	2	112	–
12	Pink floral	2	208	–
14	Blue sprig	2	157	–
	Sherds not ascribed to a specific pattern or vessel	16	–	–
Subtotal (Whiteware)		36		
	Porcelain			
1	Gilt fine line	1	5	Cup
2	Undetermined polychrome	1	33	–
3	Gilt fine line	1	84	Cup
Subtotal (Porcelain)		3	–	–
Total		39		

*Minimum number of hand-painted vessels = 15 (12 Whiteware and 3 Porcelain).

Table 9. Whiteware and porcelain decal-decorated patterns and vessels.

Pattern		Sherd Count	Vessel	
Number	Description		ID Number*	Form
	Whiteware			
1	Polychrome floral	2	20	–
2	Mulberry floral	5	66	Flatware
3	Blue unidentified	1	81	Hollowware
4	Polychrome floral	5	162	Plate
5	Polychrome floral	13	202	Serving dish
6	Green floral	4	109	Plate
	Sherds not ascribed to a specific pattern or vessel	6	–	–
Subtotal (Whiteware)		36		
	Porcelain			
1	Polychrome floral/gilt rim	8	3	Cup
2	Polychrome floral	5	65	Flatware
3	Polychrome floral	2	79	Hollowware
4	Polychrome floral	3	129	Saucer
5	Polychrome floral/molded	1	147	Flatware
6	Polychrome floral	2	163	–
7	Polychrome floral	2	164	Saucer
8	Polychrome floral	1	186	Flatware
9	Polychrome floral	1	217	–
10	Polychrome floral/gilt rim	1	218	Flatware
11	Polychrome floral	1	219	–
12	Purple floral	4	161	–
	Sherds not ascribed to a specific pattern or vessel	3	–	–
Subtotal (Porcelain)		34		
Total		70		

*Minimum number of decal-decorated vessels = 18 (6 Whiteware and 12 Porcelain).

Table 10. Whiteware and porcelain mold-decorated patterns and vessels.

Pattern		Sherd Count	Vessel	
Number	Description		ID Number*	Form
	Whiteware			
1	Floral	2	10	Plate
2	Molded band	2	11	Plate
3	Fine line	3	45	Plate
4	Swirl	2	47	Soup plate
5	Shell	15	48	Plate
6	Paneled	1	72	Hollowware
10	Swirl	1	134	Flatware
12	Floral	3	141	Flatware
13	Molded band	1	150	Flatware
15	Undetermined	3	158	Flatware
16	Floral	1	159	Flatware
18	Wheat motif	1	174	Plate
19	Scalloped	5	176	Plate
20	Undetermined	4	189	Plate
21	Paneled	3	203	Serving dish
	Sherds not ascribed to a specific pattern or vessel	3	–	–
Subtotal		50		
	Porcelain			
1	Floral	3	8	Cup
2	Floral	1	80	Flatware
3	Undetermined	9	92	Hollowware
4	Undetermined	2	16	Saucer
	Sherds not ascribed to a specific pattern or vessel	1	–	–
Subtotal		16		
Total		66		

*Minimum number of mold-decorated vessels = 19 (15 Whiteware and 4 Porcelain).

Table 11. Whiteware and porcelain undecorated patterns and vessels.

Pattern		Sherd Count	Vessel	
Number	Description		Minimum Number	Form
	Whiteware			
1*	Undecorated	48	8	Plate
		27	5	Cup
		1	1	Saucer
		6	2	Bowl
		3	3	Flatware
		2	1	Pitcher
		6	3	–
	Sherds not ascribed to a specific pattern or vessel	691	–	–
Subtotal		784	23	
	Porcelain			
1*	Undecorated	3	1	–
		4	1	Saucer
		3	1	Cup
		7	1	Hollowware
	Sherds not ascribed to a specific pattern or vessel	21	–	–
Subtotal		38	4	
Total		822	27	

*Pattern number 1 is assigned to undecorated *rim* sherds only; plain sherds that are not ascribed to pattern number 1 represent *body* sherds.

Table 12. Porcelain decorative types and vessels.

Decorative Type	Minimum Number of Patterns	Minimum Number of Vessels	Sherd Count
Undecorated	1	4	38
Decal-Decorated	12	12	34
Hand-Painted	3	3	3
Mold-Decorated	4	4*	16
Total	20	23	91

*Count includes one miniature vessel.

Table 13. Yellowware decorative types and vessels.

Decorative Type	Vessel Form(s)	Minimum Number of Vessels	Sherd Count
Rockingham			
Undecorated	Bowl	1	10
Mold-Decorated	Hollowware	1	1
Colorless Glaze			
Undecorated	Bowl, Hollowware, Flatware	3	33
Annular-Decorated	Hollowware	2	6
Hand-Painted	–	1	4
Other			
Colored Glazes	Bowl, Crock	2	29
Unglazed	–	1	1
Total		11	84

Table 14. Stoneware decorative types and vessels.

Glaze/Slip	Decorative Types			Minimum Number of Vessels	Sherd Count
	Undecorated	Hand-Painted	Mold-Decorated		
Colorless (lead)	17	–	7	4	24
Salt/Albany	235	26	1	32	262
Bristol Slip	51	1	1	3	53
Albany Slip	298	–	–	12	298
Unglazed	43	–	–	2	43
Other	13	–	1	2	14
Total	657	27	10	55	694

Table 15. Stoneware vessel count and form.

Vessel		
ID Number	Form	Sherd Count
1	Crock	4
4	–	10
14	Crock	1
15	Crock	1
16	Crock	1
17	Crock	1
18	–	1
25	Crock	2
26	–	2
58	Crock	17
59	–	1
60	–	1
61	–	2
62	–	8
64	–	1
76	–	19
77	Crock	10
78	–	2
87	–	2
88	–	1
91	Crock	1
93	Crock	2
102	Crock	2
103	–	7
114	Crock	1
115	Crock	1
116	Crock	8
117	Crock	23
118	Crock	4
119	–	1
121	Crock	10
122	Crock	4
123	Jug	12
145	–	1
149	Bottle	1
153	Crock	1
155	Crock	1
156	Crock	2
166	Crock	1
167	–	1
168	–	5

Table 15. Concluded.

Vessel		
ID Number	Form	Sherd Count
169	Crock	5
170	Crock	1
172	–	3
187	Jug	8
188	Crock	7
195	Crock	2
197	Crock	2
198	Jug	1
199	Crock	2
204	Crock	1
205	Crock	3
210	Crock	6
211	–	1
213	–	1
Sherds not ascribed to specific vessel	–	475
Total		694

Table 16. Bottle glass colors and vessels.

Color	Number of Vessels	Sherd Count			Percent of Total
		Ascribed[1]	Unascribed[2]	Total	
Colorless	19	151	741	892	59.3
Aqua	6	16	385	401	26.7
Amber	3	26	63	89	5.9
Amethyst*	1	2	59	61	4.1
Olive	2	19	20	39	2.6
Green	1	1	12	13	0.9
Cobalt	1	5	3	8	0.5
Total	33	220	1,283	1,503	100.0

[1]Ascribed = sherds ascribed to a particular vessel.
[2]Unascribed = sherds not ascribed to a particular vessel.
*Amethyst = amethyst-tint solarized glass.

Table 17. Bottles identified across proveniences.

Color	Vessel		Sherd Count	Provenience	
	ID Number	Form		Unit	Level
Amber	2	Indented panel	1	10	1
			1	10	2
			4	10	3
			2	11	1
			8	11	2
			5	11	3
			2	11	4
Olive	6	*	1	1	6
			2	1	7
			1	1	8
Olive	23	Wine	1	4	2
			1	4	3
			7	5	2
			6	5	3
Colorless	25	Mason jar	2	7	7
			5	7	8
Amber	30	Indented panel	1	10	1
			1	11	1

* = Indeterminable vessel shape.

Table 18. Glass bottle vessels.

Number	Color	Portion	Vessel/Finish Shape	Body/Finish Molding Technique	Sherd Count	Identification
1	Aqua	F, S	–/–	–/–	1	–
2	Amber	B, E	Pan/–	–/–	23	Emb. "A"
3	Colorless	F, B	Bnp/Pat	–/Lip	2	1860–1915**
4	Colorless	B, E	Pan/–	–/–	3	–
5	Aqua	F	Mjr/Cth	–/Bgr	1	–
6	Aqua	B, E	Soda/–	Pbm/Lip	11	1860–1915**
7	Aqua	F, S	Fsq/Pat	–/Aut	1	–
8	Colorless	Com	Fsq/Pat	–/Lip	1	1860–1915**
9	Colorless	F, S	–/Brn	–/Lip	1	1860–1915**
10	Colorless	Com	Sqt/Scr	Aut/Aut	1	post–1904+
11	Colorless	Com	Wnj/Scr	Aut/Aut	54	Owens Illinois Glass Co., 1929–1954*
12	Green	F, N	–/–	Aut/Aut	1	post–1904+
13	Colorless	E	Rnd/–	Aut/–	1	post–1904+
14	Colorless	F	–/Drn	–/Lip	1	1860–1915**
15	Colorless	E	–/–	–/–	2	–
16	Colorless	B, E	–/–	–/–	17	–
17	Amethyst	E	–/–	–/–	2	1880–1915
18	Colorless	F, S	–/Sbr	–/Lip	1	1860–1915**
19	Colorless	B, E	Pan/–	Aut/–	4	post–1904+
20	Aqua	Com	Rpr/–	Pbm/Lip	1	Lorenz & Wightman, 1862–1871*
21	Colorless	B, E	Pan/–	–/–	1	Emb. "140 M"
22	Colorless	F	–/Pck	–/–	1	–
23	Olive	B, E	Wine/–	–/–	15	–
24	Colorless	E	Rnd/–	–/–	3	Emb. "5"
25	Colorless	F, B	Mjr/Scr	Aut/Aut	7	post–1904+
26	Amber	F	–/Bead	–/–	1	–
27	Colorless	F	–/Ring	–/Lip	2	1860–1915**
28	Colorless	B, E	Fls/–	Cup/–	48	Wm. Frank & Sons, 1866–1876*
29	Aqua	Com	Vial/Fla	–/Hnd	1	–
30	Amber	B	Pan/Brn	–/–	2	N. B. Jacobs & Co., Rosenbaum's Bitters adv. 1858*

Table 18. Concluded.

Number	Color	Portion	Vessel/Finish Shape	Body/Finish Molding Technique	Sherd Count	Identification
31	Colorless	E	–/–	–/–	1	Hazel–Atlas Glass Co., 1920–1964*
32	Cobalt	Com	Rnd/Scr	Aut/Aut	5	post–1904+
33	Olive	B	–/–	–/–	4	–
Total sherds attributed to vessels					220	

Aut = Automatic	Emb = Embossing	Pat = Patent
B = Body	F = Finish	Pbm = Post bottom mold
Bgr = Bust and grind	Fla = Flared	Pck = Packer
Bnp = Ball neck panel	Fls = Flask	Rnd = Round
Brn = Brandy	Fsq = French square	Rpr = Round prescription
Com = Combination	Hnd = Hand–tooled	S = Shoulder
Cth = Continuous thread	Lip = Lipping tool	Sbr = Straight brandy
Cup = Cup mold	Mjr = Mason jar	Scr = Screw
Drn = Double ring	N = Neck	Sqt = Square talcum
E = Base	Pan = Panel	Wnj = Wine jug

*Identification and date determined from embossed lettering or maker's mark. Source: Toulouse 1971.
**Date range associated with lipping tool technology.
+ = date associated with the beginning of automatic bottle making.

Table 19. Domestic-group artifacts.

Provenience			Serving and Storage							Furnishings
Unit	Level	Stratum	Cer	Bot	MJ	Tum	Pre	Ins	Oth	Lamp
1	1	1	9	8	1	–	–	–	–	–
1	2	4a	8	9	–	–	–	–	–	1
1	3	4b	3	1	–	–	1	–	–	–
1	4	4b	47	24	–	–	1	–	–	9
1	5	5	15	33	–	1	1	–	–	6
1	6	6a	–	3	–	–	–	–	–	1
1	7	7a	3	–	–	–	–	–	–	–
Subtotal			85	78	1	1	3	–	–	17
2	1	1	7	17	–	–	1	–	–	–
2	3	5	64	43	–	1	2	–	–	6
2	4	6a	1	2	–	2	–	–	–	1
Subtotal			72	62	–	3	3	–	–	7
3	1	1	–	60	–	–	–	–	–	–
3	2		2	–	–	–	–	–	–	–
3	3		3	4	–	–	–	–	–	–
3	4		3	1	–	–	–	–	–	–
Subtotal			8	65	–	–	–	–	–	–
4	1	1	5	4	–	–	–	–	–	–
4	2	2	80	33	–	–	1	–	1	–
4	3	2	27	17	–	–	1	–	–	2
4	4	7b, F2	2	–	–	–	–	–	–	–
Subtotal			114	54	–	–	2	–	1	2
5	1	1	–	3	–	–	–	–	–	–
5	2	2	36	50	–	–	–	1	–	2
5	3	2	28	31	–	–	–	–	1	2
Subtotal			64	84	–	–	–	1	1	4

Table 19. Continued

Provenience			Serving and Storage							Furnishings
Unit	Level	Stratum	Cer	Bot	MJ	Tum	Pre	Ins	Oth	Lamp
6	1	1	14	22	–	–	–	1	–	3
6	2	2	61	105	–	1	1	2	–	3
6	3	2	44	19	–	–	–	–	–	–
6	4	2, 7b, F3	20	5	–	–	–	–	–	–
6	6		1	–	1	–	–	–	–	–
Subtotal			140	151	1	1	1	3	–	6
7	1	6c	11	4	–	–	–	–	–	–
7	2	6c	18	2	–	1	–	–	–	–
7	3	6c	22	1	–	–	–	–	–	1
7	4	6c	24	19	–	–	–	–	–	–
7	5	6c	4	57	–	–	–	–	–	2
7	6	5, 6c	11	17	–	–	–	–	–	3
7	7	5	27	54	3	–	1	–	–	15
7	8	5, 6b	8	24	5	–	–	–	–	4
7	9	6b	11	1	–	–	–	–	–	–
7	10	6b, 7a	2	–	–	–	–	–	–	–
Subtotal			138	179	8	1	1	–	–	25
8	1	1	4	10	–	–	–	–	–	–
8	2	2	3	2	–	1	–	–	–	–
8	3	2	15	12	–	1	–	–	2	3
8	4	2, F5, 7a	8	20	–	–	1	–	–	–
Subtotal			30	44	–	2	1	–	2	3

Table 19. Continued.

Provenience			Serving and Storage							Furnishings
Unit	Level	Stratum	Cer	Bot	MJ	Tum	Pre	Ins	Oth	Lamp
9	1	1	2	1	–	–	–	–	–	–
9	2	2	13	27	–	–	1	1	–	2
9	3	2, F7	8	23	–	–	–	1	–	4
9	4	F7	1	6	–	–	–	–	–	–
Subtotal			24	57	–	–	1	2	–	6
10	1	1	–	10	–	–	–	–	–	–
10	2	F4, 2	11	32	–	–	–	–	–	3
10	3	2	18	70	–	–	2	3	1	9
10	4	F6, 7b	2	4	–	–	–	–	–	–
Subtotal			31	116	–	–	2	3	1	12
11	1	1	1	8	–	–	–	–	–	–
11	2	F4, 2	6	14	–	–	–	–	–	–
11	3	2	25	127	–	1	1	1	–	6
11	4	F6, 7b	16	27	–	–	–	–	–	2
11	5	F6	8	3	–	–	–	–	–	–
Subtotal			56	179	–	1	1	1	–	8
12	1	1	–	6	–	–	–	–	–	–
12	2	2	18	42	–	1	1	–	–	1
12	3	2, F9	49	113	–	–	4	–	–	11
12	4	7b, F9	19	41	–	–	–	–	–	2
Subtotal			86	202	–	1	5	–	–	14

Table 19. Continued.

