

**Archeological Investigations Relating to Restoration
of the Charles E. Arnold House,
Lincoln Home National Historic Site,
Sangamon County, Springfield, Illinois**

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



Abstract

In response to preliminary plans for restoration of the Charles E. Arnold House, the Midwest Archeological Center initiated field investigations within Lincoln Home National Historic Site in the summer of 1991. The excavation team sought specific information about the original position of the relocated structure, as well as more general information on associated cultural resources that might be present on the house lot. We found no unambiguous physical remains that would refine the restored house siting. Excavations to the east of the standing structure, however, revealed the apparent locations of two former privies and a barn or similar outbuilding.

Acknowledgments

Numerous individuals made substantial contributions to this project, including several at Lincoln Home National Historic Site. Superintendent Norman Hellmers deserves thanks for facilitating all aspects of the field project by putting his staff at our disposal; his great interest in the continuing archeological program at Lincoln Home is also appreciated. Former Chief of Maintenance Bob Dunham and former Park Ranger Albert Brine also contributed to the progress of our field efforts. The late Francis O. Krupka, former historical architect at the park, added importantly to the success of our efforts.

At the Midwest Archeological Center, former Regional Archeologist Mark Lynott, now Center Manager, held overall responsibility for programmatic management of the Arnold House project. Todd Ahlman and Todd Butler performed the basic artifact processing, analyses, and tabulations. John Andresen edited the text, and Carrol Moxham worked on the various illustrations and supervised the entire report production process.

It remains, finally, to acknowledge the work of our 1991 field crew: Todd Ahlman, Todd Butler, Dennis Naglich, and Harold Roeker. The four performed extremely well — often under adverse conditions, including the considerable strain of being constantly watched and questioned by literally hundreds of Lincoln Home visitors each working day. For their good humor, perseverance, and skillful efforts in the trenches, each deserves special thanks.

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Introduction

As part of a long-range management plan to return the four-block neighborhood that constitutes Lincoln Home National Historic Site (Figure 1) to its general mid-19th-century appearance, each of the extant buildings of that general target period are in the process of being systematically restored. One of those structures, the Charles E. Arnold House (Historic Structure [HS]-20) became the focus of our attention in 1991, though planning for its restoration at that time was still very much in the formative stages (Figures 2–3). Indeed, since the house had been moved from its original position at the turn of the last century, park staff and planners felt they needed guidance to ascertain more precisely where the restored structure should be relocated on the lot. For that reason, a team of archeologists from the Midwest Archeological Center (MWAC) under the author's direction initiated a study in 1991 to gather data that might prove useful in that particular effort. The archeological team also sought more general information concerning the impacts that this proposed action might have on any unrecorded cultural resources that might also be present in the zone of development.

The Arnold House at the time of our fieldwork stood at the rear of Lots 1 and 2, Block 11, of the Elijah Iles Addition to the City of Springfield (Figure 4). All but a small part of the structure was on Lot 1, which is the northwest corner lot of Block 11, at the intersection of Eighth and Jackson streets; less than a foot of the structure lapped over the original survey line onto Lot 2. When constructed in 1840, however, the house stood nearer the west end of Lot 1 and against the north lot line, facing toward Jackson Street, almost directly opposite the south side of the house that soon would be Lincoln's. The house now has been moved back to its original position and restored to a close approximation of its former appearance.

Photographic imagery of the Arnold House is sparse and, for the most part, coincidental to pictures that actually focus on the Lincoln Home. Consequently, all of the known historic images relating to the property catch but a glimpse of the structure in the background of photographs taken from the northwest, bearing witness only partial views of the house and occasionally the outbuildings. The most useful picture for purposes of this report derives from a well-known image of a campaign rally for Lincoln, documented in August of 1860 by a local photographer (Figure 5). A detailed enlargement of the photograph (Figure 6) shows more clearly the Arnold Barn. Many pertinent details lay hidden, however, either behind the Lincoln Home itself or the Arnold fence. Further, the glancing perspective afforded by that historic photograph obscures any accurate sense of relative distance and size for the outbuilding, making any comparison with physical remains difficult.

A later photograph, taken around the time of Lincoln's 1865 funeral, also shows a portion of the Arnold east yard (Figure 7). That image similarly suffers from the angle of perspective, and the Lincoln Home, which is present in the foreground, obscures the outbuildings to an even greater degree. Of particular interest, however, is the apparent privy that can be seen behind the plank fence and west of the barn (Figure 8).

Maps and similar graphic sources relating to the Arnold property are fairly numerous and document nearly 150 years of change, spanning an interval from 1854 to the present. The earliest plat of Springfield (Figure 9) is the 1854 source, and it depicts a somewhat J-shaped dwelling structure on Jackson Street near the southeast corner of Eighth; at the alley a rectangular outbuilding in the northeast corner of the lot is the only other improvement shown (McManus 1854). There is a similar city plat produced only four years later (Sides 1858), but it shows the Arnold property without any obvious change and does not merit separate illustration here. Indeed, it is probable that the later map was simply a modified version of the 1854 plat.

The 1858 plat, however, marks the beginning of a considerable gap in the known map sequence, ending 26 years later with the first in a series of Sanborn insurance maps. Three important bird's-eye view drawings of Springfield (Ruger 1867; Beck and Pauli 1870; Koch 1873) appeared during the interim and add a new dimension to our understanding of the Arnold property. The last in that series, Koch's 1873

panoramic view, depicts the lot as it looked approximately midway through the map hiatus, with all major improvements shown in relative clarity (Figure 10).

The detailed series of Sanborn fire insurance maps provides resumed cartographic coverage beginning in 1884 and continuing through 1952. The five maps used in this study (1884, 1890, 1896, 1917, and 1952) document essential changes in the configuration and placement of structures on the Arnold property. One other Sanborn map also provides coverage of the area for 1941, but it is essentially identical to the 1952 map and need not be illustrated here. Lot 1 of Block 11 is abstracted from each of those maps and reproduced in Figures 11–15 for comparative purposes. Additional maps of the neighborhood exist for other years, but variation among them in scale, detail, and mapping conventions make them less useful for comparison in this study. It is the internal consistencies of the early city plats and the later Sanborn maps that make their illustration particularly valuable.

The Sanborn map sequence clearly shows that, sometime in the years between 1896 and 1917, a subsequent owner of the Arnold property moved the house to its modern location. This set in motion a sequence of events that eventually converted the single-family dwelling into a boarding house and, later, into a collection of multiple private apartments (cf. Figures 13 and 14). Perhaps to improve siting of the residence, house-movers rotated its axis 90° so that the roofline and gable ends ran north and south, rather than east and west as they formerly did. It also appears that several modifications to the building's form were made at, or shortly after, that time. Orientation of the relocated house, however, remained northward as with its original placement, giving it a street address of 801 E. Jackson, rather than an Eighth Street address.

Our 1991 archeological investigations focused primarily on the west lawn of the Arnold House, where that historic structure is known to have stood originally. It was acknowledged at the outset, however, that any excavations so dedicated and so conceived might prove fruitless, for soon after moving the Arnold House a second house rose in the same general area where the first had stood. That subsequent construction effort easily could have damaged or even obliterated foundation elements that would confirm the exact position where historic maps show the earlier structure was sited. Indeed, since there is no evidence that the original Arnold House had a basement, it is unlikely that the shallow foundations typical of crawlspace groundwork would survive even the demolition activities that would be expected with moving the house during the opening years of the 20th century.

As if the prospects of a successful search were not bleak enough, the initial National Park Service administrators at Lincoln Home, in keeping with the approved Master Plan, ordered demolition of the intrusive second house. Therefore, even if superposition of the second structure did not destroy all physical remains of the original Arnold House foundations, its ultimate erasure from the scene in the late 1970s might very well have eliminated any survivals of the original. Indeed, veteran maintenance staff at the park indicated shortly after we began fieldwork in 1991 that task specifications for the contracted razing called for complete removal of the demolished structure's foundations. Such an ambitious effort almost certainly would have the collateral effect of eradicating whatever physical evidence of the supposed shallow groundwork might still have survived in place.

It should come as no surprise, then, that the actions of relocating the Arnold House to the rear of the lot, building a second house where the first had stood, and then razing that second structure, may have swept all vestiges of the original Arnold House site from the residential lot. Additional excavations performed east of the structure in 1991, however, showed disturbances in that smaller yard to have been far less severe. To be sure, excavators disclosed partial remains of several former dependencies, including two privies and an apparent barn, in the abbreviated section of yard between house and alley. Given the positions where they once stood, relative to structures shown on dated maps, it seems that some of those features likely predate relocation of the Arnold House. It is not at all clear, however, whether the remains partly outlined during the 1991 field investigations are associated with the more circumscribed period of Charles Arnold's residency on the property.

This report summarizes the methods and results of the 1991 archeological investigations at the Charles E. Arnold House, which has been designated Site 11SG288 in the state filing system. At this late date, architectural/engineering contractors and other key restoration planning personnel already have received any recommendations developed out of the project, and essential planning for the site restoration project was long ago complete. Indeed, the structure at present has been returned to its former position on the lot for use as a visitor facility housing an exhibit that describes the process used to restore the Arnold House and others in the historic neighborhood to their Lincoln-era appearance, as well as the history of the owners and occupants of the Arnold House. Nevertheless, salient points made to those individuals in advance of that site restoration effort are reiterated at the conclusion of this report.

It should be noted also, however, that additional excavations at the Arnold House site took place in 1996, specifically to address questions raised in our 1991 study concerning the location of a barn or similar outbuilding indicated by those excavations and by various maps of the Springfield neighborhood (Frost 1997). That dependency now has been reconstructed, though that undertaking was not part of the original site development plan.

Artifacts collected from the Arnold House are inventoried in tabular format as an appendix, which is the last section of this report. All records and specimens generated or gathered as part of this archeological project are now housed at the Midwest Archeological Center facility in Lincoln, Nebraska. Materials are cataloged under Lincoln Home Accession Number 124 and MWAC Accession Number 492.

Background

The following historical sketch is adapted liberally from the late Francis O. Krupka's (1991) draft Historic Structure Report on the Arnold House, an effort that has since been abandoned. It would be pointless to cite specific passages in text, as the document was never formally printed; further, pagination would surely change if that were to occur. It may profit readers to know, however, that Historical Architect Krupka's initial research also provides much of the basic historical background for a subsequent Historic Structure Report on the Arnold House prepared under contract to the government by Fischer-Wisnosky Architects (1994).

The Charles E. Arnold House takes its name from the resident of official record at this Springfield address in 1860–1861, the period marking Abraham Lincoln's final year of occupancy in the neighborhood. Arnold also owned the property in question, but he was not the first to do so. The prominent Springfield developer Elijah Iles sold Lot 1, Block 11, and four other lots from the Iles Addition in 1837 to a minor syndicate consisting of John B. Weber, Daniel Ruckel, and Jacob Ruckel, who was Daniel's brother. Their land speculation appears to have proved quite lucrative in a very short time, for only two years later the properties again changed hands at an estimated return of 350 percent to Weber and the Ruckel brothers.

The Reverend Francis Springer gave the investment syndicate some of its handsome profit margin through his purchase of Lot 1 in 1839, and he is apparently the owner who initially improved that lot. Reverend Springer first made his mark upon Springfield soon after his land purchase in the field of education, serving as principal of one of Springfield's academies in the 1840s. He earned greater distinction, however, and more lasting remembrance, as the founder of Springfield's Grace Evangelical Lutheran congregation. More than 150 years later his congregation still prospers, and its church now stands at the corner of Seventh and Capitol, a mere city block from his former home. Although it lies within the official Lincoln Home National Historic Site authorized boundary designation, the church property itself is not under federal administration.

Springer is reputed to have held the congregation's first worship service in his own home — the building we now call the Charles Arnold House — on September 19, 1841. Three years later Abraham Lincoln would purchase the house across Jackson Street. Thus, the future president and his young family became the Reverend Springer's neighbors for the next few years. Today members of the Grace Evangelical Lutheran congregation take immense pride in the friendship the reverend formed with lawyer Lincoln, though the hometown hero was never actually one of Reverend Springer's parishioners.

In 1849, Reverend Springer sold his house and lot to Charles E. Arnold, ten years after purchasing the property. The good reverend, his wife, and nine children had already quit the place two years earlier, however, in favor of moving on to what he doubtless hoped would be a better life in Montgomery County, Illinois, where he became President of Hillsboro College in 1847. During the interim, he is believed to have put the house up for rent before selling it — perhaps even to the Arnolds. When the small college later moved from the town of Hillsboro to Springfield in 1852, the Springers returned to familiar surroundings, but not to their former home.

Charles E. Arnold was a minor Whig politician of only local note, never gaining the prominence his neighbor Abraham Lincoln enjoyed even in the years before the latter embraced the newly organized Republican Party. Arnold reached his highest public office through election to several terms as the Sangamon County Sheriff, but he does not appear to have distinguished himself in that post. Krupka's (1991) original research shows that Arnold was aged 40 years, married, and the father of five living children when he bought the house from the Springers in 1849. He was listed as a sheriff in the 1850 census and as a miller ten years later in the 1860 population survey. Charles E. Arnold owned the property at the southeast corner of Eighth and Jackson for fully 30 years, continuing to reside there until 1879 when death took him in his 70th year.

His son, Charles D. Arnold, inherited the property at age 39 and held it 13 years before selling to Rebecca Cook in 1892. The Arnold scion, however, lived in the family domicile just four more years after the death of his aged father, renting it to various persons as early as 1883. Indeed, his initial tenant appears to have been none other than Osborn Oldroyd — a devoted admirer of the assassinated president and by that time one of the foremost collectors of Lincolniana. Oldroyd would gain distinction as the last person to rent the Lincoln Home from Robert Todd Lincoln, when he eagerly seized upon the opportunity later in 1883 and began exhibiting his collection to the curious. Such good fortune put him in line to become the Lincoln Home's first official caretaker after the only surviving Lincoln heir deeded it to the State of Illinois in 1887, a conveyance that Oldroyd himself appears to have had a hand in advancing through the state legislature.

Of subsequent Arnold House owners, the one who immediately followed Charles D. Arnold figures most prominently in terms of impact upon the holdings. It was Rebecca Cook who purchased the Arnold property in 1892 and moved the house to its modern position at the rear of the lot, certainly by 1917 and, in Krupka's (1991) view, perhaps as early as 1904. Probably at the same time she built a new house (recorded today as the Rebecca Cook House), since demolished, essentially on the original site of the Arnold House (Figure 16). A precise date for that combined house relocation and new construction has not yet been ascertained, though the Sanborn maps and city tax records help to narrow the period during which the event must have occurred.

It is known that by 1940 the Arnold House contained four separate apartment units and had been altered radically in both floor plan and exterior appearance. The dates for those numerous modifications are not completely known, either. It is probable, however, that they accumulated at intervals over a considerable period of time. More intensive research into city records and, of course, physical examination of the house itself may yet enlighten the particular chronology of its structural evolution. The basic character of major exterior changes to the Arnold House, however, can be summarized in brief.

As stated earlier in this report, a particularly radical change made to the Arnold House was the turning of the original frame structure 90° upon its relocation on the back lot. The effect was not terribly obvious at the time of our excavations, however, even to discerning observers, owing to the way the shift in orientation had been masked by subsequent additions. The entire first floor of the Arnold House was then clad in a brick veneer, whereas flat-roofed, single-story, brick additions were appended to the main structure on three sides. Accordingly, the only part of the original house clearly visible was the roof and the upper half story, which at that time was still sided with wooden planks. The roof's appearance, too, had been altered by a small dormer added midway along its length on both the east and west sides.

Among those later additions was a large, open porch on the northwest corner of the house (Figures 2 and 3). Combined with a room addition against the house's west elevation and immediately south of the front porch, it gave the Arnold House a northward orientation onto Jackson Street. Though steps mounting the front porch from the west might confuse one's immediate perception, the true orientation was emphasized by a walkway that approached the porch from Jackson Street.

It bears noting also that map comparisons indicate that the Arnold House in 1991 contained only part of the structure that had developed prior to the time of the move. Dimensions of the core structure in 1991 were more reminiscent of the small story-and-a-half section shown in the northwest quarter of the house on the Sanborn maps of 1884 and 1890 (cf. Figures 11 and 12). Quite possibly, this was the oldest part of the house, which had undergone several remodelings even by 1884. In fact, the 1884 depiction bears only slight resemblance to the structure shown at this location on the 1854 plat of Springfield (Figure 9).

Tracing the sequence of Sanborn maps for this city block is a revealing exercise that helps chronicle and plot out the latter-day evolution of the Arnold House. There are six known Sanborn maps, spanning a 68-year period (1884, 1890, 1896, 1917, 1941, and 1952), that supply coverage of Springfield (Figures 11–15). The first three are separated by relatively short intervals of only six years, whereas the time intervals between map pairs are increasingly greater thereafter. Differences between the 1896 and 1917 maps are the most noticeable, not simply for the fact that the single structure depicted in 1896 had

moved by 1917, but also for the fact that parts of the 1896 house are no longer present in the 1917 map, as can be seen by comparing Figure 13 with Figure 14. As stated earlier, the 1941 and 1952 maps are identical as far as the Arnold House depiction is concerned.

Again, at first glance, the Charles E. Arnold House once appeared to face S. Eighth Street, primarily because of the porch configuration and the expectations fostered by the obvious orientations of all neighboring houses on the block. Prior to demolition of Rebecca Cook's turn-of-the-century structure, built forward on the lot, it would have been far clearer to casual passers-by that the Charles Arnold House actually faced E. Jackson Street in its modern location. It should be underscored, however, that the Arnold House also faced E. Jackson when on its original foundations. Even though movers turned it 90° before settling the house on its 20th-century foundations, the street address was the same — 810 E. Jackson — before and after the shift in location and structural alignment (numbers would not have been used for addresses in Springfield during its earliest years, however). The Rebecca Cook House bore the address 500 S. Eighth Street and clearly did face that north–south street.

The extensive lawn that lay west of the structure in 1991 was, of course, the site of the original Arnold House, as well as the subsequent Rebecca Cook House that stood on approximately the same plot of ground. The latter building, demolished under contract to the National Park Service after 1978, is shown as a square, two-story dwelling when first depicted on the Sanborn map of 1917 (Figure 14). Thirty-five years later, as shown on the 1952 Sanborn map (Figure 15), it still stood virtually unchanged. By the time the National Park Service established Lincoln Home National Historic Site in 1972, however, local developers had converted the huge, single-family residence into nine separate apartments through extensive remodeling of the interior space.

Excavation Strategy

The Charles E. Arnold House excavations followed generally accepted archeological field procedures and MWAC standards with few exceptions and innovations; the field strategy differed from others only in relation to the circumstances of purpose. Owing to the narrowly focused interests of restoration planners and park managers, the 1991 investigations placed emphasis on a search of the Arnold House west lawn for evidence relating to the original siting of the structure. In addition to that, however, on our own initiative we also examined the Arnold House east lawn in order to seek more general information on the potential collateral impacts of the proposed undertaking. Accordingly, our deployment of excavation units in the west yard contrasted markedly with the strategy used in the smaller east yard.

Since the primary goal of the west lawn excavations was to attempt the intersection of foundation lines representing the original house site, the archeological team employed exploratory trenches formed of 1-m by 1-m test units laid in series along the cardinal directions (Figure 17). To facilitate placement of those test units, the crew established a metric survey grid across the entire expanse of lawn (Figure 18). Excavation began in areas where the likelihood of crossing a foundation line seemed highest. Failing to encounter apparent remains of the original structure in the first test unit, the crew extended the trench by opening another test unit, and yet another, until they either exposed relevant evidence or until it became clear that the foundation line they sought must have been passed.