Provenience			Serving and Storage							Furnishings
Unit	Level	Stratum	Cer	Bot	MJ	Tum	Pre	Ins	Oth	Lamp
13	1	1, F8	3	10	–	–	–	–	–	–
13	2	1	5	7	–	–	–	–	2	3
13	3	2	14	14	–	1	–	–	–	2
13	4	2, 7b	2	3	–	–	–	–	–	–
Subtotal			24	34	–	1	–	–	2	5
Feature 2			3	–	–	–	–	–	–	2
Feature 4			–	17	–	–	–	–	–	–
Feature 5			3	2	–	–	–	–	1	–
Feature 6			–	1	–	–	–	–	–	–
Feature 9			27	10	–	–	–	–	–	–
Subtotal			33	30	–	–	–	–	1	2
ST 1			32	7	–	–	–	–	–	–
ST 2			11	24	–	–	–	–	–	2
ST 3			13	28	–	–	–	–	–	3
ST 4			19	6	–	–	–	–	–	–
ST 5			5	17	–	–	1	–	–	–
ST 6			14	5	–	–	–	1	–	–
ST 7			6	1	–	–	–	–	–	1
ST 8			1	5	–	–	–	–	–	–
ST 10			10	12	–	–	1	–	–	–
ST 11			12	8	–	–	–	–	–	1
ST 12			1	4	–	–	–	–	–	–
ST 13			2	–	–	–	–	–	–	–
ST 14			–	4	–	–	–	–	1	1
ST 15			4	1	–	–	–	–	–	–
ST 16			7	4	–	–	–	–	–	–
ST 17			11	11	–	–	–	–	–	1
ST 18			13	5	–	–	1	–	–	1
ST 19			11	6	–	–	–	–	–	1
ST 20			7	9	–	–	–	–	–	–
ST 21			3	3	–	–	–	–	1	–
ST 22			2	2	–	–	–	–	–	–
ST 24			3	–	–	–	–	–	–	–

Table 19. Concluded.

Provenience Unit	Level	Stratum	Serving and Storage Cer	Bot	MJ	Tum	Pre	Ins	Oth	Furnishings Lamp
ST 25			–	–	–	–	1	–	–	–
ST 26			6	1	–	–	–	–	–	–
ST 27			–	1	–	–	–	–	–	–
ST 30			5	3	1	–	1	–	–	–
ST 31			–	1	–	–	–	–	–	–
ST 33			–	–	–	–	–	–	1	–
ST 34			–	–	–	–	–	–	1	–
Subtotal			198	168	1	–	5	1	4	11
Total			1,103	1,503	11	11	25	11	12	122

Bot = Bottle glass sherds
Cer = Ceramic sherds
Ins = Opal glass insert
Lamp = Chimney glass sherds
MJ = Mason jar sherds
Oth = Other glass sherds
Pre = Pressed glass sherds
ST = Shovel test
Tum = Tumbler sherds

Table 20. Personal-group artifacts.

Provenience			Clothing						Personal Use					Activity	
Unit	Level	Stratum	Fs	Bk	Bu	Cl	Ey	Bd	Pi	Pn	Co	Sc	Th	Cs	Ty
1	1	1	–	–	–	–	–	–	–	–	–	1	–	–	–
1	5	5	–	–	1	–	–	–	10	–	–	–	1	2	–
Subtotal			–	–	1	–	–	–	10	–	–	1	1	2	–
2	1	1	–	–	1	–	–	–	–	1	–	–	–	–	–
2	3	5	1	–	–	–	–	–	5	–	–	–	–	–	–
2	4	6a	1	–	–	–	–	–	–	–	–	–	–	–	–
Subtotal			2	–	1	–	–	–	5	1	–	–	–	–	–
4	2	2	–	–	–	–	–	–	2	1	–	–	–	–	1
4	3	2	–	–	–	–	–	–	1	–	–	–	–	–	–
Subtotal			–	–	–	–	–	–	3	1	–	–	–	–	1
5	2	2	–	–	–	–	–	–	1	–	–	–	–	1	–
5	3	2	–	–	–	–	–	–	2	–	–	–	–	–	1
Subtotal			–	–	–	–	–	–	3	–	–	–	–	1	1
6	1	1	–	–	–	–	–	–	–	1	–	–	–	–	–
Subtotal			–	–	–	–	–	–	–	1	–	–	–	–	–
7	2	6c	–	–	–	–	–	–	1	–	–	–	–	–	–
7	3	6c	–	–	1	–	–	1	–	–	–	–	–	–	–
7	4	6c	–	–	–	–	–	–	–	–	–	–	–	1	–
7	5	6c	–	–	–	–	–	–	1	–	–	–	–	–	–
7	6	6c, 5	–	–	–	6	–	–	1	–	–	–	–	–	–
7	7	5	–	–	1	4	–	–	–	–	–	–	–	–	–
7	8	6b, 5	–	–	–	–	–	–	1	–	1	–	–	–	–
7	10	6b, 7a	–	–	–	–	–	–	1	–	–	–	–	–	–
Subtotal			–	–	2	10	–	1	5	–	1	–	–	1	–

Table 20. Continued.

Provenience			Clothing						Personal Use					Activity	
Unit	Level	Stratum	Fs	Bk	Bu	Cl	Ey	Bd	Pi	Pn	Co	Sc	Th	Cs	Ty
8	4	2, F5, 7a	–	–	–	–	–	–	2	–	–	–	–	–	–
Subtotal			–	–	–	–	–	–	2	–	–	–	–	–	–
9	1	1	–	–	–	–	–	–	–	1	–	–	–	–	–
9	2	2	–	–	–	–	–	–	2	1	–	–	–	–	–
9	3	2, F7	–	–	–	–	–	–	1	–	–	–	–	–	–
Subtotal			–	–	–	–	–	–	3	2	–	–	–	–	–
11	1	1	–	–	–	–	–	–	1	1	–	–	–	–	–
11	2	F4, 2	–	–	–	–	1	–	–	–	–	–	–	1	–
11	4	F6, 7b	1	–	1	–	–	–	2	–	–	–	–	–	–
Subtotal			1	–	1	–	1	–	3	1	–	–	–	1	–
12	1	1	–	–	–	–	–	–	–	1	–	–	–	–	2
12	2	2	–	–	–	–	–	–	4	–	–	–	–	–	–
12	3	2, F9	–	–	–	–	–	–	4	–	–	–	–	–	–
12	4	7b, F9	–	–	–	–	–	–	2	–	–	–	–	–	–
Subtotal			–	–	–	–	–	–	10	1	–	–	–	–	2
13	1	1, F8	–	–	1	–	–	–	–	–	–	–	–	–	–
13	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–
Subtotal			–	–	2	–	–	–	–	–	–	–	–	–	–

Table 20. Concluded

Provenience Unit	Level	Stratum	Clothing Fs	Bk	Bu	Cl	Ey	Bd	Personal Use Pi	Pn	Co	Sc	Th	Activity Cs	Ty
Feature 2			–	–	1	1	–	–	–	–	–	–	–	–	–
Subtotal			–	–	1	1	–	–	–	–	–	–	–	–	–
		ST 2	–	1	–	–	–	–	–	–	–	–	–	–	–
		ST 3	–	–	–	–	–	–	3	–	–	–	–	–	–
		ST 4	–	–	–	–	–	–	2	–	–	–	–	–	–
		ST 5	–	–	–	–	–	–	3	–	–	–	–	–	–
		ST 6	–	–	–	–	–	–	2	–	–	–	–	–	–
		ST 7	–	–	–	–	–	–	–	–	–	–	–	1	–
		ST 12	–	–	–	–	–	–	–	–	–	–	–	–	1
		ST 16	–	–	–	–	–	–	1	–	–	–	–	–	–
		ST 18	–	–	–	–	–	–	1	–	–	–	–	–	–
		ST 25	–	–	–	–	–	–	–	–	–	–	–	–	1
		ST 27	–	–	–	–	–	–	1	–	–	–	–	–	–
Subtotal			–	1	–	–	–	–	13	–	–	–	–	1	2
Total			3	1	8	10	1	1	57	7	1	1	1	6	6

Fs = Fastener
Bk = Buckle
Bu = Button
Cl = Cloth or leather
Ey = Eyelet
Bd = Bead
Pi = White clay pipe
Pn = Pencil end
Co = Coin
Sc = Scissors
Th = Thermometer
Cs = Cartridge shell
Ty = Toys, marbles, doll parts, toy gun parts

Table 21. Architectural-group artifacts.

Provenience			Construction Mat						Fasteners					Misc. Metal		
Unit	Level	Stratum	Br	Mo	As	Sl	Ce	Wg	Cn	Wn	Rn	Bo	Ot	Ho	Oh	Um
1	1	1	+	–	+	–	+	10	2	3	2	–	–	–	–	3
1	2	4a	+	–	–	–	–	4	1	2	–	1	–	–	–	1
1	3	4b	+	–	–	–	–	2	–	–	–	–	–	–	–	–
1	4	4b	+	+	–	–	–	80	4	1	–	2	–	–	–	6
1	5	5	+	+	–	–	–	355	3	–	–	–	–	–	8	3
1	6	6a	–	–	–	–	–	28	1	–	–	–	–	–	–	–
1	7	7a	–	–	–	–	–	2	–	–	–	–	–	–	–	–
Subtotal								481	11	6	2	3	–	–	6	10
2	1	1	–	–	–	–	–	61	73	18	1	–	1	–	1	28
2	2	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2	3	5	+	–	–	–	–	283	13	7	7	–	–	–	2	17
2	4	6a	–	–	–	–	–	37	3	–	–	–	1	–	–	5
2	5	7a	–	–	–	–	–	4	1	–	–	–	–	–	1	2
Subtotal								385	90	25	8	–	2	–	4	52
3	1	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–
3	2		–	–	+	–	–	1	–	–	–	–	–	–	1	1
Subtotal								2	–	–	–	–	–	–	1	1
4	1	1	–	–	–	–	–	7	–	–	–	–	–	–	–	–
4	2	2	–	–	–	–	–	49	31	5	–	1	1	–	1	–
4	3	2	–	+	–	–	–	53	36	8	–	1	–	–	1	35
4	4	7b, F2	–	–	–	–	–	3	–	–	–	–	–	–	–	1
Subtotal								112	67	13	–	2	1	–	2	36
5	1	1	–	–	–	–	–	8	–	–	1	–	–	–	–	5
5	2	2	–	–	–	–	–	69	19	6	–	4	–	–	1	22
5	3	2	–	–	–	–	–	33	20	6	1	5	–	–	–	15
5	4	7a, 7b, F2	–	–	–	–	–	–	5	1	–	1	–	–	–	6
Subtotal								110	44	13	2	10	–	–	1	48

Table 21. Continued.

Provenience			Construction Mat						Fasteners					Misc. Metal		
Unit	Level	Stratum	Br	Mo	As	Sl	Ce	Wg	Cn	Wn	Rn	Bo	Ot	Ho	Oh	Um
6	1	1	–	–	–	–	–	16	1	–	–	–	–	–	–	–
6	2	2	–	–	–	–	–	106	6	–	–	1	–	–	–	5
6	3	2	–	–	–	–	–	36	–	–	–	–	–	–	–	1
6	4	2, 7b, F3	–	–	–	–	–	27	–	–	–	–	–	–	–	–
Subtotal								185	7	–	–	1	–	–	–	6
7	1	6c	–	–	+	+	–	8	–	–	–	–	–	–	–	–
7	2	6c	–	–	–	+	–	2	–	–	–	–	–	–	–	–
7	3	6c	–	+	+	–	–	17	1	–	–	1	1	–	–	5
7	4	6c	–	–	–	–	–	20	1	–	–	3	1	–	–	5
7	5	6c	+	–	–	–	–	3	2	–	–	–	–	–	–	2
7	6	6c, 5	–	–	–	–	–	13	2	–	–	1	1	1	1	4
7	7	5	–	–	–	–	–	95	22	3	–	3	–	–	1	23
7	8	6b, 5	–	–	–	–	–	42	15	–	–	–	–	–	1	32
7	9	6b	–	–	–	–	–	11	9	–	–	–	–	–	–	10
7	10	6b, 7a	+	–	–	–	–	7	1	–	–	–	1	–	–	6
Subtotal								218	53	3	–	8	4	1	3	87
8	1	1	–	–	–	–	–	–	4	3	5	1	–	–	–	8
8	2	2	–	–	–	–	–	13	8	1	2	–	–	–	–	2
8	3	2	–	–	–	–	–	22	12	1	–	–	–	–	–	7
8	4	2, F5, 7a	–	–	–	–	–	6	11	2	–	1	–	–	–	4
Subtotal								41	35	7	7	2	–	–	–	21

Table 21. Continued.

Provenience			Construction Mat						Fasteners					Misc. Metal		
Unit	Level	Stratum	Br	Mo	As	Sl	Ce	Wg	Cn	Wn	Rn	Bo	Ot	Ho	Oh	Um
9	1	1	+	–	–	–	–	–	1	2	–	–	–	–	–	–
9	2	2	–	+	–	–	–	52	9	2	–	–	–	–	–	7
9	3	2, F7	+	–	–	–	–	64	11	1	–	1	–	–	1	23
9	4	F7	+	–	–	–	–	7	1	–	–	–	–	–	–	1
Subtotal								123	22	5	–	1	–	–	1	31
10	1	1	+	–	–	–	–	5	38	42	4	–	1	–	–	29
10	2	F4, 2	+	–	–	–	–	11	13	–	1	–	–	–	–	19
10	3	2	+	–	–	–	–	16	29	–	–	–	–	–	–	42
10	4	F6, 7b	–	–	–	–	–	12	4	–	–	–	–	–	–	1
Subtotal								44	84	42	5	–	1	–	–	91
11	1	1	+	–	–	–	–	2	25	22	3	–	–	–	–	13
11	2	F4, 2	+	+	–	–	–	6	4	1	–	–	–	–	1	11
11	3	2	–	–	–	–	–	37	27	6	1	1	1	–	1	34
11	4	F6, 7b	+	+	–	–	–	17	37	2	–	–	1	–	–	50
11	5	F6	–	–	–	–	–	15	21	–	–	–	–	–	–	43
Subtotal								77	114	31	4	1	2	–	2	151
12	1	1	+	+	–	+	–	3	–	–	–	–	–	–	–	–
12	2	2	–	–	–	–	–	46	4	–	–	–	1	–	–	2
12	3	2, F9	+	–	–	–	–	106	8	–	1	–	2	–	–	28
12	4	7b, F9	+	+	–	–	–	90	6	–	–	–	–	–	–	6
Subtotal								245	18	–	1	–	3	–	–	36

Table 21. Continued.

Provenience			Construction Mat						Fasteners					Misc. Metal		
Unit	Level	Stratum	Br	Mo	As	Sl	Ce	Wg	Cn	Wn	Rn	Bo	Ot	Ho	Oh	Um
13	1	1, F8	+	–	+	–	–	12	4	12	–	–	–	–	–	11
13	2	1	–	–	+	–	–	6	2	4	6	1	–	–	3	7
13	3	2	–	–	+	–	–	20	14	3	–	–	–	–	1	11
13	4	2, 7b	–	–	–	–	–	2	–	–	–	–	–	–	–	2
Subtotal								40	20	19	6	1	–	–	4	31
Feature 2			+	–	–	–	–	–	2	–	–	–	–	–	–	15
Feature 4			+	+	–	–	–	–	16	10	–	–	2	–	–	7
Feature 5			–	–	–	–	–	–	6	–	–	–	–	–	–	2
Feature 7			–	+	–	–	–	–	–	–	–	–	–	–	–	–
Feature 9			–	+	–	–	–	–	3	–	–	–	–	–	–	4
Subtotal									27	10	–	–	2	–	–	28
ST 1			–	–	–	–	–	11	5	–	–	–	–	–	–	–
ST 2			–	–	–	–	–	19	7	–	–	–	–	–	2	3
ST 3			–	–	–	–	–	19	1	–	–	–	–	–	–	–
ST 4			–	–	–	–	–	5	2	–	–	–	–	–	–	1
ST 5			–	–	–	–	–	12	4	–	–	–	–	–	–	5
ST 6			–	–	–	–	–	8	5	–	–	–	–	–	–	–
ST 9			–	–	–	–	–	2	–	–	–	–	–	–	–	–
ST 10			–	–	–	+	–	5	1	1	1	–	–	–	–	–
ST 11			–	–	–	–	–	13	9	–	–	–	–	–	–	–
ST 12			–	–	–	+	–	5	5	4	–	–	–	–	1	3
ST 13			–	–	–	–	–	–	–	–	3	–	–	–	–	–
ST 14			–	–	–	–	–	4	–	–	–	–	–	–	–	–
ST 15			–	–	–	–	–	4	1	2	–	–	–	–	–	1
ST 16			–	–	–	–	–	–	2	–	–	–	–	–	–	5
ST 17			–	–	–	–	–	8	1	–	–	–	–	–	–	–
ST 18			–	–	–	–	–	11	2	1	–	–	–	–	–	1
ST 19			–	–	–	–	–	14	–	1	–	–	–	–	–	2
ST 20			–	–	–	–	–	3	1	2	2	–	1	–	–	6
ST 21			–	–	–	–	–	4	2	–	1	–	–	–	–	–
ST 22			–	–	–	–	–	2	–	–	–	–	–	–	–	1
ST 23			–	–	–	–	–	2	–	–	–	–	–	–	–	–
ST 24			–	–	–	–	–	2	1	–	1	–	–	–	–	1

Table 21. Concluded.