General guidance for this undertaking was available in several historic maps documenting the house lot. In addition to the series of Sanborn maps presented in Figures 11–15, three of which document this lot prior to the house moving, there are the two pre-Civil War plats of the City of Springfield already mentioned. Both the 1854 McManus map (Figure 9) and the almost identical 1858 Sides map show Charles Arnold's property as recorded during the first decade of his ownership.

Field investigators used the maps to narrow down the possible locations of house foundation elements in the yard. This was done by scaling out the measured drawings on the ground and by comparing the position of the house relative to other fixed features, such as the Lincoln Home on the opposite side of Jackson Street. Employing the collected maps advisedly, owing to their possible imprecision, the data served only as points of departure for the exploratory strategy. In other words, it would not be assumed that all evidence had been obliterated if an examination of the "best guesses" failed to meet with immediate success.

Our approach to this problem, once again, entailed 1-m by 2-m test units excavated end to end and forming continuous trenches (Figure 18). Orientation of the exploratory trenches was on the cardinal directions and primarily along the east–west axis. The initial effort attempted intersections with the east and west foundations somewhere near the central portion of the house site. Additional efforts sought to find evidence of those walls, as well as others, at various locations. Finally, in 1992, additional test units sought supplementary information at the specific request of park managers.

Neither restoration planners nor park managers voiced any particular concern about the Arnold east yard in that spring of 1991, focusing instead on the single question of where the original structure once stood in the west yard. Nevertheless, mandated procedures for assessing potential impacts on cultural resources by an "undertaking," as defined under Section 106 of the National Historic Preservation Act, dictated otherwise. Accordingly, the archeological field crew also designed to determine whether intact archeological deposits of potential significance lay between the house and the alley. Although development plans in 1991 did not specify reconstruction of any outbuildings in that area, construction staging and the house moving itself would almost certainly cause substantial ground disturbance in parts of the east yard. It would be our added task, then, to assess the effects of those secondary impacts.

Referring to historic documentary sources, the field crew excavated several 1-m by 1-m test units designed to reveal any surviving evidence of former outbuildings. Virtually all mid-19th-century domiciles, even those in urban areas, would have had several associated dependencies or service structures in addition to the main house. Generally such improvements would include at least a barn or carriage house,

a privy, a well, and one or more cisterns. Other structures, such as a wash house, summer kitchen, woodshed, or some combination thereof, might also be present.

Maps depicting the early Arnold House confirm the former presence of one minor structure, indicating the size and position of an apparent barn in the northeast corner of the Arnold lot. Further, one photograph taken of the 1860 Lincoln campaign rally held in front of his house provides a glancing view of the Arnold Barn and what appears to be a privy immediately west of that structure. No privy is shown on any of the detailed Sanborn maps, but since such documents were prepared for insurance purposes that is not at all surprising. It is not probable that such humble and generally ephemeral structures, though necessary beyond a doubt, were valued highly enough to insure against loss. Therefore, there would be little reason to plot them on such a map and, in fact, privies are rarely depicted on any historic maps.

As they did in the west yard, the field crew employed a linear exploratory strategy in the east yard to prospect for the south wall of the presumed Arnold Barn (Figure 19). Both the 1854 (Figure 9) and 1858 city plats, as well as the first two Sanborn maps for the Lincoln Home neighborhood (Figures 11–12), show a structure in the extreme northeast corner of the lot. Further, the north–south dimension on all four of those maps consistently measures about 20 ft or less, with the north edge of the barn congruent with the north property line. The two city plat maps, however, distinctly differ from the 1884 and 1890 Sanborn maps with respect to the east–west dimension. That dimension seems to be about 30–40 ft on the 1854 and 1858 maps, forming an unambiguous rectangle with a ratio of about 2:1. The Sanborn maps some 30 years later, however, clearly depict the structure in that same northeast corner position as a square having equal sides of approximately 20 ft or less. It is also worth noting that all three known drawings of Springfield in bird’s-eye perspective, including Koch’s 1873 panoramic view (Figure 10), depict the Arnold outbuilding of that era in what appears to be a rectangular form.

Since there was no idea in 1991 that the Arnold Barn was to be reconstructed as part of the house restoration package, our purpose in the east yard was simply to determine if cultural resources were present that might be inadvertently damaged by the house moving operation and construction staging. Accordingly, under that operating assumption, it would not be necessary to continue excavation at the presumed barn location were we to confirm that substantial remains survive. Having done so, efforts then could be redirected to other areas of the yard worthy of equal concern to resource management principles. In short, it was never our purpose in 1991 to gather detailed information on the former outbuilding.

By 1992, however, park management had come to give serious consideration to reconstructing the Arnold Barn. Accordingly, a crew assigned elsewhere in the park during 1992 excavated an additional test unit to explore for the north edge of the barn, positioning the unit to overlap the historic property line shown on maps to coincide with the outbuilding’s north wall (Figure 19). This was done in direct response to the park’s special request for supplementary investigation of the area in question. There was no desire expressed at that time, however, for more information on either the east or west barn walls.

In keeping with the general need to assess the potential effects of proposed undertakings, the 1991 crew examined the Arnold House east yard where collateral impacts associated with the house moving were most likely to occur. The excavation of a single 1-m by 2-m test unit yielding partial remains of a privy vault, proved sufficient to determine that intact cultural features survived within 2 m of the standing structure. As a result, having demonstrated the clear necessity for circumspection in moving the structure, there would have been no practical purpose served by continuing our investigation of the Arnold House east yard at that time.

Excavation Findings

Finds made in the Arnold House west yard during the 1991 field project are so few in relation to the effort expended that there would be little point in providing detailed, unit-by-unit summaries of the excavations. Rather, descriptions are offered only with respect to larger block excavations and exploratory trenches. In addition, emphasis is placed on the presence or absence of cultural features. Artifact specimens are considered in the narrative only to the extent that they cast light upon the archeological context. Frequency data for all specimens collected from the west yard during 1991 are summarized in the appendix in tabular format by provenience (Tables 1–23).

The east yard, on the other hand, yielded far more substantive information per test unit excavated; artifacts recovered from that yard are also summarized in the appendix in tabular format by provenience (Tables 24–29). In part, this owes to the fact that modern disturbance on that side of the house was far less than what proved true of the lawn west of the house. That is not to say, however, that the physical remains found in the east yard are more readily understood in terms of age or function, only that they were more intact. As will be evident from the description of our findings, excavation and analysis of the east yard remains failed to disclose certain essential details. Later investigations under the supervision of MWAC Archeologist Forest Frost (1997), however, did serve to clarify some of the cultural features partly exposed during the 1991 field season at the Arnold House.

Results of the Arnold House archeological investigations are summarized first for the west yard and then for the east yard. In addition to the major excavations of 1991, the following year park management requested a crew on assignment elsewhere in the park to perform minor supplementary testing at the Arnold House. Accordingly, that later field crew excavated a 1-m by 2-m test unit in the east yard and another in the west yard. The products of those 1992 efforts are also considered here, and their artifact collections are summarized in the appendix in tabular format by provenience (Tables 30–31).

West Yard

Although it appeared in 1991 to be the front yard of the Arnold House, the expansive west lawn (Figure 18) was in fact a side yard. Orientation of the residential structure in the mid-19th century was toward the north and Jackson Street, as it still was in 1991, though the structure in modern times stood east of its original siting. From the turn of the last century through the 1970s, as explained earlier, another dwelling stood atop much of the east yard.

In 1991, the Arnold House west yard measured some 22.8 m (75 ft) by 13.1 m (43 ft), for a total area of slightly less than 300 sq m (3,225 sq ft). That part of the house lot was bounded on the north and west sides by a low fence of white pickets and on south side by a somewhat higher plank fence. The 1991 fencing, however, did not conform precisely to the original platted lot, which measured 40 ft wide (north–south) and 152 ft deep (east–west). Park personnel apparently installed the modern fences, here and elsewhere, after 1978.

An informal check of the north fence line relative to the Lincoln Home south fence, which is correctly positioned, revealed that the Arnold House fence was almost exactly 3 ft north of the actual lot line. The south Arnold House fence, on the other hand, appeared to lie slightly south of the original surveyed lot line. Further, it was apparently positioned to match the southwest corner of the relocated and expanded Arnold House, which overlapped perhaps a few inches into Lot 2 of the block. The south fence at that time ran only from the west fence line to a point 3.5 m (11.5 ft) from the southwest corner of the house — for no apparent reason other than providing park groundskeepers ready access to the yard for mowing the grass.

The Arnold House west yard in 1991 was a treeless expanse of neatly trimmed lawn. The yard was level, for the most part, but at the extreme west end it dipped sharply to a plane even with the replicated boardwalk that passes between the lot and the Eighth Street parkway. The slight rise west of the Arnold House is also evident in several other yards that flank the eastern side of Eighth. Indeed, the Lincoln

Home doubtless stands on a similar natural embankment of low height, accentuated and embellished in 1850 when the ascending lawyer-politician ordered the construction of a brick retaining wall to enclose the front lawn of his remodeled residence, thus giving it a much grander appearance in keeping with his many accomplishments and future ambitions.

Establishing an excavation grid in the west yard proved to be a simple task. It seemed logical to set a zero datum point in relation to the standing structure for ease of map preparation from the existing conditions. Accordingly, we placed a 0/0 stake precisely 2 m west and north of the southwest corner of the house. From that point, using a standard surveyor's transit, the field crew set baseline referents at 10-m intervals. Having accomplished that, test units readily could be placed at any location in the west yard and identified by their Cartesian coordinates.

The west yard field excavations (Figure 18) employed a routine exploratory strategy, informed by reference to several historic maps. As stated elsewhere, useful early cartographic sources consulted include the 1854 (Figure 9) and 1858 *City of Springfield, Sangamon County, Illinois* maps (McManus 1854; Sides 1858). A much later series of Sanborn maps (Figures 11–13), published in the years 1884, 1890, and 1896, also show the Arnold House in its original position on the lot, though greatly modified from its 1850s configuration. Even so, all five maps depict the oldest part of the house roughly in the same relation to lot lines.