Provenience Unit	Level	Stratum	Construction Mat Br	Mo	As	Sl	Ce	Wg	Fasteners Cn	Wn	Rn	Bo	Ot	Misc. Metal Ho	Oh	Um
	ST 25		–	–	–	–	–	1	–	–	–	–	–	–	–	–
	ST 26		–	–	–	–	–	1	–	–	–	–	–	–	–	–
	ST 27		–	–	–	–	–	1	–	–	–	–	–	–	–	–
	ST 28		–	–	–	–	–	1	–	–	–	–	–	–	–	–
	ST 29		–	–	–	–	–	–	–	–	–	–	–	–	–	1
	ST 32		–	–	–	–	–	–	–	1	–	–	–	–	–	–
	ST 33		–	–	–	–	–	–	1	–	–	–	–	–	–	–
Subtotal								157	50	12	8	–	1	–	3	30
Total								2,220	642	186	43	29	16	1	29	562

Br = Brick sample, presence/absence
Mo = Mortar sample, presence/absence
As = Asphalt shingle sample, presence/absence
Sl = Slate sample, presence/absence
Ce = Cement sample, presence/absence
Wg = Window glass
Cn = Cut nails
Wn = Wire nails
Rn = Roofing nails
Bo = Bolts
Ot = Other fasteners
Ho = Horseshoe
Oh = Other miscellaneous metal
Um = Unidentified metal

Table 22. Comparison of artifact frequencies from Boston General Store (BGS), 33–Cu–314, and 33–Cu–341.

Artifact Description	Artifacts per m^2			Vessels per m^2		Artifacts per m^3		
	33–Cu–314	BGS	33–Cu–341	33–Cu–314	BGS	33–Cu–314	BGS	33–Cu–341
Whiteware								
Transfer-printed	13.5	4.4	2.2	2.0	2.1	33.9	–	4.5
Annular-decorated	1.1	1.2	0.5	0.27	0.55	2.7	–	1.1
Hand-painted	1.1	1.1	1.2	0.39	0.6	2.8	–	2.5
Edge-decorated	1.4	0.8	0.8	0.42	0.6	3.5	–	1.6
Decal-decorated	0.1	1.1	0.3	0.09	0.3	0.3	–	0.6
Sponge-decorated	0.2	0.4	0.1	0.2	–	0.4	–	0.1
Undecorated	10.5	27.2	14.8	1.0	1.36	26.4	–	29.6
Stoneware	6.6	21.4	3.9	0.97	2.78	16.6	–	7.7
Yellowware	1.8	2.6	1.3	0.23	0.05	4.6	–	2.6
Redware	1.5	–	1.2	0.33	–	3.9	–	2.5
Porcelain	0.5	1.2	0.9	–	–	1.1	–	1.9
Bottle Glass	32.5	75.5	33.9	1.86	1.66	81.6	116.9	67.7
Tumblers	3.4	0.6	0.2	–	–	8.5	0.9	0.4
Pressed Glass	0.5	1.2	0.2	–	–	1.4	1.9	0.4
Buttons	1.8	0.4	1.14	–	–	4.5	0.6	2.3
Cartridges/Arms	0.2	0.3	0.2	–	–	0.6	0.5	0.4

Table 22. Concluded.

Artifact Description	Artifacts per m^2			Vessels per m^2		Artifacts per m^3		
	33–Cu–314	BGS	33–Cu–341	33–Cu–314	BGS	33–Cu–314	BGS	33–Cu–341
Pipe Fragments	12.3	2.86	1.3	1.56	–	31.0	4.4	2.6
Coins	0.7	0.1	0.1	–	–	1.6	0.1	0.2
Window Glass	104.0	111.6	23.7	–	–	261.0	172.8	47.5
Nails	69.1	43.1	134.2	–	–	173.5	66.8	268.4

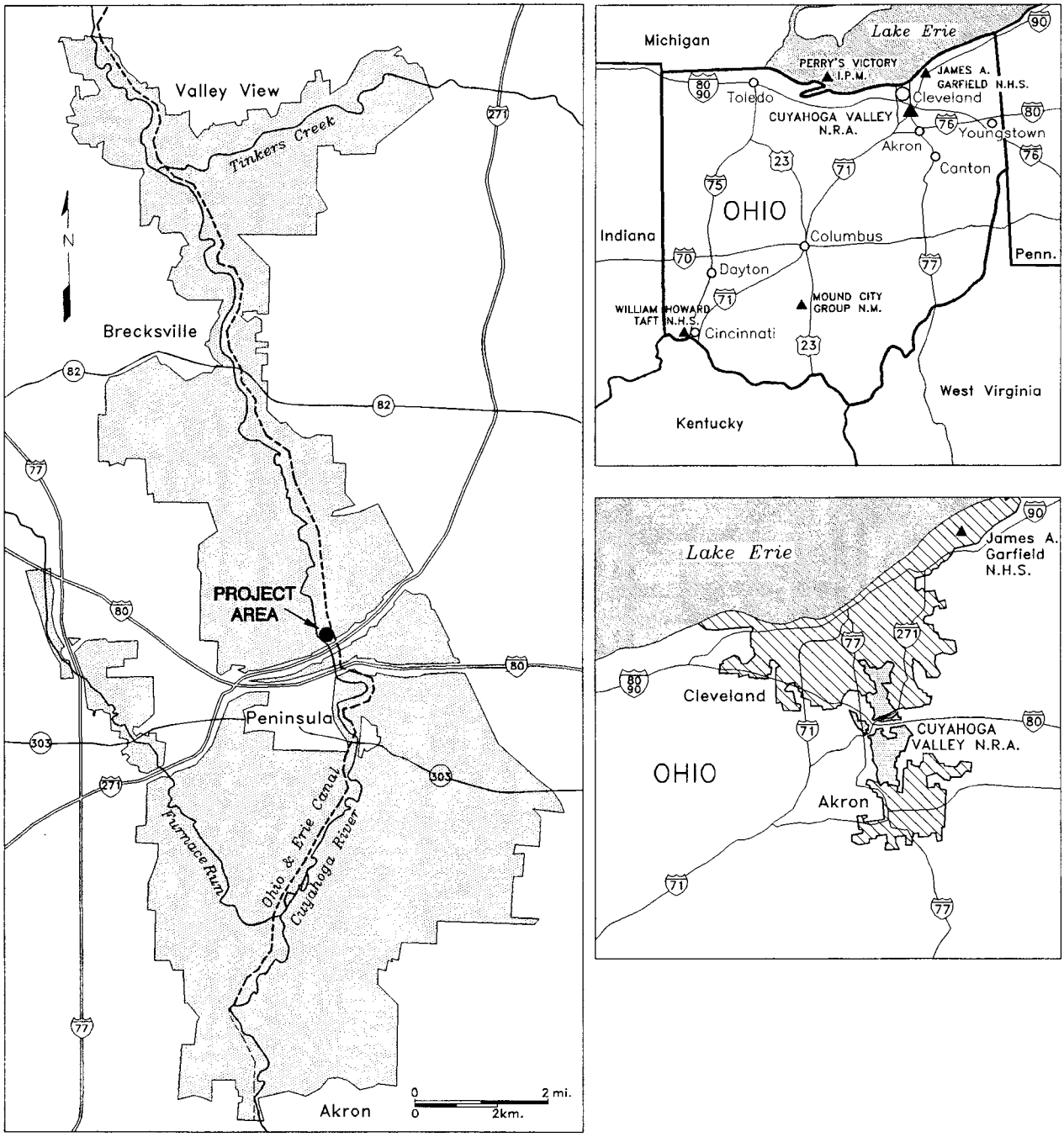


Figure 1. Project area map.

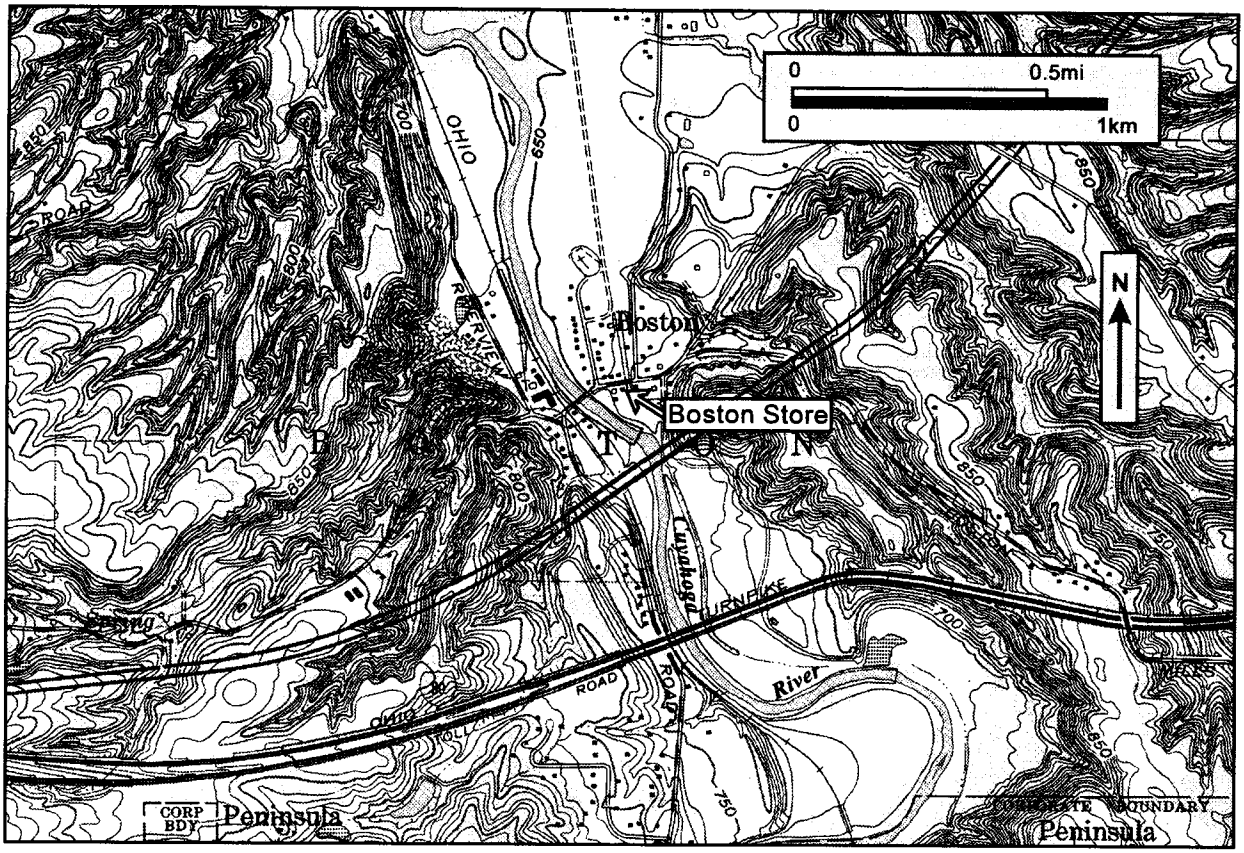


Figure 2. Site location.

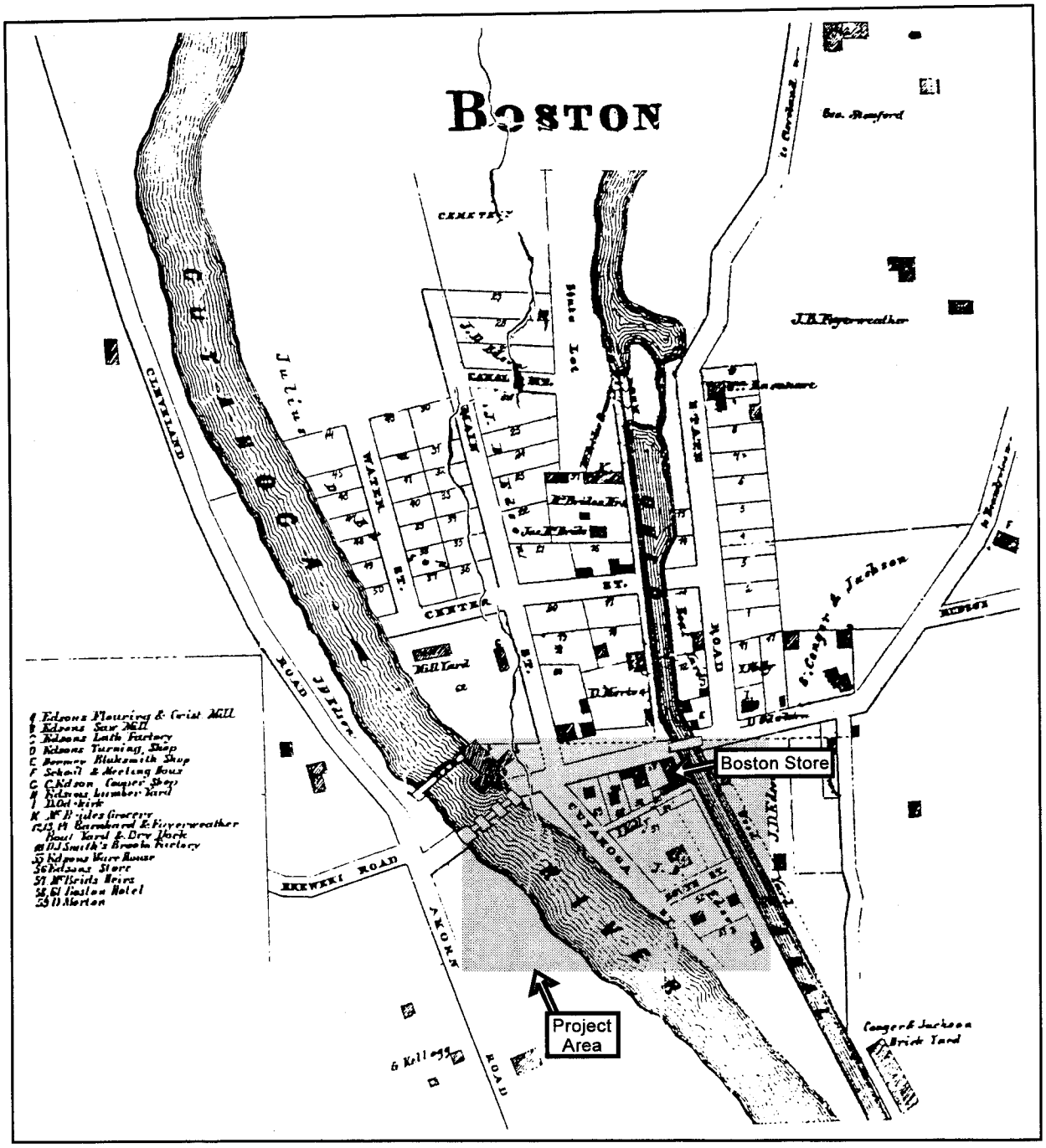


Figure 3. Annotated 1856 map of Boston.

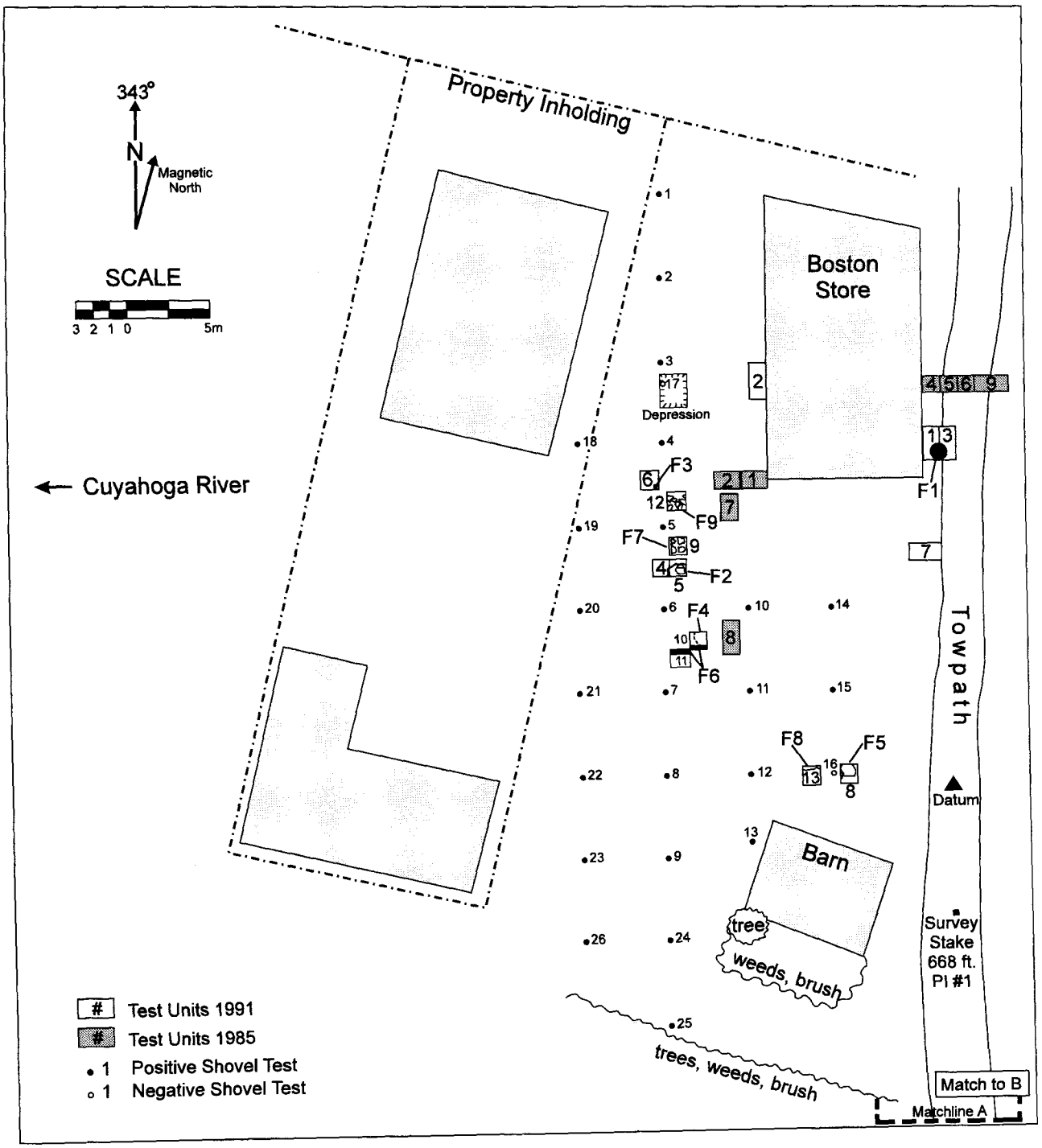


Figure 4. Excavation plan, 1985 and 1991.