On both maps from the 1850s the north elevation of the Arnold House is shown coincident with the north property line, and the west elevation appears to lie approximately 10 ft from the west property line. The Sanborn maps still depict the house abutting the north property line in the 1880s and 1890s. The building's west elevation, however, now seems to lie 20 ft east of the west lot line, and that is the case in all three of those drawings. It is likely, however, that the first Sanborn insurance map in this series served as the basis for all subsequent maps produced by that company, and so certain similarities are to be expected.

Even if the admittedly rough map scaling (based on the 40-ft width of house lots in this neighborhood) calculated to derive those figures is wrong by some factor or degree, it is clear from even the most cursory inspection that the house depicted on later maps is sited farther back on the lot. The disparity in distances from Eighth Street may reflect mapping errors or actual changes made to the structure. The answer to that intriguing question, however, was beyond the scope of our 1991 field project. For purposes of devising a strategy to search for evidence of the original Arnold House it would be sufficient to put the building's general whereabouts at 10–20 ft from the west property line and proceed from that assumption.

Beginning at a point 2 m east of the west fence (in other words, less than the apparent 10-ft minimum set-back recorded in the 1850s), the archeological crew laid out and excavated a meter-wide trench composed of several 1-m by 2-m test units laid end to end (Figure 18). Positioning the trench line slightly more than 5 m (16.5 ft) from the north fence would also ensure intersection of any surviving evidence of the original house foundations as work progressed eastward. Recall that the north fence in 1991 was situated some 3 ft north of the actual lot line, meaning the trench would run near the midline of the house.

Having excavated as far as 9 m (29.5 ft) east of the west fence line, by that point the trench certainly should have crossed over into the central portion of the building site, whether the distance east actually was 10 ft, 20 ft, or both at different times. Nevertheless, the excavations revealed absolutely no indication of a former foundation line at any point along its length. To be sure, scattered brick rubble of indeterminate age occurred throughout the trench, but those obviously were redeposited by-products of demolition. The debris recorded in 1991 had no demonstrable relation to the earlier foundations and, even if such an association could be established, the materials clearly would have been displaced from their original positions.

On the chance that preservation near the north fence might be better, the excavators turned 90° and continued the trench toward Jackson Street (Figure 18). Starting from a position that would have to be inside the original Arnold House enclosure, the 4-m trench extension stopped at the north fence line or 3 ft beyond the actual lot line position. If the historic maps are accurate — and all of them do agree on this

critical point — the north foundation should have been encountered about 1 m from the north end of the trench. But that was not the case. There was no sign whatsoever of any foundation remnant, footing trench, or even any substantial construction debris that might suggest the former presence of a house foundation.

Failing to find evidence of the Arnold House in its presumed northwest quarter, our attention then turned to the northeast (Figure 18). Excavation resumed along the same trench line 4 m from the eastern end of the initial trench. This second exploratory device proceeded from that point of origin — again, doubtless within the former perimeter — to an end point 8 m east, stopping about 1 m (3 ft) from the boardwalk approach to the front porch.

As before, this effort disclosed no evidence of any kind that would relate directly to the original Arnold House. Indeed, that part of the west yard showed considerable disturbance. The only cultural features that could be discerned, the lower courses of brick porch piers, were obviously associated with the rear of the 20th-century Rebecca Cook House. Additional excavations undertaken in the area about those features represent an intensive effort to confirm that fact and eliminate the earlier Arnold House as a possible source of the deposits.

Despite the observed ground disturbance, excavators again attempted to intersect a north foundation line by redirecting their efforts. Turning 90° once more, they extended the trench northward to the fence line (Figure 18). Immediately inside the fence, at considerable depth, they noted the paired steam pipes that supplied heat to this neighborhood shortly after the turn of the century. About halfway to the fence they also crossed the path of a shallow water conduit, apparently leading to a former cistern believed to lie abandoned in front of the present Arnold House front porch. Another drainage line could be seen on the ground surface in 1991, skirting the structure's north side toward that same point. As revealed through the use of a steel probe and an additional isolated excavation, the conduit appeared to terminate near the former true northeast corner of the Rebecca Cook House (as distinguished from the corner of the back porch).

It should also be noted that the isolated 1-m by 2-m test unit mentioned above was by all appearances in a position to touch the north foundation, if the groundwork was indeed on or near the north property line (concluded to be 3 ft south of the existing fence). There was no evidence of a foundation line in the unit, however, nor any indication of peripheral disturbance associated with either construction or demolition of such a feature. Accordingly, the entire excavation effort expended in the northeast quarter of the west yard (totaling 22 sq m) failed to yield any physical evidence of the former Arnold House. With the exception of a few pre-Civil War era ceramic sherds scattered in what would have been the open space between the Arnold and Cook houses, all materials observed and recorded here in 1991 most probably relate to the later Rebecca Cook House.

This was not the full extent of archeological investigations in the west yard, however, as one aspect of the former Arnold House still had not been addressed. The two early plats of the City of Springfield (1854 and 1858) show the building in the shape of a large, block 'J' (Figure 9). Indeed, the south wing attached to the eastern end of the main house in both maps appears to extend all the way to the south property line. There was some chance, then, of finding intact structural remains in the southeast quarter of the west yard.

For that reason, the crew began excavation of a third trench, this time to explore for the south wing. This trench line ran east and west, as did the main parts of the previous two. The south edge of the trench, however, was only 2 m from the plank fence aligned with the south wall of the present Arnold House (Figure 18). By our estimation, the path of the exploratory trench should have corresponded to the midline of the south wing; certainly it would have been in direct line with the presumed addition if that part of the Arnold House were still visible in the ground.

Starting from a point unquestionably south of the mapped wing, the crew examined a linear distance of 8 m, stopping 4 m west of the standing structure. Branches off the main trench, both north and south, represent attempts to intersect other edges of the rectangular room. The arm extending to the existing

south fence line certainly would have crossed the actual lot line and the south wall of the presumed addition, but nothing of substance came to light. Indeed, most of the southeast trench appeared to pass through a jumble of recent fill, probably derived from demolition of the Rebecca Cook House.

A year later, while again in the park on a field assignment at another house lot, this author directed a crew in one last examination of the west yard; at that time the crew also placed another test unit in the east yard, which is described in the next section. The contractor preparing the Arnold House Historic Structure Report had requested investigation of one specific location where he believed evidence of the south wing should still survive. Therefore, in order to respond to park concerns and accommodate that request, the field investigators made the adjustment of departing from their approved work plan and returned once more to the Arnold House.

That single 1-m by 2-m test unit, placed where directed by the consulting historical architect, lay 1 m from the southwest corner of the Arnold House (Figure 14). It failed, however, to produce any physical evidence of structural foundations or any other element of the original structure. To the contrary, the test unit contained nothing worthy of remark, and the meager few artifact specimens recovered were manufactured well after the period of the Arnold occupancy. This was the case even though the extent and depth of disturbance here seemed considerably less than had been shown to be true elsewhere in the west yard.

Before abandoning our 1991 efforts in the west yard, we arranged to have the park provide a backhoe and operator for limited deep testing of the second exploratory trench. This was done in order to test our supposition that the trench traversed fill deposited into the Rebecca Cook House basement cavity after demolition of the aboveground elements, and that fact was soon confirmed. Indeed, machine excavation at the western end of the second trench (Figure 18) showed that the central portion of the Arnold House yard is composed of unsorted fill containing mixed debris. With its arm extended to a depth of about 1.3 m, the backhoe struck a level, poured concrete surface in which excavators noted a circular drain opening. Accordingly, there is little doubt that the concrete surface represents the floor of the former basement.

A basement floor situated at less than 4.5 ft below grade immediately impresses one as being rather shallow, considering clearance needs for normal use of a basement. Photographs of the Rebecca Cook house taken before its demolition, however, show that the foundation walls rose perhaps 2 ft above ground surface (Figure 16). That additional height might provide up to 6 ft of headroom in the basement, which could well have been the actual clearance to the first floor joists. Still, it is distinctly possible that the demolition contractor graded off some portion of the lot surface. At least that would be consistent with the specified tasks of removing the Rebecca Cook House foundations and filling the basement cavity.

It is clear that any grading could not have been substantial, but even a relatively minor leveling of the lot could have removed or disturbed any surviving sign of the original Arnold House site. Given the fact that groundwork surrounding a crawlspace is often quite shallow, the foundations may have been laid up from a depth of 10 cm (4 in) or less. That being the case, it is conceivable that any surviving evidence of the initial occupation could have been lost in the general clean-up activities following demolition of the Cook House in the late 1970s.

There is a saying in archeology that “absence of evidence is not evidence of absence,” and these investigations seem to provide a case in point. Despite the failure of archeological data recovery techniques, cartographic sources give ample evidence of the former house location. Although there are certain apparent inconsistencies from map to map, those are not necessarily the results of error. Since each map image is separated in time from the others, differences among them could reflect real changes made to the residence over its long history. Indeed, the basic accuracy of historic map sources has been demonstrated repeatedly by investigations at other house lots in the Lincoln Home neighborhood.

It would seem, then, that sufficient map data exist to relocate the Arnold House onto its original site, at least within a reasonable measure of certainty and tolerance, and that is what planners ultimately had to rely upon in their efforts. The fact that its position on any map can be compared with the well-documented Lincoln Home across Jackson Street limits the degree of doubt. Further, it is unlikely that the

potential error would exceed 5 ft in any direction, a distance that is hardly consequential from the standpoint of visitor experience.

Equally important, at least from a statutory compliance point of view, is the fact that extensive excavation of the west yard failed to record any cultural resources of significance. In other words, there appeared to be no need for concern about impacting intact remains anywhere in that expansive yard. Nor were there any buried utilities or other modern hazards known from any of our investigations. Therefore, it would seem that, regardless where the building might be sited in the yard, placement of the relocated building should have had no adverse effect on cultural resources in the ground.