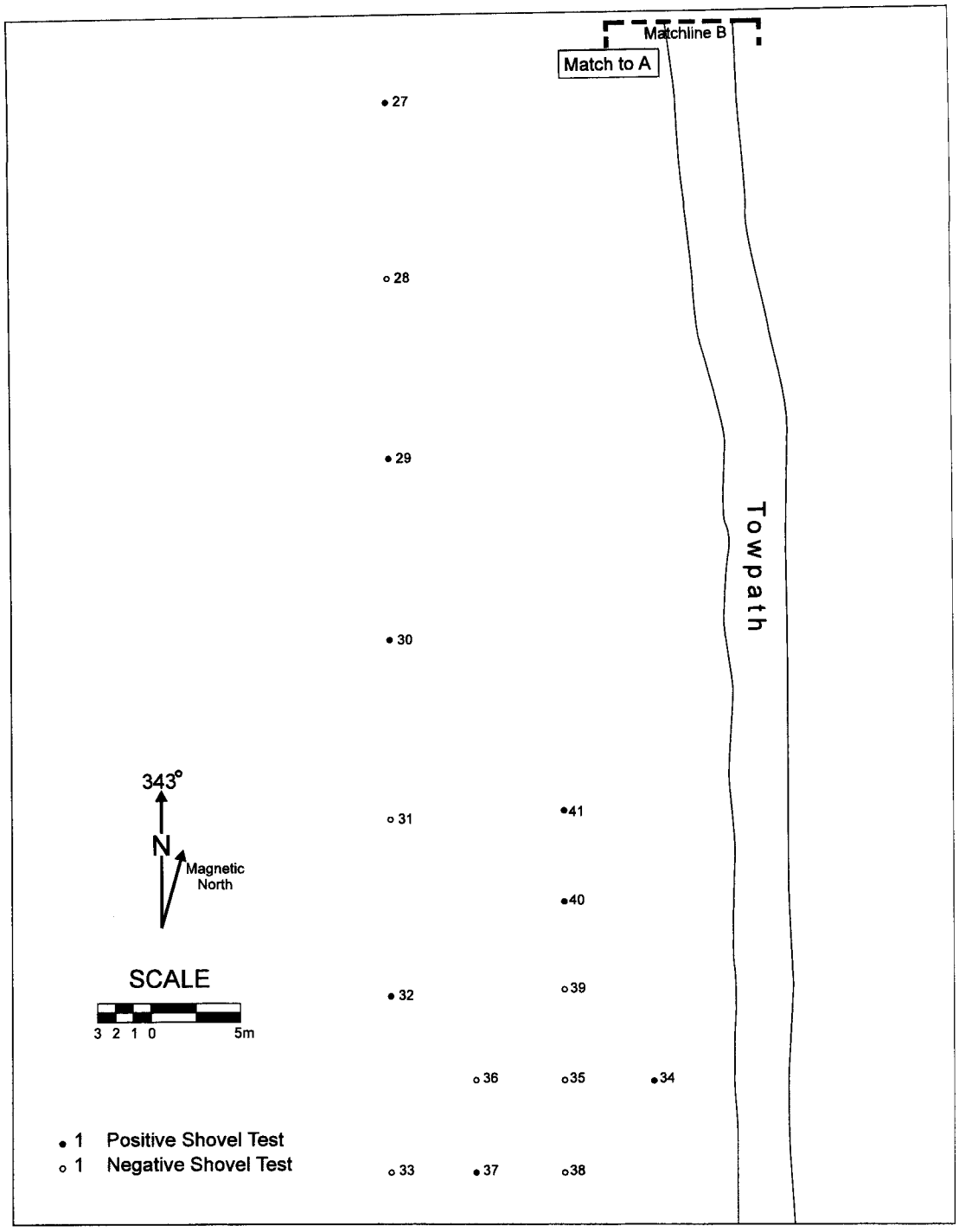
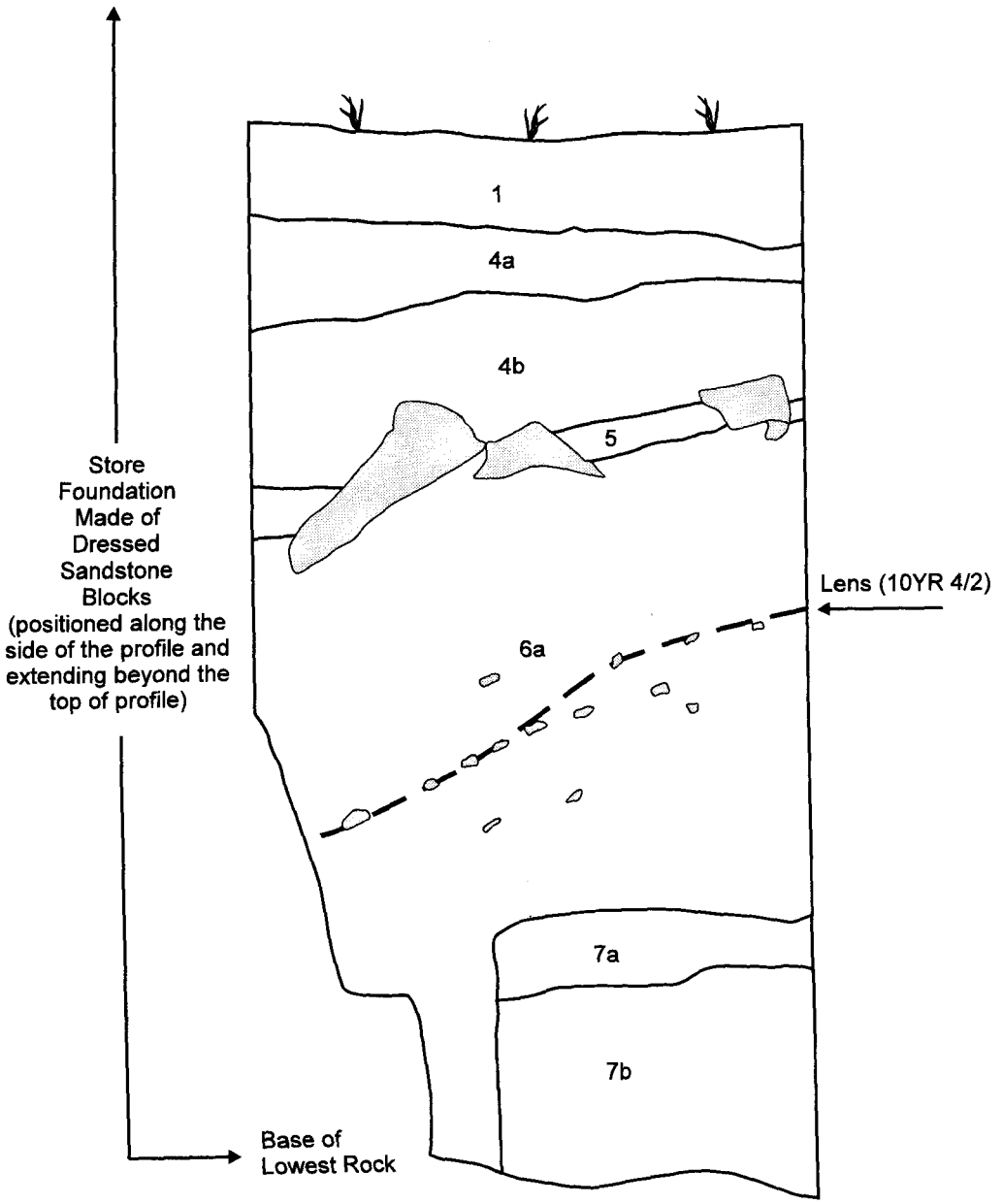


Figure 4, continued. Excavation plan, 1985 and 1991.



1 10YR 3/1, very dark gray loam

4a 10YR 6/4, cinders, light yellowish brown

4b 10YR 3/1, cinders, very dark gray

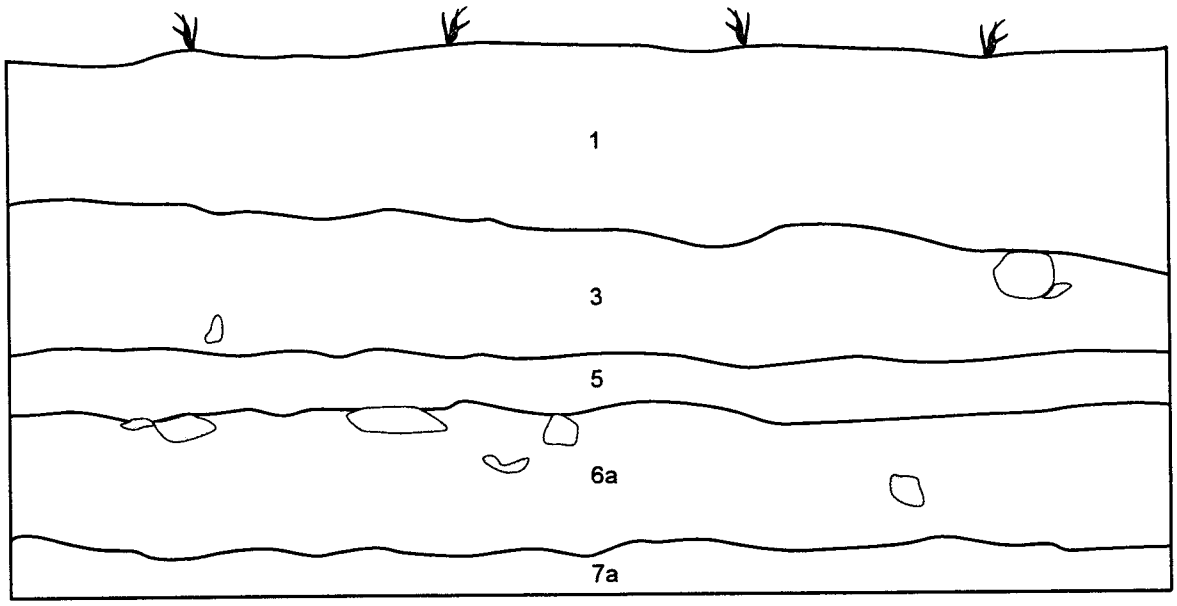
5 10YR 4/2, dark grayish brown loam with sandstone, midden

6a 10YR 6/4, light yellowish brown loam with sandstone and lens of mottled silt

7a 10YR 3/2, "A" Paleosol horizon, very dark grayish brown loam

7b 10YR 6/4, "B" Paleosol horizon, light yellowish brown loam

Figure 5. North wall profile, Unit 1.



SCALE (cm)

0 10 20cm

Sandstone

1 10YR 3/1, very dark gray loam, modern surface

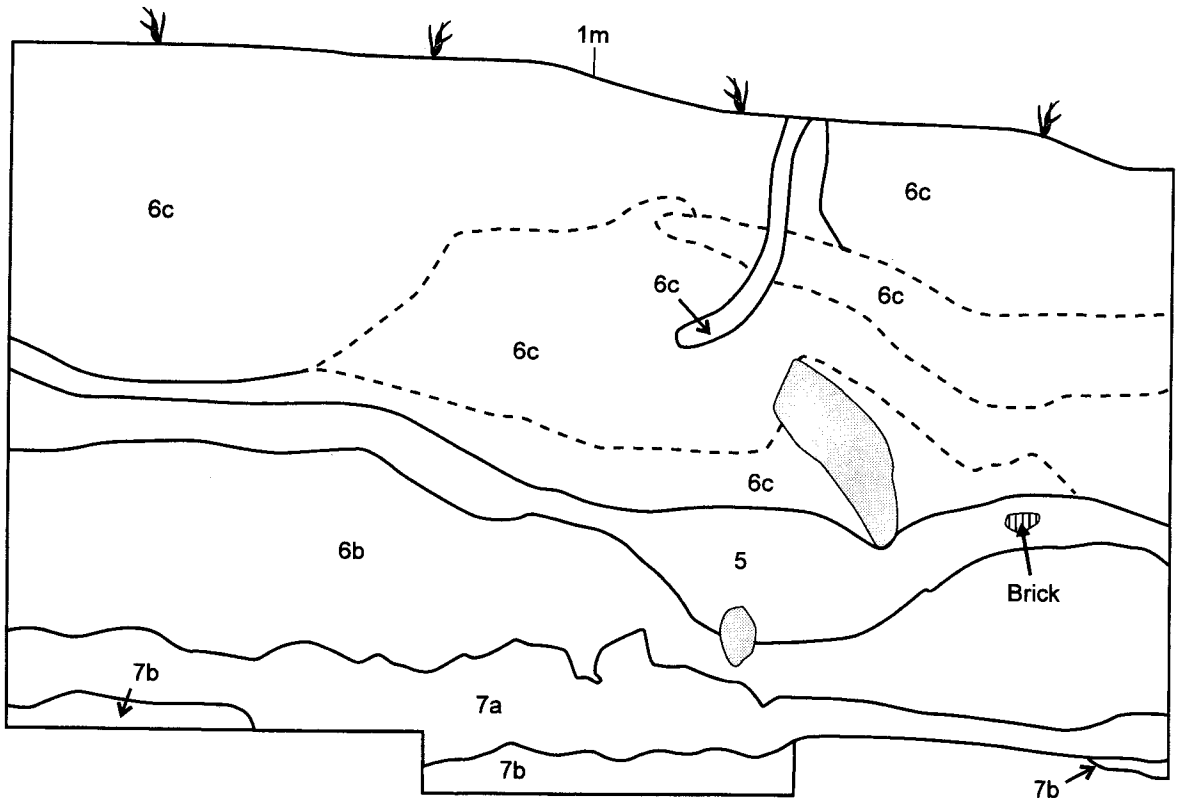
3 10YR 5/1, gray clay, compact and wet

5 10YR 4/2, midden, dark brownish loam

6a 10YR 6/4, light yellowish brown loam

7a 10YR 3/2, "A" Paleosol horizon, very dark grayish brown loam

Figure 6. West wall profile, Unit 2.



SCALE (cm)

0 10 20cm

Sandstone

5 10YR 4/2, midden, dark grayish brown loam

6b 10YR 6/4, light yellowish brown loam mottled with brown

6c 10YR 6/4, compact light yellowish brown loam, bivalves throughout

7a 10YR 3/2, "A" Paleosol horizon, very dark grayish brown loam

7b 10YR 6/4, "B" Paleosol horizon, light yellowish brown loam

Figure 7. South wall profile, Unit 7.

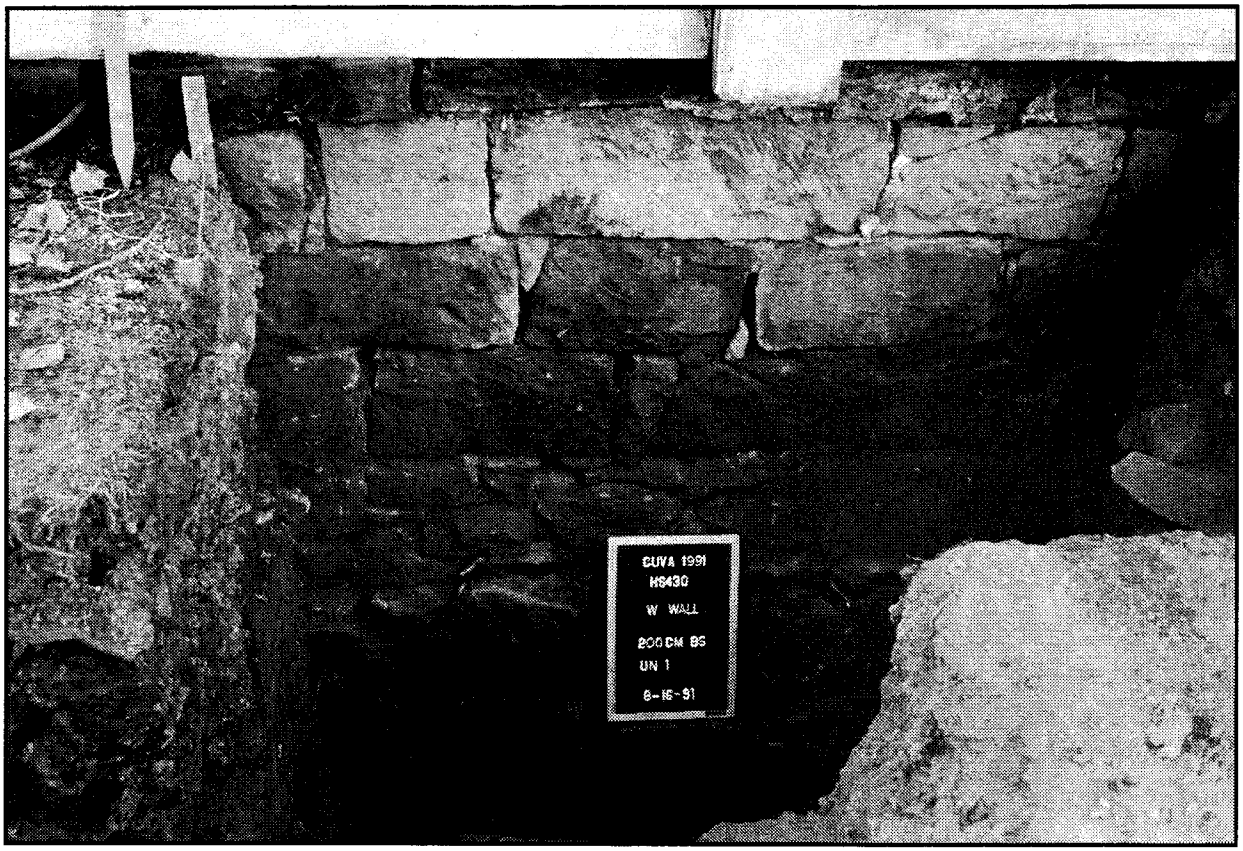


Figure 8. Photograph of the west wall of Unit 1, showing the outer surface of the east wall of the structure's foundation.

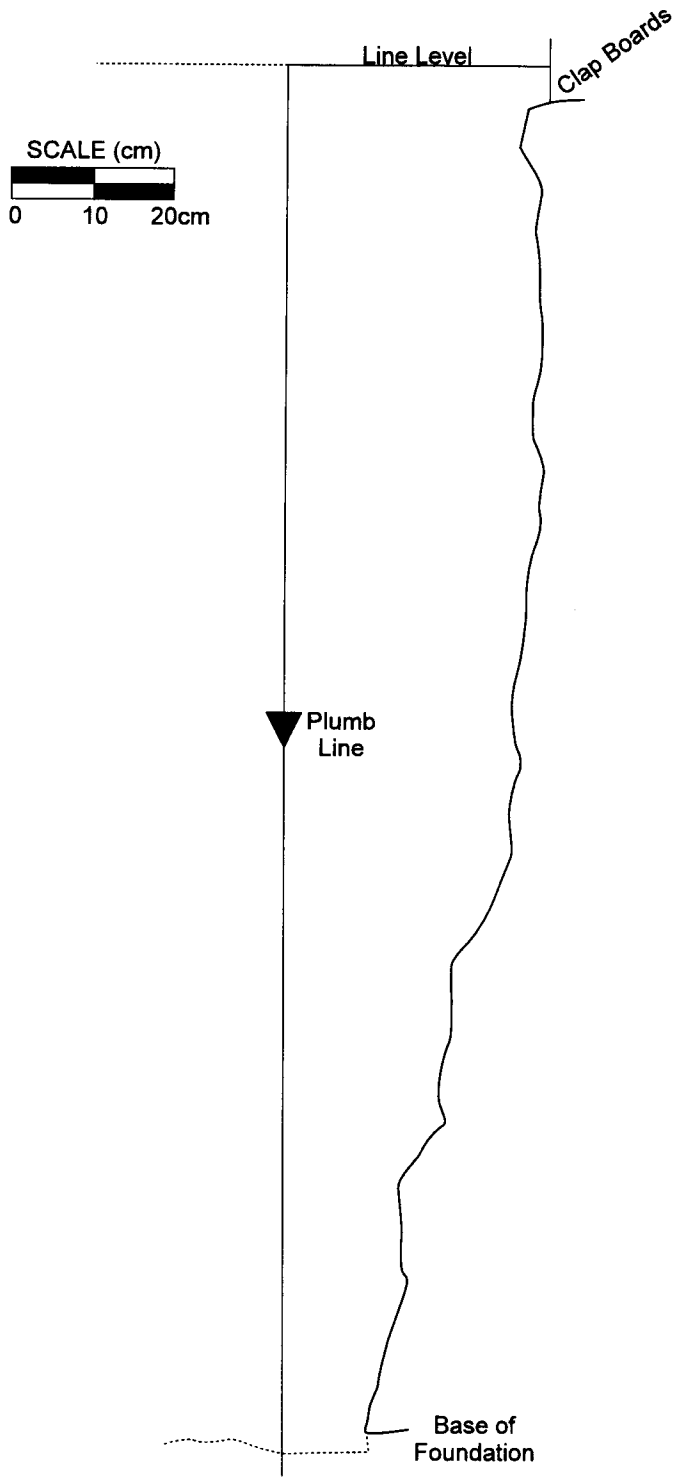


Figure 9. Profile of east wall foundation in Unit 1.

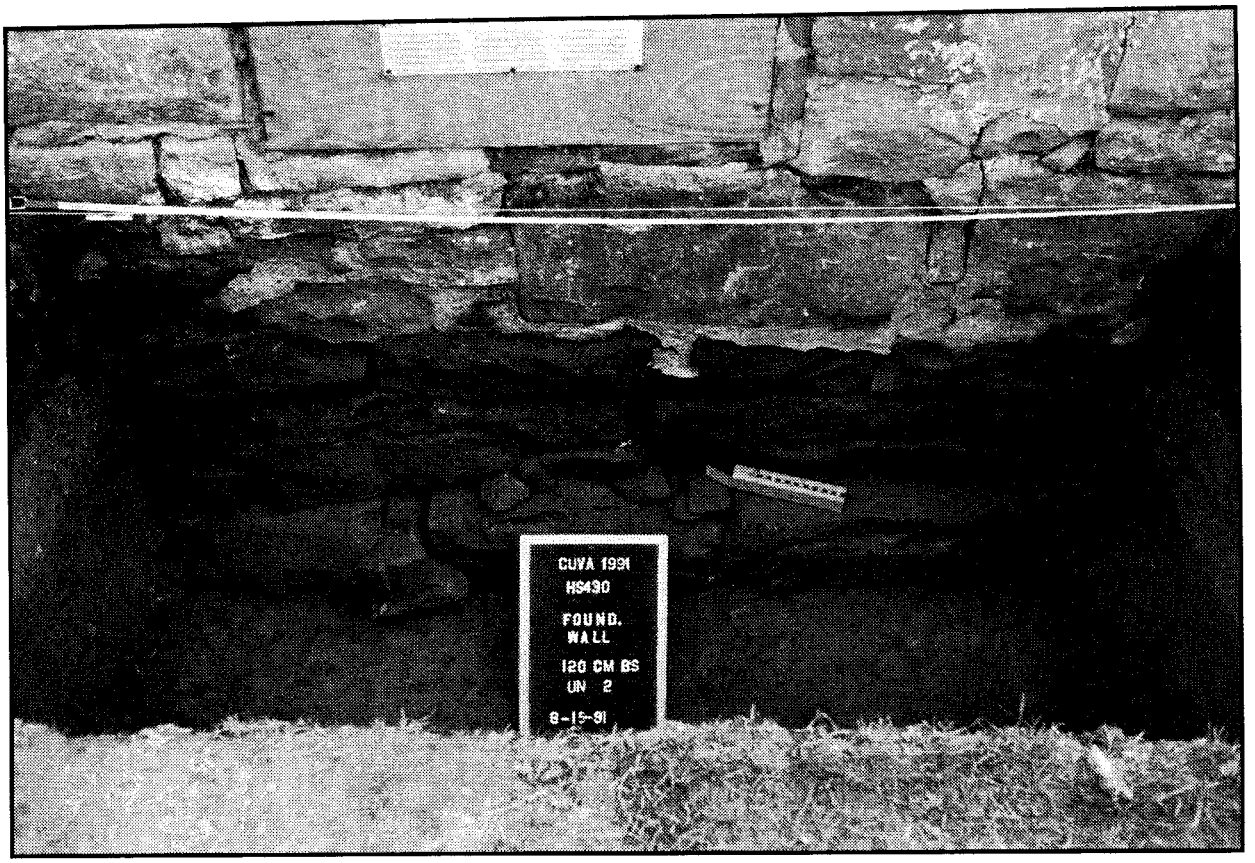


Figure 10. Photograph of west foundation wall, Unit 2.

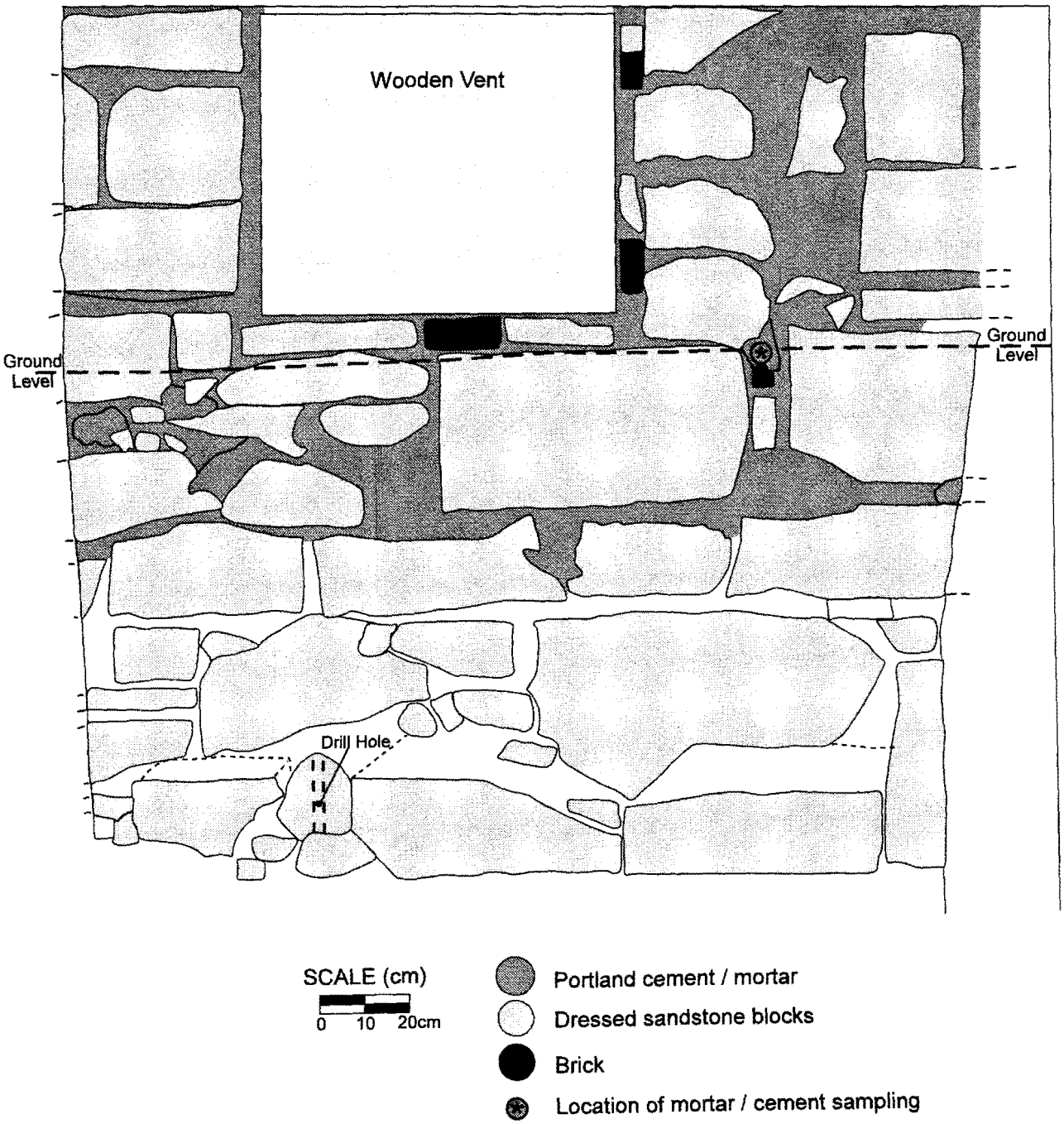


Figure 11. Scale drawing of west foundation wall, Unit 2.

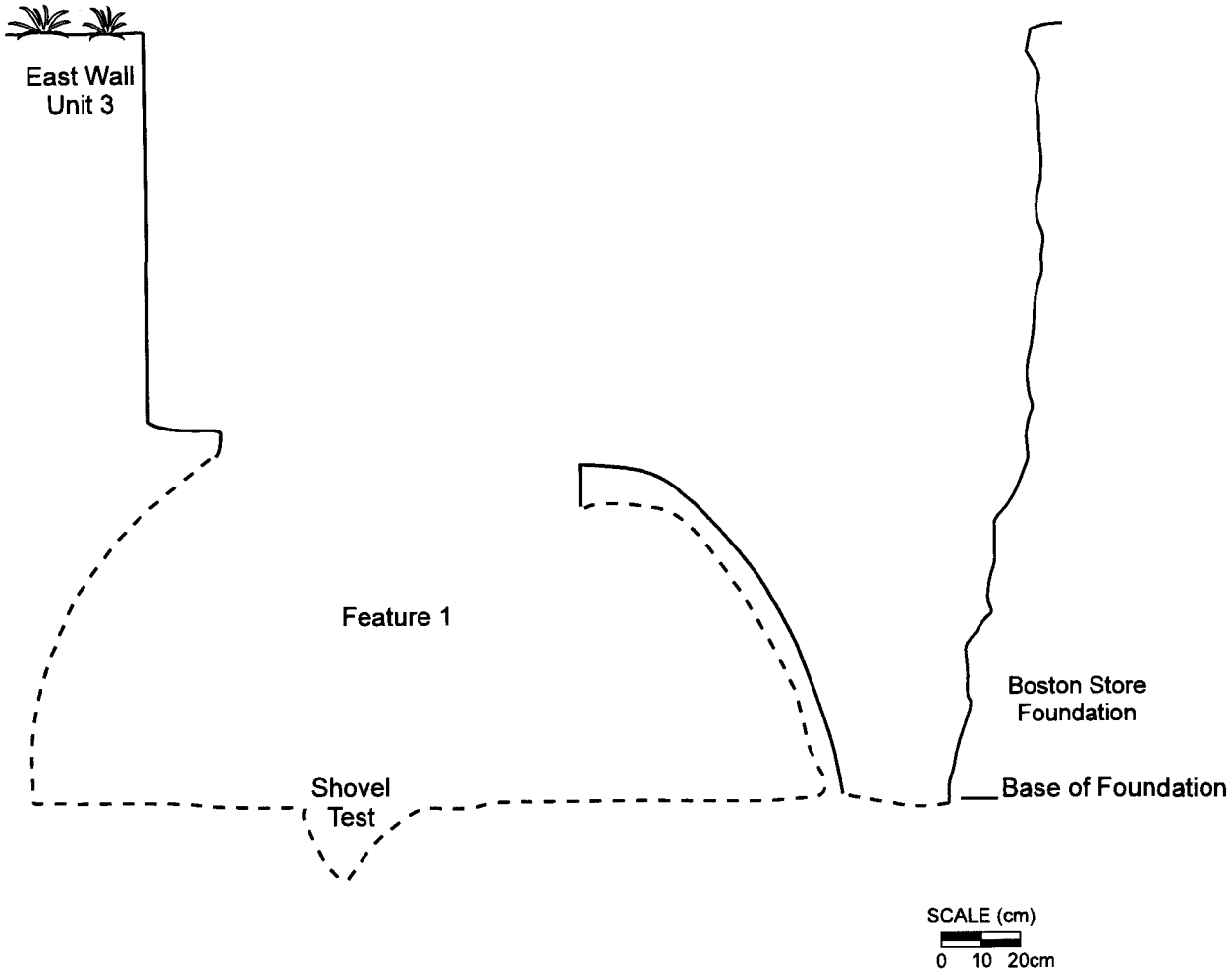


Figure 12. Profile of a portion of Feature 1.