This does not imply, however, that the undertaking would be totally without effect. To the contrary, excavations in the east yard confirmed the presence of several intact features that have since been found to have significance. Those resources, furthermore, were indeed threatened by the removal of non-historic elements and by the house relocation. The potential impacts of that undertaking, and others contemplated for the east yard, were quite clear in 1991 as is evident in the next section of this report. For those reasons, the Frost (1997) follow-up excavations of 1996 were designed to mitigate the effects of this historic structure restoration.

East Yard

Investigation of the Arnold House east yard (Figure 19) focused on whether any cultural resources were present that might be deemed significant and that might be affected by restoration of the house. At that time, the archeologists were given to understand that there were no plans to reconstruct the Arnold House outbuildings. In fact, park management expressed little or no interest in the east yard excavations during our 1991 fieldwork. Nevertheless, a need to assess the potential collateral impacts of the house relocation was apparent, and the east yard investigation eventually became part of the archeological work plan approved prior to project initiation.

Of course, there was good reason to suspect that the remains of certain cultural features might survive in the east yard. The same historic maps consulted for guidance in addressing the west yard showed different outbuildings toward the rear of the lot at different times. It also could be assumed with confidence that other features not documented on those maps would have been present at various times (e.g., privies, wells, cisterns, refuse pits, etc.). Furthermore, it seemed probable that the amount of post-occupation disturbance here would prove to be far less than in the west yard, despite obvious changes in the form and location of the primary outbuilding depicted in the historic map sequence. If nothing else, the former east yard outbuildings at least had been spared the construction and demolition of a house with basement atop them.

Although our purpose here differed from that which guided actions in the west yard, we again consulted historic maps to optimize our exploratory efforts. The crew began by excavating a 1-m by 2-m test unit in the northeast corner of the lot to see if anything of the presumed sequence of barns survived (Figure 19). This was at a point that would certainly lie within any of the outbuildings shown cartographically on Lot 1 of Block 11 over the 100 years following the mid-19th century. No direct evidence of any structure came to light, but it was apparent from inspection of the unit profiles that a layer of fill approximately 0.5 m (1.5 ft) covered that part of the east yard.

Excavation of a second 1-m by 2-m unit immediately west of the first proved more productive (Figure 19). A short distance below the fill layer, at a depth of approximately 60 cm, there appeared what seemed to be a heavy sill beam sufficient to support structural framing (Figures 20–21). Not a single timber, the exposed feature was composed of two aligned timber segments separated by a disrupted stack of bricks (perhaps formerly a support pier). The position of this presumed sill relative to the rest of the yard, however, raised questions about its possible association with the documented Arnold Barn.

The sill ran on an east–west line almost exactly 7 m (23 ft) south of the fence then marking the north edge of the Arnold House lot. Historic maps, however, consistently show the north–south dimension of the former outbuilding as about 20 ft or less. This apparent discrepancy prompted an informal field check

of the fence location relative to other fixed points, which led to the previously stated observation that the modern fence was not on the historic lot line. As expected, separation between the fences on either side of Jackson Street proved to be 3 ft less than the distance shown on various plats and boundary surveys. Since the present Lincoln Home plank fence served as the primary referent, and its location was accepted as being true, we assumed that the Arnold House fence was 3 ft north of the actual lot line at that time.

Subtracting the 3-ft difference places the presumed sill beam at 20 ft from the true lot line. Therefore, its position seemed entirely consistent with the south wall of an outbuilding shown in the northeast corner of Lot 1 on the 1854, 1858, 1884, and 1890 historic maps. No structure appears at this location on the 1896 or 1917 maps, though one is shown at the southeast corner in those years. It should also be noted that the 1854 (Figure 9) and 1858 plat maps clearly show a rectangular outbuilding that measures approximately 20 ft by 30 ft. Although precise scaling is impossible, the 1873 (Figure 10) panoramic view of Springfield shows a rectangular outbuilding of the same relative proportions, that is, approximately twice as long as it is wide. The 1884 and 1890 Sanborn maps (Figures 11–12), however, depict a square outbuilding some 20 ft on a side. In one form or the other, whether the same structure modified or different outbuildings, the north and south walls appeared to be in the same approximate positions. Frost's (1997) later fieldwork strongly suggests that the two manifestations were distinct structures, rather than an original and modified version of the same outbuilding.

Accepting the premise that the north and east walls of the outbuilding correspond respectively to the north and east lot lines, as shown on all relevant maps, our excavations confirmed both the south wall location and the north–south dimension (barring an unlikely coincidence, of course). That being the case, it would seem highly probable that the west wall and east–west dimensions are also shown accurately on the historic maps. It was not possible, however, to determine from the evidence at hand whether the sill was associated with the earlier or later outbuilding form. Indeed, the same element could have been used as support for both the rectangular and square barn. Subsequent study, however, suggests that was not the case (Frost 1997).

Other excavations in the Arnold House east yard during 1991 shed no more light on the presumed barn. Though not designed specifically to intersect additional barn remains, an isolated test unit west of the initial “trench” should have touched upon the west edge of the later structure, but did not (Figure 19). Rather, it partly exposed the upper portion of a feature we eventually designated Privy 1 (Figure 22), which certainly could have been used while the earlier rectangular barn stood (unless it were inside the barn). On the other hand, it possibly could have seen use when the square barn was present in the northeast corner, for it might be far enough west to be just outside that smaller structure. It could also date, however, from the mid-1890s, by which time a Sanborn map (Figure 14) shows the square barn had been removed from the northeast corner and a structure of similar dimensions built in the southeast corner of the lot. No materials were recovered from the privy fill in 1991 that would help ascribe a probable date range for its use.

Excavators eventually did place two other test units in the east yard purposefully at locations where elements of the presumed barn might be exposed. The first of these was a 1-m by 2-m unit directly east of the exploratory excavation that revealed the apparent sill beam (Figure 19). Set against the plank fence skirting the alley between Eighth and Ninth streets, map comparisons and ground measurements indicated that this spot should have been on or directly inside the former outbuilding's southeast corner. No suggestion of that structure was present, however, and certainly nothing comparable to the timber and brick alignment found only 1 m west.

Although no evidence of the barn came to light, this test unit did reveal an unexpected cultural feature at its south end, the second privy hole encountered in the east yard (Figure 22). The location of Privy 2, however, does not conflict with either northeast barn configuration. Therefore, the privy and barn could have coexisted at some point in time. Given its position at the extreme east edge of the property, however, it could well be that the privy first saw use after relocation of the Arnold House to its present site. It should be noted that the privy was only exposed in plan and not excavated in whole. Accordingly, there is not a collection of artifacts that might provide a range of dates for use of the feature.

One last excavation in the Arnold House east yard took place in 1992 at the specific request of park personnel. While in the park on assignment at another structure proposed for restoration, management asked the 1992 crew to examine the extreme northeast corner of the lot for evidence of the barn's north wall. To honor that irregular request, the crew modified its approved 1992 work plan and excavated another 1-m by 2-m test unit in the east yard (Figure 19). Once again, however, this additional effort failed to produce any tangible or visible evidence of the former outbuilding, despite the fact the excavation unit straddled the platted lot line and, presumably, the north wall of the barn.

The one thing worthy of remark that this unit did yield was a small fragment of a bifacially flaked stone tool, the first prehistoric artifact found in the park. The artifact is too fragmentary, however, to assign even an approximate date with any measure of probability. Further, the single isolated find is not unambiguous support for a claim that ancient peoples lived in this part of Springfield, for its depositional context was not clear enough to exclude altogether the possibility that it was transported to the house lot along with fill that covers the east yard.

Finally, it bears noting that during the course of these investigations it was not possible to examine one area that might yet contain evidence of the original barn's western limits. If measurements scaled from the 1854 and 1858 plats correctly indicate that the rectangular structure was 30–40 ft in its east–west dimension, then the west wall should have been where the Arnold House south porches and boardwalk stood in 1991 and 1992. Relocation of the house and construction of those later features, of course, may have disturbed or obliterated any deposits representing the 1850s barn. Since the impediments denied all reasonable access in those years, however, the matter remained unresolved until Frost (1997) was able to examine parts of the area when the house was being restored in 1996. While he did not find substantial remains of the barn within the compass of the Arnold House additions, he did note what appeared to be a posthole that he interpreted as the southwest corner of the rectangular barn. He concluded that, if this were correct, it would put the east–west dimension of the outbuilding at approximately 10.5 m (34.5 ft).

Summary and Conclusions

The Arnold House archeological investigations of 1991 in some respects could be viewed as an exercise in futility. Despite considerable effort expended in examining the west yard, no direct evidence of the former Arnold House location could be found. A few artifacts dating to the Civil War era did occur in one area of that yard, but they provided no information on the structure's historic position.

On the other hand, our intensive examination of the west yard sufficiently demonstrated that the then-proposed development actions offered little or no prospect of affecting significant cultural resources. To the contrary, it appeared that much of the west yard is composed of fill within the former Rebecca Cook House basement cavity, and areas outside that perimeter are highly disturbed by the sequence of construction and demolition. Accordingly, it seemed the house and support facilities could be placed almost anywhere in the west yard without fear of doing inadvertent harm to intact archeological remains.

We were left, then, with the question of where to put the house. Archeological techniques, for reasons now plain, failed to provide any guidance to planners; for all practical purposes there was nothing left to mark the original house site. Nevertheless, other lines of evidence did exist that adequately served the need. Indeed, given the fact that historic maps covering the neighborhood have been shown time and again to be reasonably accurate, there was no reason to cast inordinate doubt on depictions of this one house lot. Building footprints may differ from map to map, of course, but those are doubtless the products of actual changes made to the structure over time. For any particular period, therefore, the Arnold House depictions are as faithful to reality as we could reasonably hope to achieve. Archeological confirmation of certain aspects might have been nice to have, but not essential.