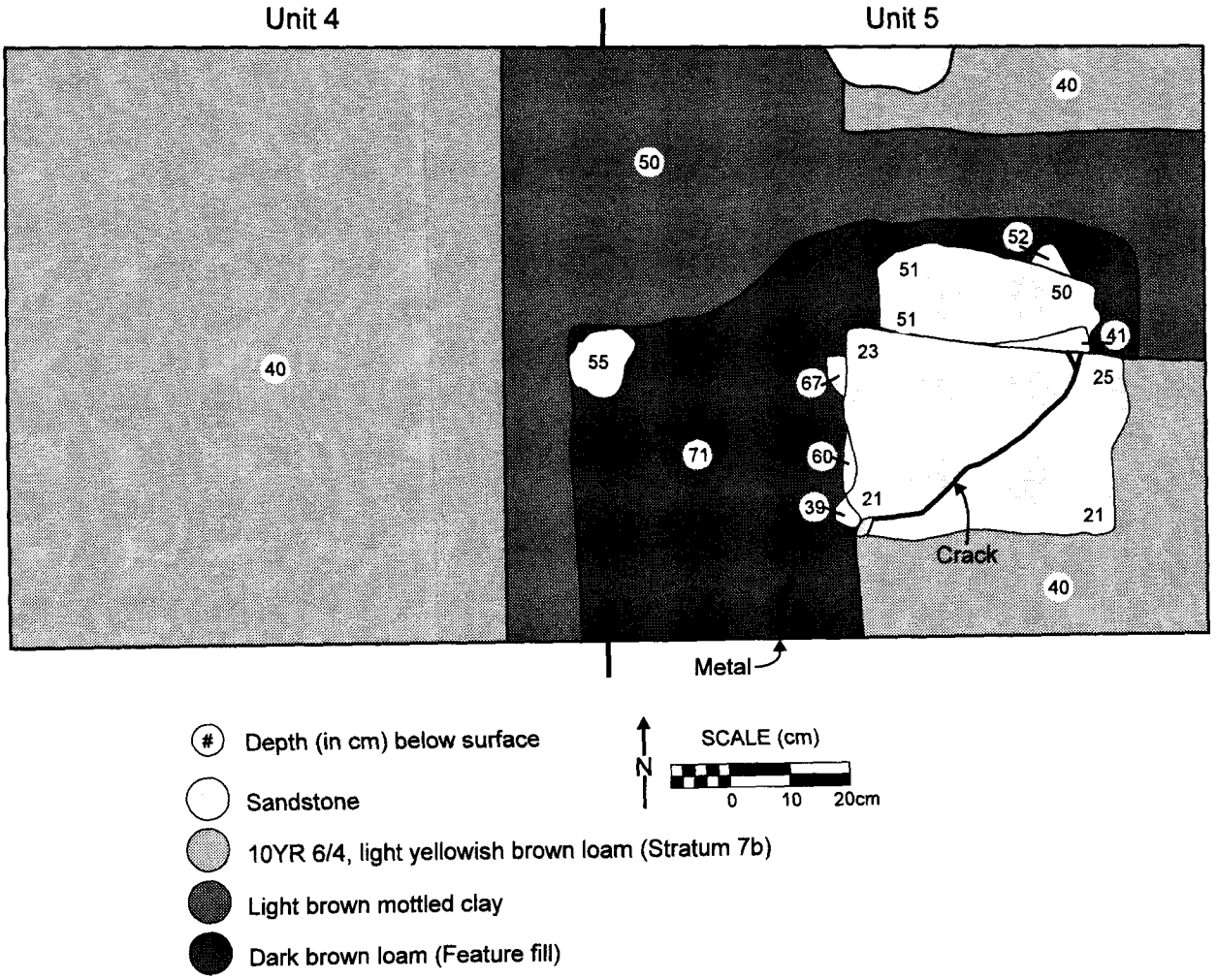


Figure 13. Plan view of Feature 2.

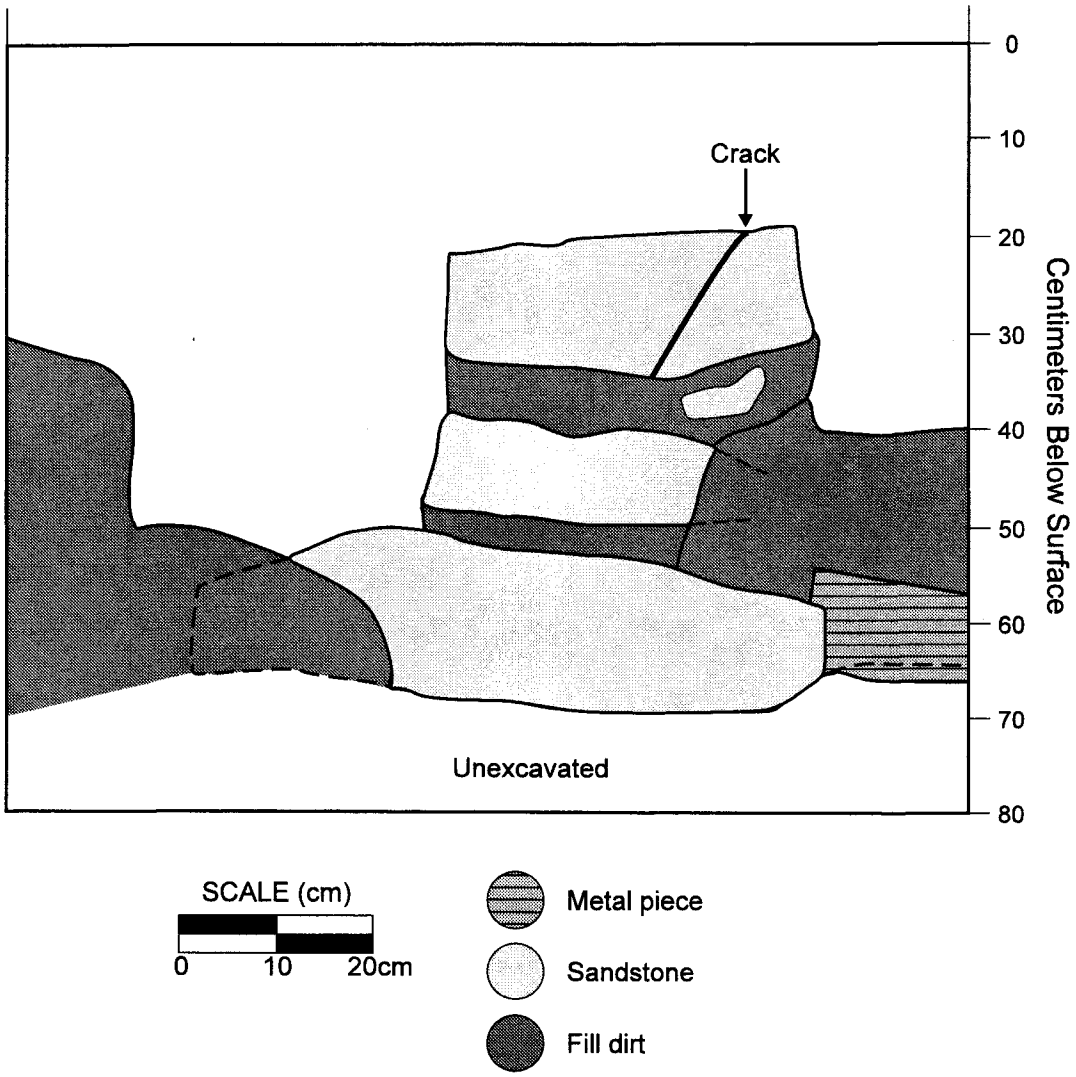


Figure 14. Profile of Feature 2, view to the east.

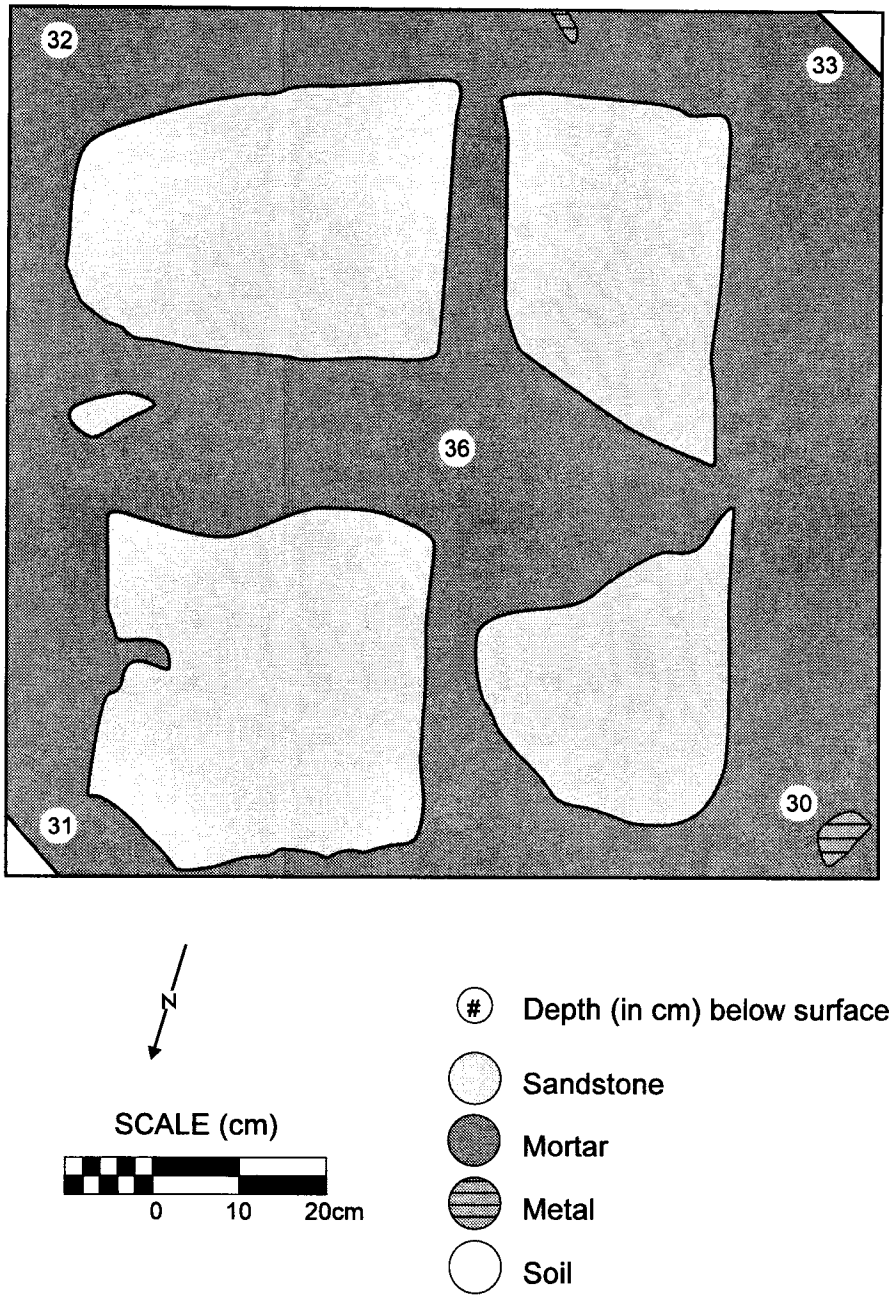


Figure 15. Plan view of Feature 7.

Figure 16. Photograph of Feature 7.

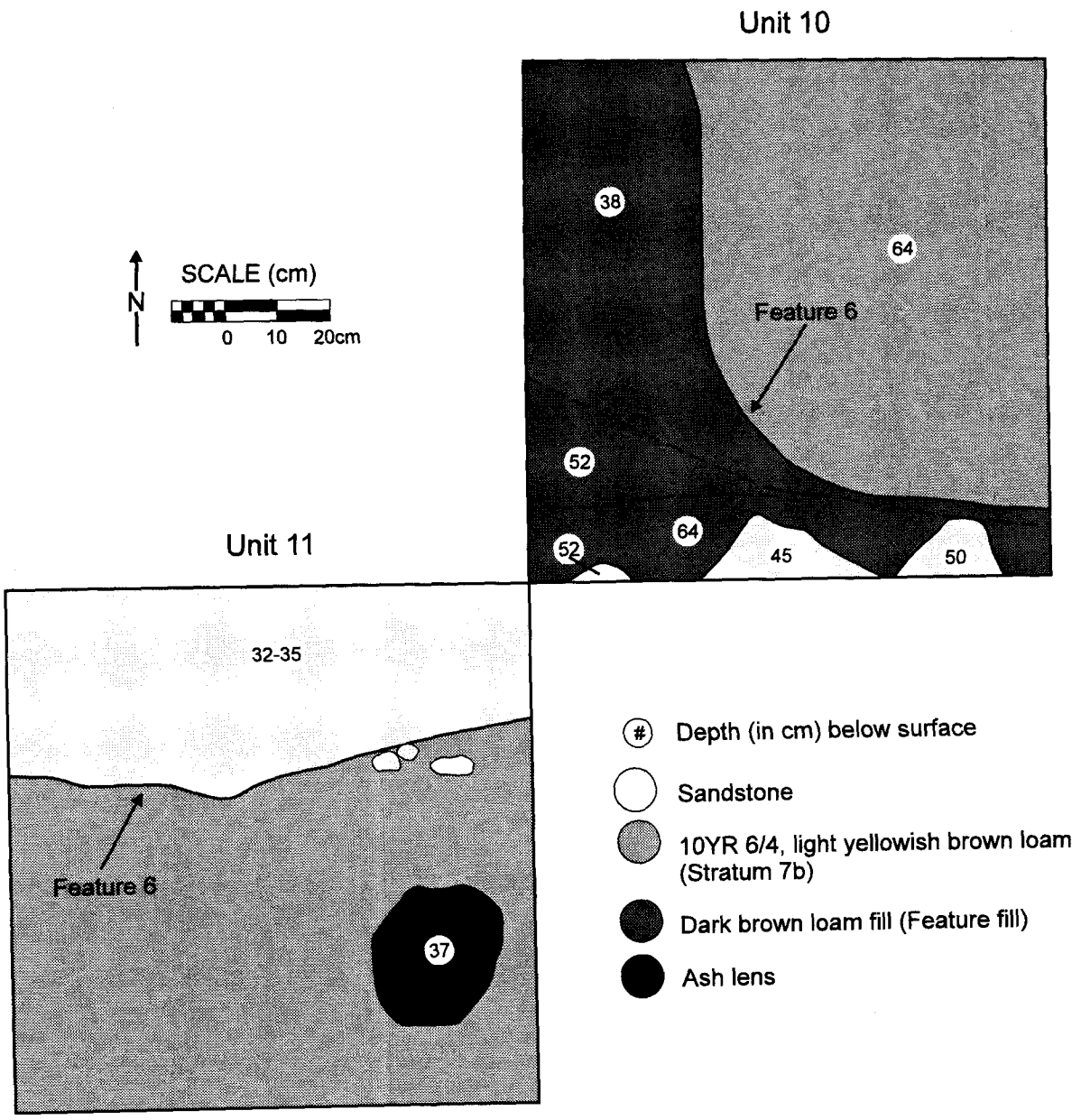


Figure 17. Plan view of Feature 6.

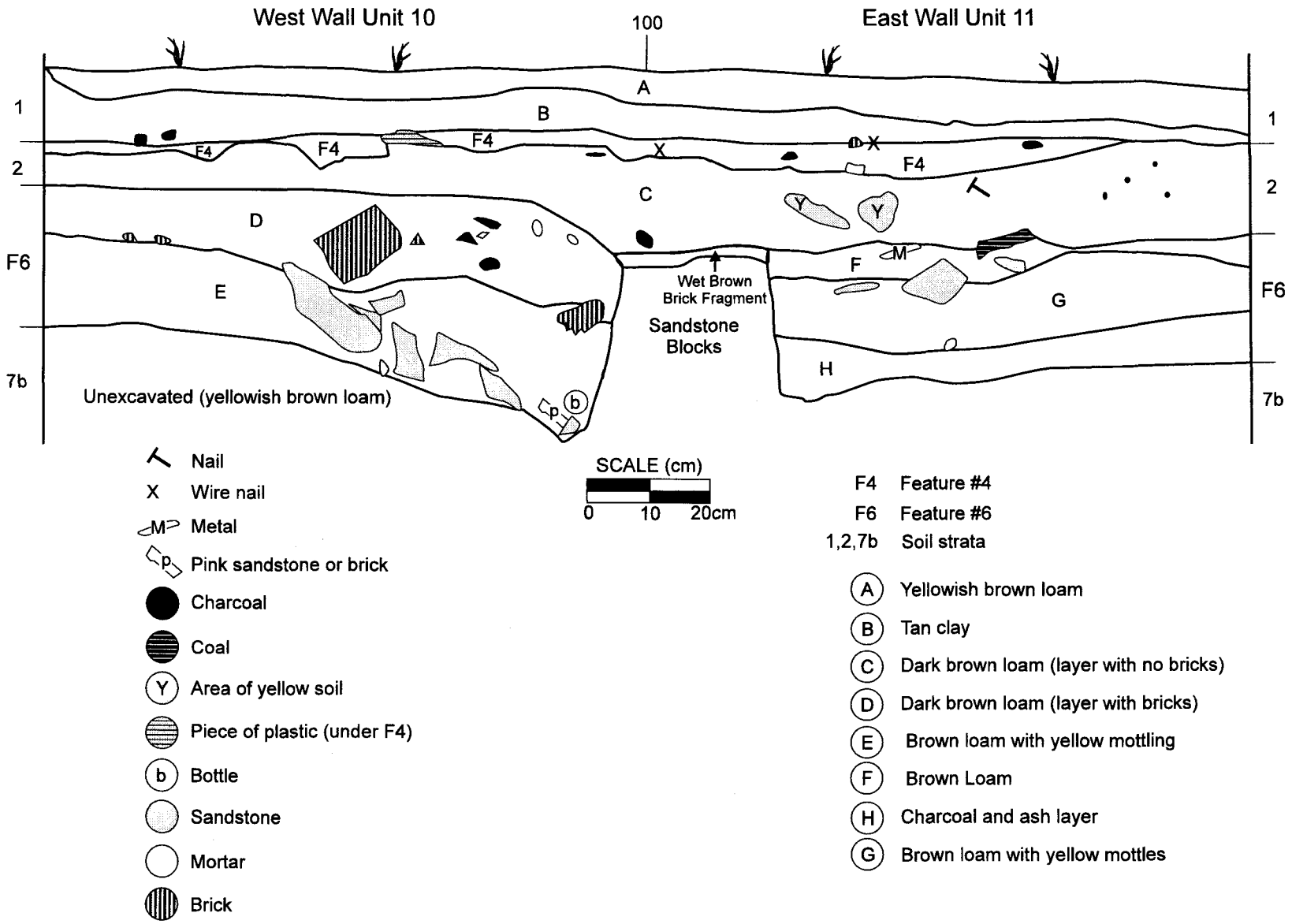


Figure 18. Profile of Units 10 and 11, showing Feature 6.

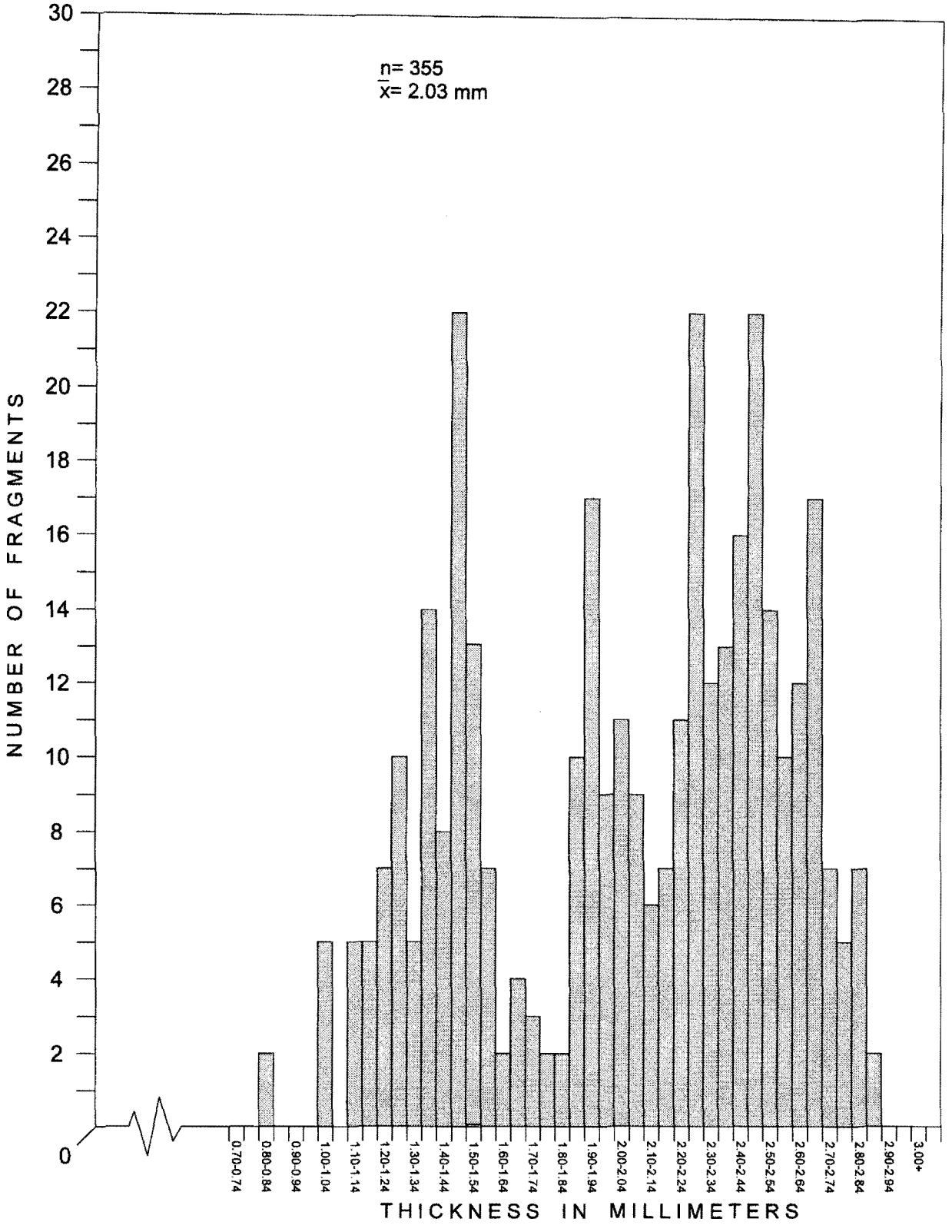


Figure 19. Window glass thickness, Unit 1, Stratum 5.

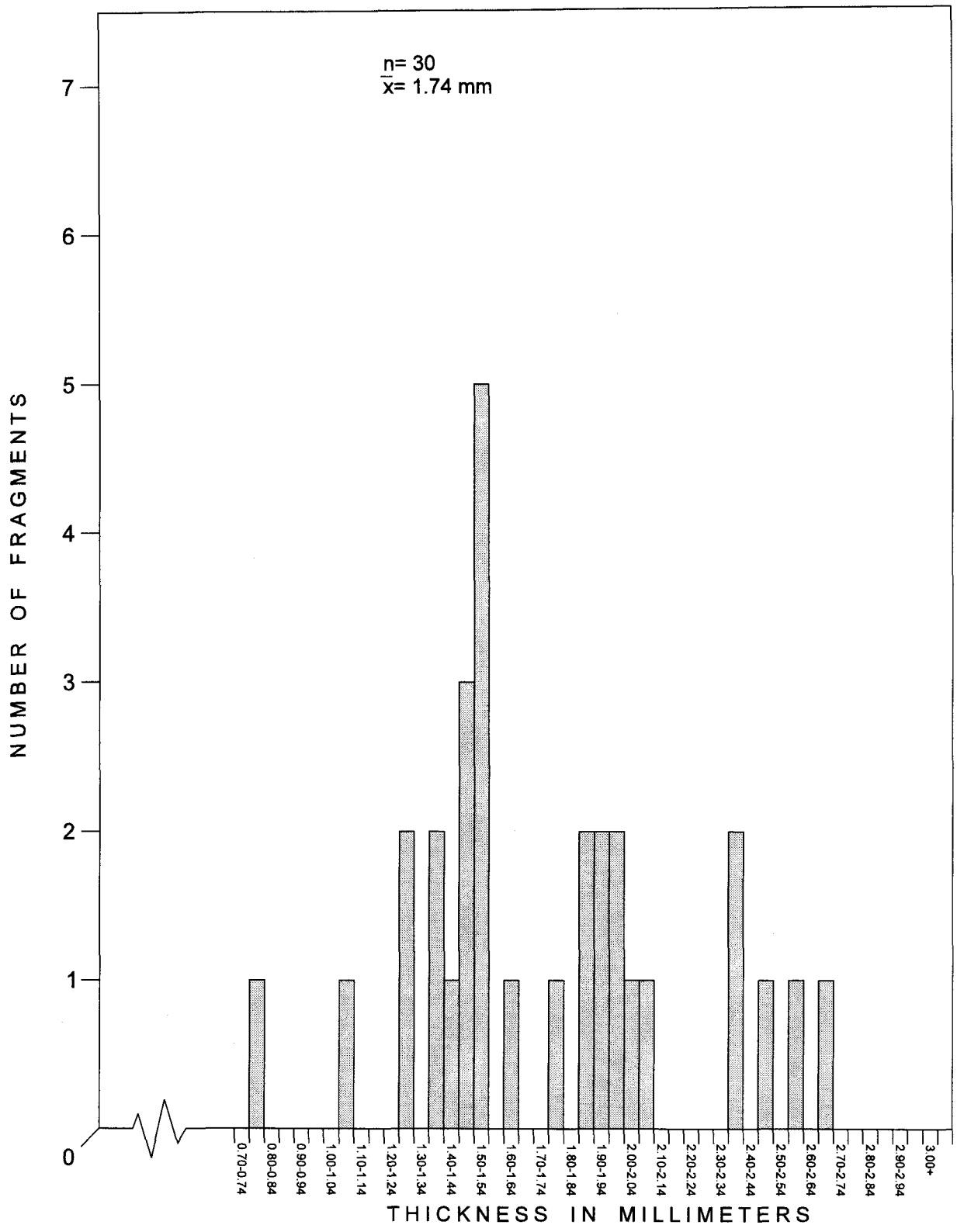


Figure 20. Window glass thickness, Unit 1, Strata 6a and 7a.

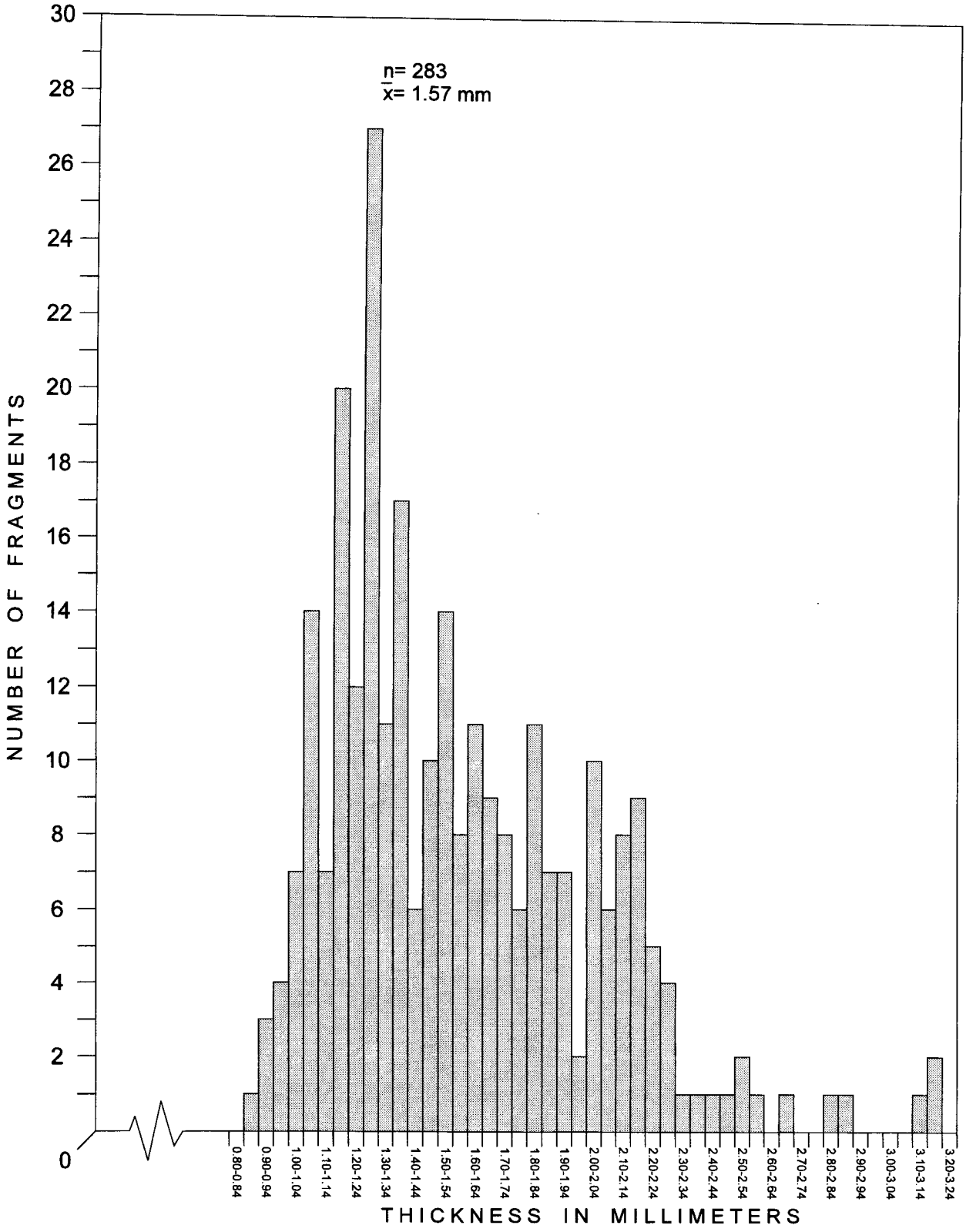


Figure 21. Window glass thickness, Unit 2, Stratum 5.

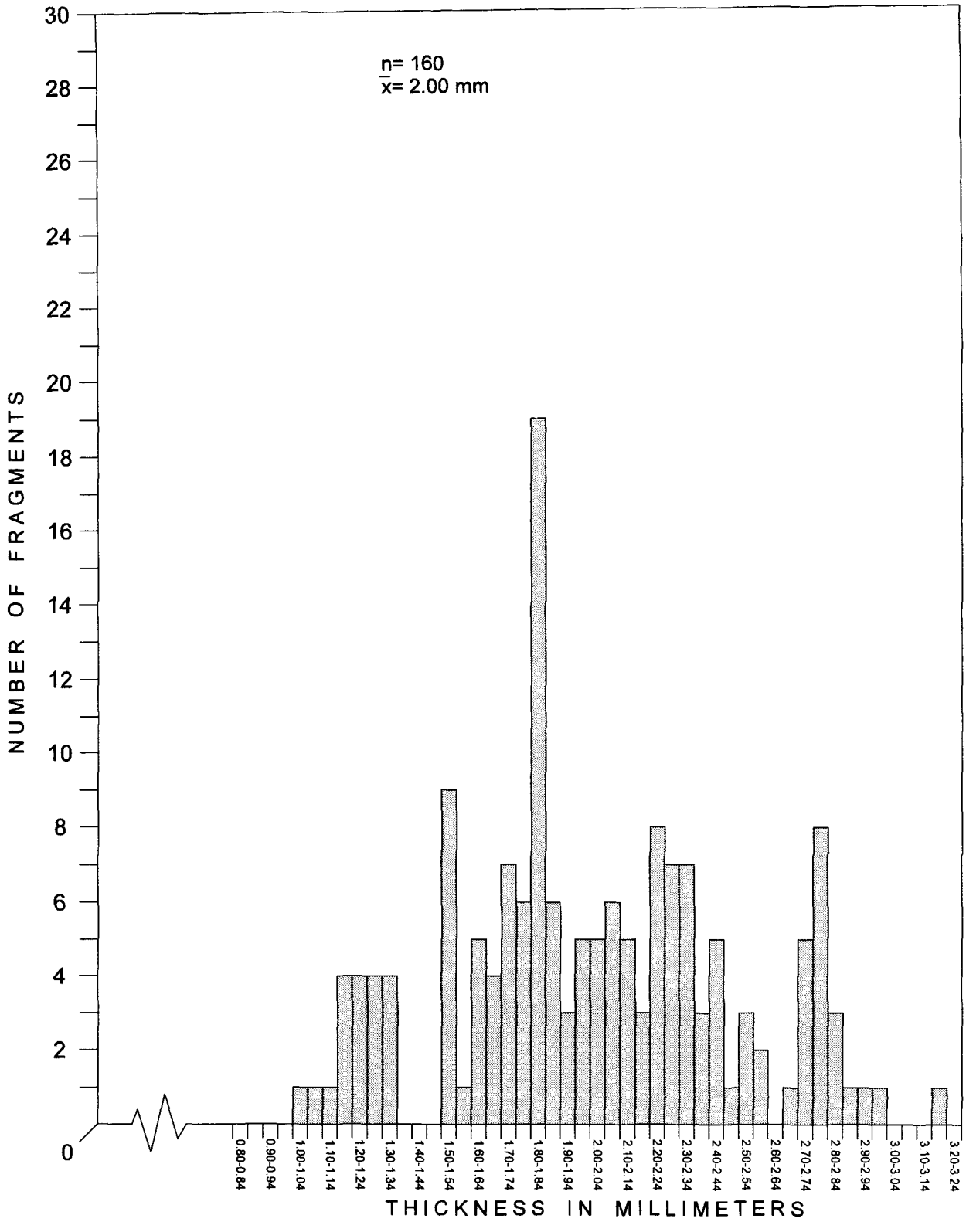


Figure 22. Window glass thickness, Units 4, 5, and 9, Stratum 2.