The east yard investigations were narrower in scope, but somewhat broader in purpose and utility. Indeed, some important conclusions relevant to the Arnold House restoration effort were drawn from the data collected there. Although much about the east yard was left unknown archeologically, the testing reported here provided sufficient information to guide subsequent archeological investigations, the planning of this development, and future management decisions.

First, the discovery of a timber and brick alignment suggested a sill beam consistent with our understanding of the mapped position of the Arnold Barn south wall throughout the period 1854–1890, whether one considered depictions of the rectangular (1854–1873) or square (1884–1890) configuration. Exposure of this structural element helped focus the attention of supplementary field investigations in 1996, which concluded that the two barns did not in fact share a south wall position in common and that the sill and pier were associated with the later square configuration (Frost 1997). With the matter of configuration of the Arnold Barn satisfactorily resolved, it only remained to decide which barn to reconstruct. Since it would appear that the rectangular form was present during 1860, which is the designated period for restoration of the core historic area, that was the logical determination.

The two other cultural features discovered in the Arnold House east yard are privies (Figure 22), which have less direct relevance to the planned site restoration. Privy 1 is located at a spot within the rectangular barn footprint shown on the 1854 and 1858 city plats, as well as later bird's-eye views, and perhaps just outside the barn depicted on the 1884 and 1890 Sanborn maps. It is probable, therefore, that Privy 1 did not see its first use until sometime toward the end of the 19th century. The other privy exposed in 1991, Privy 2, conceivably could be associated with either Arnold Barn manifestations in the northeast corner of the house lot, since there is no conflict of positions. Indeed, for that same reason, Privy 2 might even have been used after construction of an outbuilding that first appears in 1896 at the southeast corner of Lot 1.

In short, it is not possible to determine from the available evidence what precise time period either privy vault represents; we can only draw general inferences from their locations relative to mapped features on dated maps and exclude certain alternatives. It is certain, for example, that Privy 2 is not the outbuilding partly obscured in an 1865 photograph, for it lies too far back on the lot. Nor does it seem probable that Privy 1 has the distinction of being the photographed structure, since it appears to lie within

space formerly occupied by the mapped barn during that time. Even additional excavation into the privy vaults in the hope of recovering temporally diagnostic artifacts from their fill deposits is not likely to provide dates sufficiently precise to define narrow time ranges for either their use or abandonment. Absent any other corroborating information, the best resolution might only be to the quarter century.

As for physical reconstruction of the barn, now complete, it is our opinion that available maps, photographs, archeological data, and other documentary sources provided an adequate basis to place a reasonable facsimile of the barn on the ground. Probably no single source, and certainly not the archeological record, could have laid sufficient foundation for such a task, but the combined information from all sources support a reconstruction consistent with the historical reality.

The ultimate decision to reconstruct the Arnold Barn on its original position, however, had other implications; namely, that any archeological resources remaining in the ground at the time of reconstruction would likely be destroyed or at the very least rendered inaccessible. Accordingly, Frost's fieldwork in 1996 was as much an effort to mitigate the potential adverse effects of this undertaking as it was to acquire information useful to accomplish the reconstruction.

In conclusion, it cannot be emphasized too strongly that areas of archeological concern still lie in the Arnold House east lawn. The excavations reported here, and in Frost's (1997) report, show remains that are potentially significant in and immediately around the reconstructed barn. Further, maps and other documents indicate the presence of other former outbuildings elsewhere in that yard, and there is little doubt that many unrecorded site features, such as expedient trash pits, are also present. Therefore, it is imperative that managers and planners be ever mindful of the continuing need to attend to cultural resource matters when future undertakings are contemplated at the Arnold House.

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Appendix

Artifact Frequency Tables

Table 1. Artifact groupings by level, N 0-1/W 3-5.

Description	Level			Total
	1	2	3	
Cinder	1	—	—	1
Concrete	1	—	—	1
Brick fragments	2	3	—	5
Curved glass	5	2	—	7
Flat glass	1	3	—	4
Plate glass	1	1	—	2
Bone	—	1	—	1
Earthenware	—	1	—	1
Slate	—	1	—	1
Wood	—	—	2	2
Total	11	12	2	25

Table 2. Artifact groupings by level, N 0-1/W 5-7.

Description	Level		Total
	1	2	
Flat glass	2	1	3
Wire nail	1	—	1
Cut nails	2	—	2
Brick fragments	—	8	8
Shingle fragments	—	2	2
Mortar	—	3	3
Total	5	14	19

Table 3. Artifact groupings by level, N 0-1/W 7-9.

Description	Level								Total
	1	2	3	4a	4b	5a	5b	6b	
Plaster	1	—	—	1	—	1	3	4	10
Brick fragments	1	1	1	3	3	3	—	2	14
Wood	1	1	—	3	3	11	6	15	40
Shell fragments	—	1	—	—	—	—	—	1	2
Shingle fragments	—	1	—	—	1	2	1	3	8
Concrete	—	1	—	1	—	—	—	—	2
Mortar	—	2	—	2	3	2	1	—	10
Porcelain tile fragments	—	4	—	—	—	—	2	—	6
Limestone	—	—	—	1	—	—	—	—	1
Cinder	—	—	—	1	1	—	—	—	2
Bone	—	—	—	1	—	3	—	—	4
Coal	—	—	—	—	—	1	—	—	1
Rock	—	—	—	—	—	1	—	—	1
Porcelain door knob	—	—	—	—	—	1	—	—	1
Earthenware	1	—	—	—	—	—	1	2	4
Redware	—	—	—	—	—	—	1	—	1
Curved glass	—	—	—	3	—	15	—	1	19
Flat glass	8	—	1	5	1	4	2	8	29
Metal	—	1	—	—	—	2	2	10	15
Cut nails	—	—	—	—	—	3	—	1	4
Wire nails	—	—	—	—	—	1	—	4	5
Roofing nails	—	—	—	1	—	—	1	1	3
.22-caliber shell casing	—	—	—	—	—	—	1	—	1
Total	12	12	2	22	12	50	21	52	183

Level Key: 4a = black soil; 4b = general fill; 5a = general fill; 5b = east one-half; 6b = east one-half.

Table 4. Artifact groupings by level, N 0–1/W 9–10.

Description	Level					Total
	1	2	3	4	5	
Brick fragments	3	3	—	8	15	29
Slag	1	1	—	—	2	4
Mortar	2	—	—	9	23	34
Charcoal	—	1	—	—	6	7
Plaster	—	—	1	4	12	17
Hard rubber fragment	—	—	—	1	—	1
Shingle fragments	—	—	—	2	3	5
Bone	—	—	—	2	—	2
Wood	—	—	—	3	—	3
Record fragment	—	—	—	—	1	1
Earthenware	1	—	—	3	1	5
Stoneware	—	—	—	—	2	2
Curved glass	2	—	—	11	14	27
Flat glass	5	—	—	—	12	17
Plate glass	1	—	—	—	4	5
Non-ferrous metal	—	—	—	1	1	2
Metal	—	—	—	1	4	5
Cut nails	—	—	—	3	3	6
Wire nails	—	—	—	1	6	7
Roofing nails	—	1	—	—	1	2
Total	15	6	1	49	110	181

Table 5. Artifact groupings by level, N 0–2/W 2–3.

Description	Level		Total
	1	2	
Porcelain tile fragment	1	—	1
Brick fragments	1	2	3
Concrete	1	—	1
Wood	—	4	4
Plaster	—	4	4
Shingle fragments	—	3	3
Earthenware	1	—	1
Stoneware	1	—	1
Flat glass	22	4	26
Non-ferrous metal	—	1	1
Metal	—	1	1
Cut nails	1	1	2
Total	28	20	48

Table 6. Artifact groupings by level, N 1–3/W 1–2.

Description	Level			Total
	1	2	3	
Mortar	3	—	1	4
Brick fragments	2	3	1	6
Plaster	1	1	2	4
Bone	—	2	2	4
Charcoal	—	1	—	1
Ceramic drain tile	—	—	1	1
Porcelain tile	—	—	2	2
Earthenware	2	1	4	7
Redware	—	2	—	2

Table 6. Concluded.

Description	Level			Total
	1	2	3	
Curved glass	2	1	—	3
Flat glass	7	3	2	12
Metal	2	—	—	2
Cut nails	—	2	2	4
Total	19	16	17	52

Table 7. Artifact groupings by level, N 4–5/W 2–4.

Description	Level						Total
	1	2	3	4	5	6	
Cinder	1	—	—	4	—	—	2
Charcoal	3	—	—	—	—	—	3
Wood	3	—	—	—	8	7	18
Mortar	5	1	1	1	—	—	8
Brick fragments	4	—	—	2	1	3	10
Plaster	—	—	5	4	2	6	17
Porcelain tile fragments	—	—	—	2	2	2	6
Shingle fragments	—	—	—	4	—	9	13
.22-caliber shell casing	—	—	—	—	1	—	1
Hard rubber fragments	—	—	—	—	5	—	5
Bone	—	—	—	—	3	11	14
Jewelry, Bead	—	—	—	—	1	1	2
Button	—	—	—	—	1	—	1
Earthenware	2	—	—	1	3	7	13
Redware	—	—	—	—	—	2	2
Curved glass	1	—	3	—	6	6	16
Flat glass	7	7	46	—	83	17	160
Plate glass	2	—	—	—	—	3	5
Non-ferrous metal	—	—	—	—	2	—	2
Metal	1	—	—	4	2	—	7
Cut nails	3	—	1	—	8	9	21
Wire nails	—	2	—	4	3	5	14
Roofing nails	—	1	—	—	1	1	3
Total	32	11	56	23	132	89	343

Table 8. Artifact groupings by level, N 4–6/W 0–1.