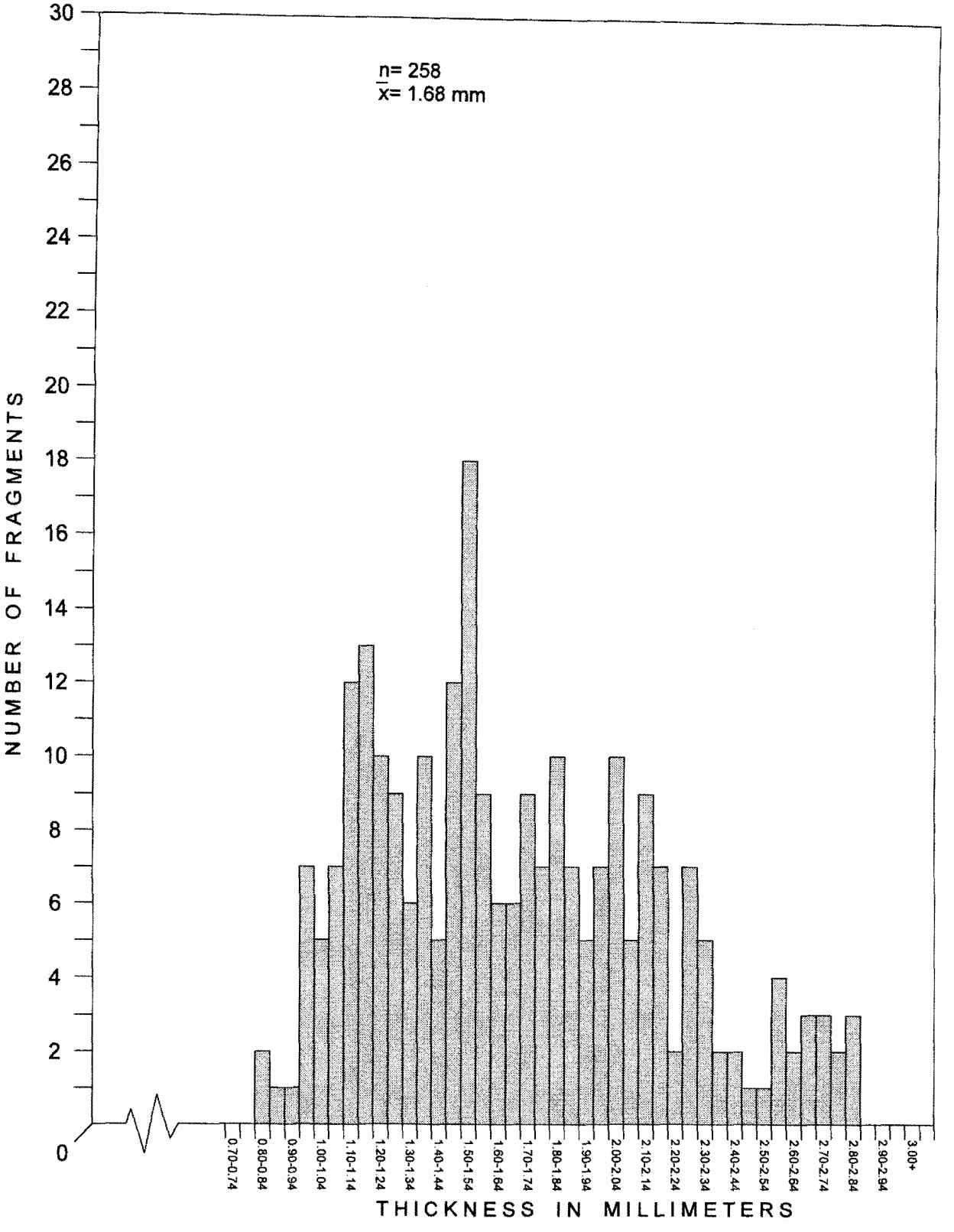


Figure 23. Window glass thickness, Units 6 and 12, Stratum 2.

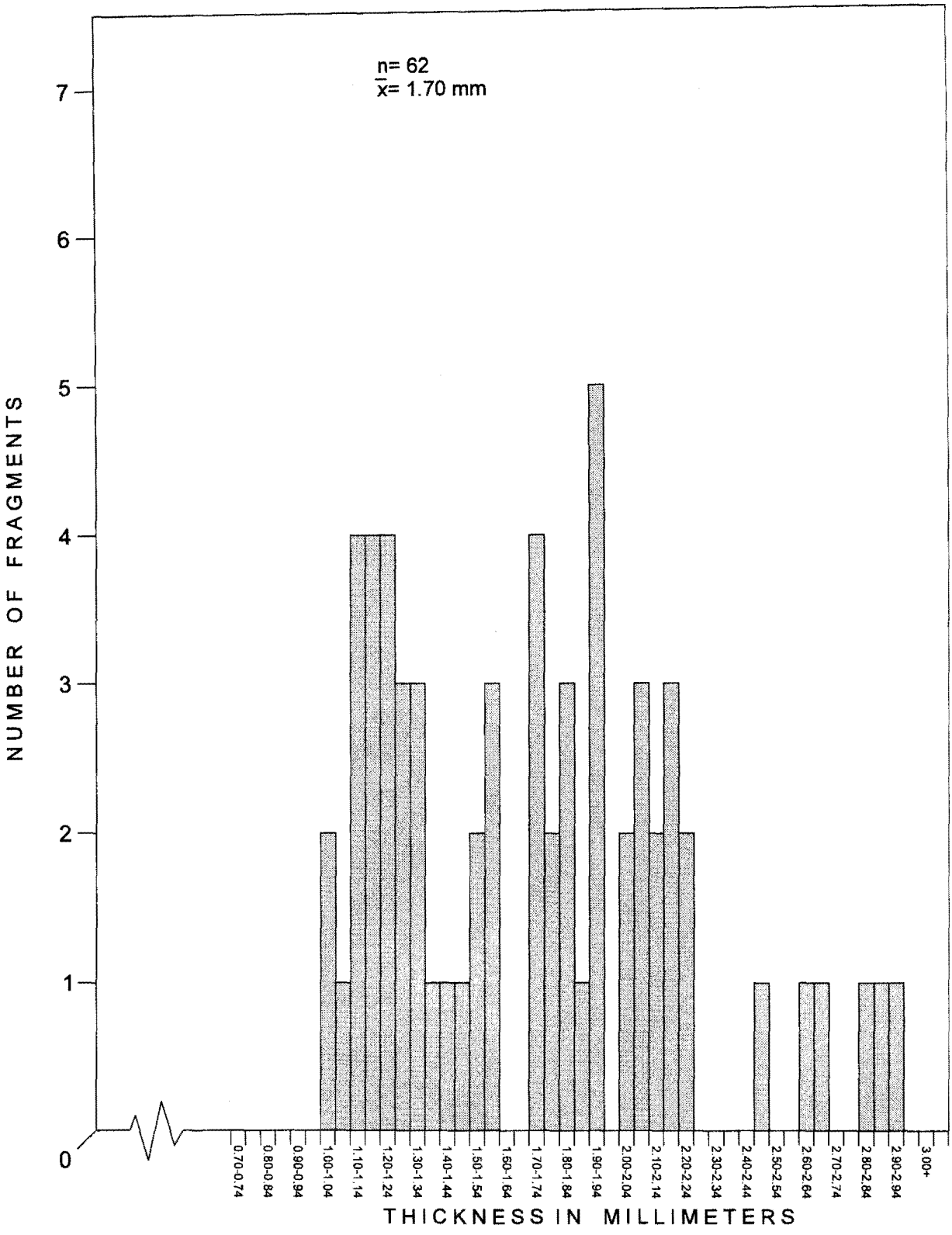


Figure 24. Window glass thickness, Unit 7, Stratum 6c.

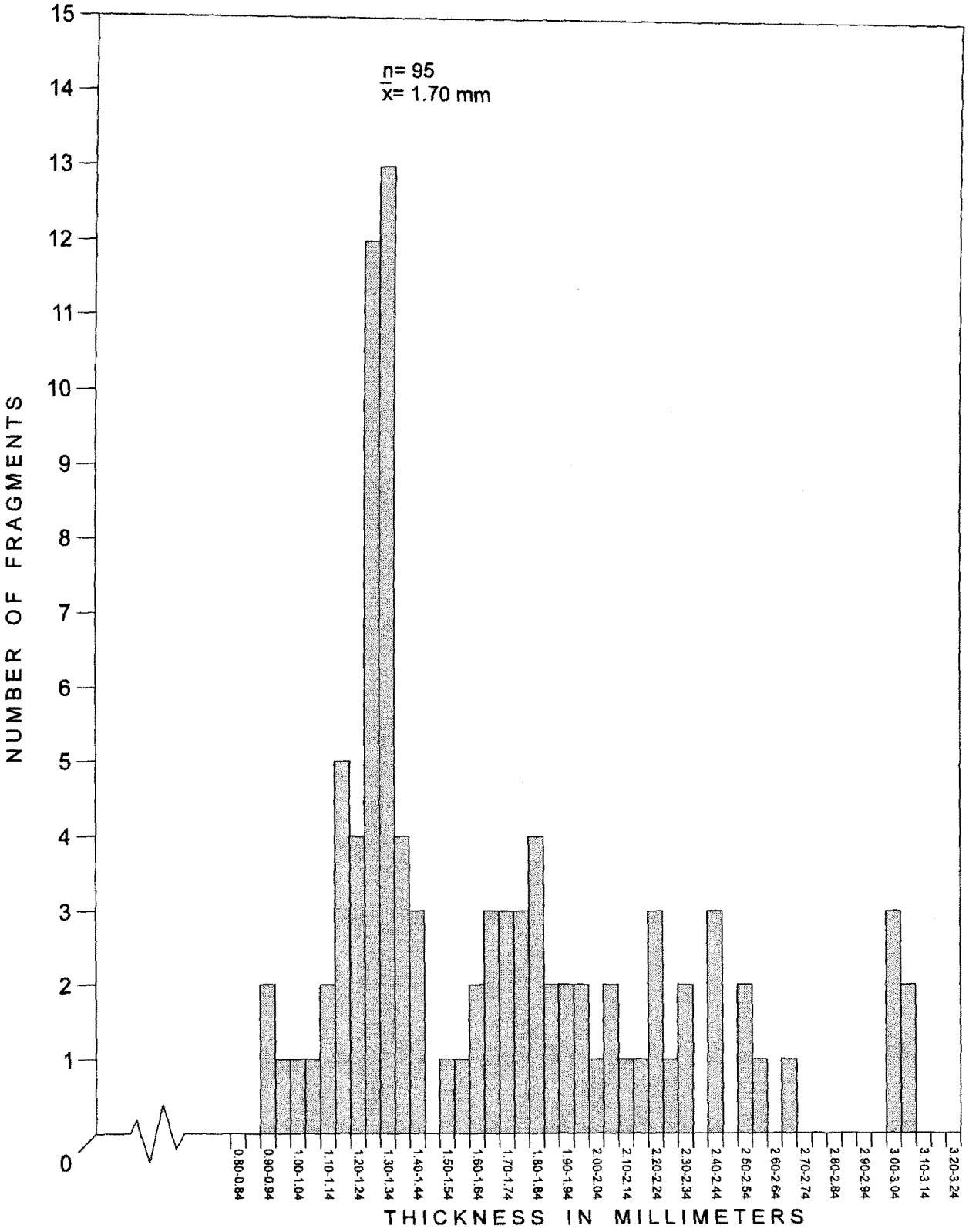


Figure 25. Window glass thickness, Unit 7, Stratum 5.

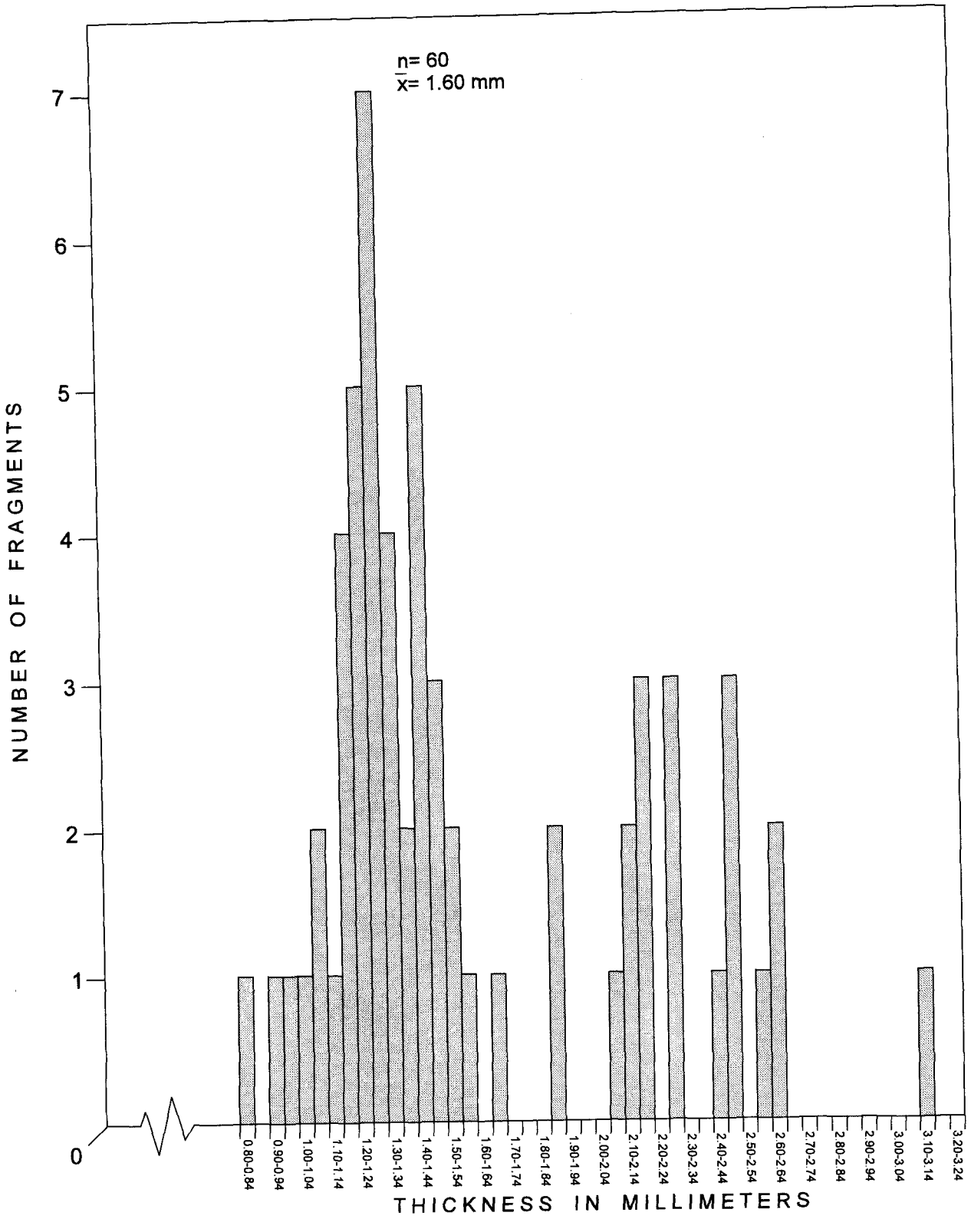


Figure 26. Window glass thickness, Unit 7, Stratum 6b.