Description	Level								Total
	1	2	3a	3b	4a	4b	4c	4d	
Shingle fragments	3	2	—	—	—	—	—	—	5
Slag	3	—	2	—	—	—	—	1	6
Wood	4	16	1	2	—	—	—	—	23
Brick fragments	3	3	3	1	1	—	—	2	13
Mortar	1	—	5	—	—	—	—	1	7
Plaster	1	—	4	—	—	—	—	—	5
Porcelain tile fragments	2	—	1	—	—	—	—	—	3
Ceramic drain tile	—	—	1	—	—	—	1	—	2
Button	1	—	—	—	—	—	—	—	1
Concrete	—	1	—	—	—	—	—	—	1
Bone	—	—	6	2	—	—	1	1	10
Slate	—	—	—	—	—	—	—	1	1
Earthenware	3	2	7	—	1	—	1	1	15
Redware	—	1	—	—	—	—	—	—	1

Table 8. Concluded.

Description	Level								Total
	1	2	3a	3b	4a	4b	4c	4d	
Curved glass	7	2	10	—	1	—	—	—	20
Flat glass	11	67	49	—	7	—	—	6	140
Plate glass	2	—	1	—	—	—	—	—	3
Non-ferrous metal	—	—	2	—	—	—	—	—	2
Metal	—	5	8	1	—	—	1	—	15
Cut nails	1	4	22	2	5	1	3	1	39
Wire nails	3	11	14	5	—	—	1	2	36
Total	45	114	136	13	15	1	8	16	348

Level Key: 3a = general fill; 3b = Pit A, yellow stain area; 4a = general fill; 4b = Pit A; 4b = Pit B; 4c = Pit B; 4d = Pit C.

Table 9. Artifact groupings by level, N 4–6/W 1–2.

Description	Level						Total
	1	2	3a	3b	4a	4b	
Record fragment	1	—	—	—	—	—	1
Plaster	3	—	—	1	5	—	9
Mortar	1	—	1	1	—	—	3
Shingle fragments	6	3	—	—	—	—	9
Brick fragments	1	—	2	2	1	—	6
Ceramic drain tile	1	1	—	—	—	—	2
Hard rubber cap	—	1	—	—	—	—	1
Wood	—	—	22	4	—	4	30
Bone	—	—	—	—	—	9	9
Earthenware	3	1	—	—	1	—	5
Redware	—	1	—	—	1	—	2
Curved glass	3	3	1	—	3	2	12
Flat glass	16	11	3	—	25	1	56
Metal	1	—	6	—	3	4	14
Cut nails	1	—	—	—	—	3	4
Wire nails	3	5	—	1	3	1	13
Total	40	26	35	9	42	24	176

Level Key: 3a = general fill; 3b = yellow stain area; 4a = general fill; 4b = yellow stain area.

Table 10. Artifact groupings by level, N 6–7/W 0–2.

Description	Level				Total
	1	2	3	4	
Wood	5	15	25	—	45
Plaster	4	—	2	—	6
Button	—	1	—	1	2
Shingle fragments	3	14	—	—	17
Brick fragments	6	2	5	5	18
Mortar	—	3	3	3	9
Clay pipe fragment	—	1	—	—	1
Bone	—	6	12	15	33
Ceramic insulator fragments	—	3	1	—	4
Cinders	—	—	4	—	4
Ceramic drain tile	—	—	—	1	1
Earthenware	6	8	11	1	26
Stoneware	—	1	1	—	2
Redware	1	3	2	—	6
Porcelain	—	1	1	—	2

Table 10. Concluded.

Description	Level				Total
	1	2	3	4	
Curved glass	8	2	7	—	17
Flat glass	12	14	24	3	53
Non-ferrous metal	—	—	—	1	1
Metal	4	1	2	1	8
Cut nails	5	24	17	7	53
Wire nails	5	61	59	2	127
Unidentified nails	—	4	—	—	4
Total	59	164	176	40	439

Table 11. Artifact groupings by level, N 6–7/W 2–4.

Description	Level						Total
	1	2	3a	3b	4a	4b	
Brick fragments	12	3	3	3	8	8	37
Porcelain tile fragment	1	—	—	—	—	—	1
Mortar	4	4	—	7	4	2	21
Plaster	1	2	1	1	—	—	5
Shingle fragments	1	2	—	—	—	—	3
Bone	1	1	—	2	3	6	13
Slag	1	—	—	—	—	—	1
Coal	—	—	—	—	1	—	1
Concrete	1	—	—	—	—	—	1
Cinder	—	—	—	—	1	—	1
Wood	—	30	—	11	14	—	55
Ceramic drain tile	—	—	1	—	—	—	1
Button	—	1	—	—	—	—	1
Ceramic insulator	—	1	—	—	—	—	1
Rubber	—	1	—	—	—	—	1
Pendent	—	—	—	—	1	—	1
Earthenware	2	2	1	5	—	2	12
Stoneware	—	—	—	—	—	1	1
Curved glass	—	1	—	—	2	—	3
Flat glass	4	5	2	30	8	4	53
Metal	1	1	—	5	9	3	19
Cut nails	—	4	—	6	2	6	18
Wire nails	1	2	1	8	2	3	17
Total	30	60	9	78	55	35	267

Level Key: 3a = general fill; 3b = trench area; 4a = general fill; 4b = trench area.

Table 12. Artifact groupings by level, N 6–7/W 4–6.

Description	Level				Total
	1	2	3	4	
Slag	5	—	—	—	5
Wood	3	—	1	—	4
Shingle fragments	1	—	4	—	5
Mortar	1	—	3	12	16
Charcoal	4	—	—	—	4
Brick fragments	16	—	5	1	22
Ceramic drain tile	1	—	—	3	4
Record fragments	—	1	2	—	3

Table 12. Concluded.

Description	Level				Total
	1	2	3	4	
Cast iron car steering wheel fragments	—	—	3	—	3
Plaster	—	—	—	5	5
Porcelain tile fragments	—	—	—	1	1
Earthenware	2	—	—	1	3
Curved glass	—	—	2	2	4
Flat glass	8	—	7	3	18
Car window glass	—	7	—	1	8
Metal	2	—	1	—	3
Cut nails	—	—	2	—	2
Wire nails	—	—	1	—	1
Total	43	2	31	29	105

Table 13. Artifact groupings by level, N 6–7/W 6–8.

Description	Level			Total
	1	2	3	
Brick fragments	3	1	14	18
Shingle fragments	—	1	—	1
Mortar	—	1	1	2
Plaster	—	1	—	1
Wood	—	—	5	5
Bone	—	—	1	1
Ceramic drain tile	—	—	1	1
Earthenware	—	—	6	6
Curved glass	—	1	1	2
Flat glass	5	17	36	58
Plate glass	1	—	2	3
Wire nail	—	—	1	1
Furniture caster	—	—	1	1
Total	9	22	69	100

Table 14. Artifact groupings by level, N 6–7/W 12–14.

Description	Level			Total
	1	2	3	
Ceramic drain tile	1	—	—	1
Shingle fragment	1	—	—	1
Brick fragments	5	1	2	8
Mortar	3	3	3	9
Cinder	1	—	2	3
Porcelain tile fragments	1	—	1	2
Limestone	3	—	—	3
Curved glass	27	4	5	36
Flat glass	15	1	—	16
Metal	1	—	—	1
Cut nail	1	—	—	1
Roofing nail	1	—	—	1
Total	60	9	13	82

Table 15. Artifact groupings by level, N 6–7/W 14–16.

Description	Level				Total
	1	2	3	4	
.22-caliber shell casings	2	—	—	—	2
Mortar	8	3	6	7	24
Plaster	1	—	3	—	4
Brick fragments	11	5	8	7	31
Bone	1	—	—	—	1
Ceramic drain tile	1	—	—	—	1
Shingle fragment	1	—	—	—	1
Wood	5	—	1	7	13
Concrete	—	—	3	—	3
Cinder	—	—	—	2	2
Porcelain tile fragment	—	—	—	1	1
Earthenware	3	—	1	1	5
Redware	—	2	—	—	2
Curved glass	4	10	47	19	80
Flat glass	9	48	54	9	120
Plate glass	—	1	6	—	7
Metal	1	—	—	1	2
Cut nails	1	1	8	1	11
Wire nails	1	5	21	2	29
Roofing nail	—	—	1	—	1
Total	49	75	159	57	340

Table 16. Artifact groupings by level, N 6–7/W 16–18.

Description	Level		Total
	1	2	
Rubber	1	—	1
Brick fragments	9	17	26
Cinders	1	4	5
Mortar	—	12	12
Plaster	—	1	1
Wood	—	6	6
Earthenware	2	3	5
Stoneware	—	1	1
Curved glass	2	2	4
Flat glass	16	5	21
Cut nails	2	—	2
Wire nail	—	1	1
Total	33	52	85

Table 17. Artifact groupings by level, N 6–7/W 18–19.

Description	Level					Total
	1	2	3	4	5	
Mortar	1	—	—	—	—	1
Clay pipe fragment	1	—	—	—	—	1
Brick fragment	—	—	1	—	—	1
Bone	—	—	1	—	—	1
Earthenware	1	—	1	—	—	2
Redware	—	3	—	—	—	3
Flat glass	—	4	4	4	—	12
Cut nails	1	1	—	—	2	4
Total	4	8	7	4	2	25

Table 18. Artifact groupings by level, N 7-9/W 0-1.

Description	Level					Total
	1	2	3	4a	4b	
Brick fragments	3	7	5	2	4	19
Plaster	4	—	—	—	—	4
Wood	1	11	—	—	—	12
Shingle fragment	1	—	—	—	—	1
Ceramic drain tile	1	7	—	1	7	18
.22-caliber shell casing	—	1	—	—	—	1
Concrete	—	2	—	—	—	2
Bone	—	7	3	—	2	12
Limestone	—	1	—	—	—	1
Cinder	—	3	—	1	2	6
Carbon rod	—	1	—	—	—	1
Slate	—	2	—	—	—	2
Mortar	—	10	6	3	2	21
Earthenware	34	17	7	1	—	59
Stoneware	2	—	—	—	—	2
Porcelain	1	—	—	—	—	1
Curved glass	6	4	—	1	—	11
Flat glass	29	33	28	2	2	94
Non-ferrous metal	1	—	—	—	—	1
Metal	1	—	—	—	2	3
Cut nails	7	17	1	5	1	31
Wire nails	1	12	—	1	1	15
Unidentified nails	—	2	—	—	—	2
Total	92	137	50	17	23	319

Level Key: 4a = general fill; 4b = trench line.

Table 19. Artifact groupings by level, N 7-9/W 1-2.

Description	Level						Total
	1	2a	2b	3	4a	4b	
Bone	2	22	—	10	—	4	38
Wood	1	5	—	—	—	—	6
Shingle fragment	1	—	—	—	—	—	1
Brick fragment	1	3	—	4	5	2	15
Mortar	4	2	6	—	5	7	24
Shell fragment	1	—	—	—	—	—	1
Buttons	—	3	—	—	1	—	4
Marble	—	1	—	—	—	—	1
Bone toothbrush or comb fragments	—	1	—	—	3	—	4
Milk glass jar insert	—	1	—	—	—	—	1
.22-caliber shell casings	1	—	—	1	—	—	2
Slate pencil fragment	—	—	—	1	—	—	1
Pencil lead	—	—	—	1	—	—	1
Charcoal	—	—	—	3	—	6	9
Slag	—	—	—	—	1	3	4
Earthenware	7	23	—	13	1	—	44
Redware	1	3	—	2	—	—	6
Porcelain	1	—	—	1	—	—	2
Curved glass	7	8	—	8	—	—	23
Flat glass	48	102	1	20	—	—	171
Non-ferrous metal	1	—	—	—	—	—	1
Metal	2	5	—	3	—	—	10
Cut nails	8	18	—	15	2	4	47
Wire nails	9	5	—	3	—	1	18
Roofing nail	1	—	—	—	—	—	1
Total	96	202	7	85	18	27	435

Level Key: 2a = general fill; 2b = worker's trench; 4a = general fill; 4b = worker's trench.

Table 20. Artifact groupings by level, N 9-10/W 4-6.

Description	Level																							Total						
	1	2	3	4a	4b	5a	5b	5c	6a	6b	6c	6d	7a	7b	7c	7d	7e	8a	8b	8c	8d	9a	9b		9c	10a	10c	10b	10d	11
Wood	3	1	6	1	—	—	—	1	—	—	—	—	—	—	—	—	—	20	—	—	—	—	—	—	—	—	—	4	—	36
Ceramic drain tile	11	8	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21
Mortar	4	4	10	6	3	8	4	1	9	6	2	5	7	4	—	12	—	3	7	—	4	4	2	10	5	5	2	7	1	135
Plaster	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	4	8
Brick frags ^a	1	6	2 ^b	6	—	9	2	—	4	2	1	—	5	—	3	5	—	3	7	3	2	—	—	4	2	—	1	3	2	69
Cinder, slag	6	4	—	5	—	4	—	—	2	4	—	3	—	—	—	8	—	3	3	—	2	—	—	6	—	—	—	1	5	58
Rock, stone	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Concrete	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	5
Limestone	—	2	—	1	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	2	—	—	—	—	—	7
.22-caliber shell casing	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
12-ga. shotgun shell head	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Glass slag	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Bone	—	—	7	—	1	5	—	—	3	—	—	—	1	—	—	1	—	—	1	—	2	—	—	—	—	—	—	—	—	21
Shingle fragments	—	—	13	4	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	21
Slate	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Plastic cigarette filter	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Porcelain tile frags ^a	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	2
Buttons	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	3
Eyeglass lens	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Earthenware	2	1	8	—	—	4	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	22
Redware	1	—	2	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
Curved glass	4	7	7	—	—	3	3	—	2	4	—	3	4	—	—	5	13	—	3	—	5	—	—	3	—	1	—	2	3	72
Flat glass	15	15	36	2	1	1	—	—	8	1	—	11	—	—	—	—	—	7	—	—	—	—	—	1	1	—	5	3	3	110
Plate glass	10	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	12
Non-ferrous metal	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Metal	—	5	7	3	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	1	—	18
Cut nails	7	6	31	1	—	6	1	—	2	1	—	5	4	—	2	3	—	—	4	1	—	—	—	—	—	—	—	4	—	78
Wire nails	2	—	1	1	—	—	—	—	—	2	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	9
Roofing nail	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Total	69	63	136	32	6	46	10	2	32	23	5	27	22	4	7	37	13	9	55	9	17	4	2	26	9	6	9	27	21	726

^a frags = fragments; ^b two whole bricks make up the Level 3 total.

Level Key: 4a = yellow clay; 4b = building trench; 5a = general fill; 5b = black fill area; 5c = brown clay area; 6a = yellow clay; 6b = trench area; 6c = dark brown silty clay SW; 6d = general fill; 7a = yellow clay; 7b = "cellar fill"; 7c = brown clay; 7e = north profile; 8a = yellow clay area; 8b = fill around brick and window; 8c = brown clay inside L-shaped brick area; 8d = yellow humus layer; 9a = hard yellow clay; 9b = brown soil; 9c = yellow humus; 10a = yellow clay material; 10b = mixed yellow humus; 10c = black fill around drain pipe; 10d = fill around iron pipe.

Table 21. Artifact groupings by level, N 9–11/W 0–1.

Description	Level							Total
	1	2	3	4a	4b	4c	4d	
Mortar	2	5	3	3	7	6	3	29
Bone	22	5	1	1	—	1	—	30
Brick fragments	6	7	5	3	8	3	2	34
Ceramic drain tile	1	2	—	—	1	—	3	7
Cinders	—	4	—	3	—	—	3	10
Concrete	—	—	—	—	—	—	5	5
Plaster	—	—	1	—	—	—	—	1
Porcelain doll fragment	—	1	—	—	—	—	—	1
Earthenware	6	3	9	—	—	1	2	21
Redware	1	—	1	—	—	1	—	3
Porcelain	1	—	—	—	—	—	—	1
Stoneware	—	—	—	—	—	—	1	1
Curved glass	15	2	4	1	—	1	3	26
Flat glass	8	5	19	4	3	6	2	47
Plate glass	—	5	5	—	—	—	—	10
Metal	1	8	1	—	—	—	—	10
Cut nails	5	3	2	1	—	—	4	15
Wire nails	3	13	1	—	—	—	—	17
Total	71	63	52	16	19	19	28	268

Level Key: 4a = south utility trench; 4b = medium brown silty clay; 4c = yellow clay; 4d = north end of unit.

Table 22. Artifact groupings by level, N 9–11/W 12–13.

Description	Level						Total
	1	2	3	4	5	6	
Coin	1	—	—	—	—	—	1
Mortar	3	15	1	8	4	3	34
Brick fragments	2	14	5	9	5	1	36
Shingle fragments	—	2	—	—	—	—	2
Cinder	—	—	—	7	1	10	18
Concrete	—	—	—	9	—	—	9
Earthenware	1	—	1	—	—	—	2
Porcelain	1	—	—	—	—	—	1
Curved glass	2	—	1	3	—	—	6
Flat glass	6	5	8	11	5	3	38
Metal	1	1	—	—	—	1	3
Cut nails	1	1	2	—	—	—	4
Wire nails	—	9	2	3	—	—	14
Total	18	47	20	50	15	18	168

Table 23. Artifact groupings by level, N 7–9/W 12–13.

Description	Level				Total
	1	2	3	4	
.22-caliber shell casing	1	—	—	—	1
.32-caliber shell casings	2	—	—	—	2
Wood	1	3	—	—	4
Brick fragments	7	1	—	—	8
Mortar	9	1	2	—	12
Shingle fragments	3	8	2	1	14
Plaster	—	3	—	—	3
Porcelain tile fragment	—	1	—	—	1
Ceramic drain tile	—	—	1	1	2

Table 23. Concluded.

Description	Level				Total
	1	2	3	4	
Earthenware	1	—	—	—	1
Redware	1	—	1	—	2
Stoneware	—	—	1	—	1
Curved glass	65	35	2	2	104
Flat glass	28	49	16	—	93
Plate glass	4	1	—	—	5
Cut nails	3	1	—	—	4
Wire nails	7	9	1	—	17
Roofing nail	1	4	—	—	5
Total	133	116	26	4	279

Table 24. Artifact groupings by level, S 0–1/W 7–8.

Description	Level						Total
	1	2	3	4	5	6	
Brick fragments	1	—	—	2	2	—	5
Mortar	3	—	1	3	—	—	7
Wood	—	—	—	12	—	—	12
Shingle fragments	—	—	—	1	1	—	2
Ceramic drain tile	—	—	—	1	—	—	1
Plaster	—	—	—	—	2	—	2
Redware	—	—	—	2	1	—	3
Curved glass	—	2	3	1	1	—	7
Flat glass	1	4	—	5	6	—	16
Plate glass	—	—	1	—	—	1	2
Metal	1	—	—	1	3	2	7
Cut nails	—	—	—	2	—	—	2
Wire nails	—	—	—	2	—	—	2
Roofing nail	—	—	—	1	—	—	1
Total	6	6	5	33	16	3	69

Table 25. Artifact groupings by level, west yard, S 0–2/W 2–3.

Description	Level				Total
	1	2	3	4	
Brick fragments	3	—	—	—	3
Mortar	1	1	—	—	2
Bone	2	1	—	—	3
Wood	—	1	—	1	2
Porcelain tile fragments	—	2	—	—	2
Shingle fragments	—	5	—	—	5
Ceramic drain tile	—	1	—	—	1
Earthenware	2	—	—	—	2
Curved glass	3	1	—	—	4
Flat glass	21	7	1	—	29
Plate glass	1	—	—	—	1
Metal	—	1	—	—	1
Cut nails	1	3	—	—	4
Roofing nails	—	1	—	1	2
Total	34	24	1	2	61

Table 26. Artifact groupings by level, east yard, S 4–6/W 0–1.

Description	Level											Total
	1	2	3	4	5	6a	6b	7a	7b	7c	8a	
Mortar	1	—	—	—	—	—	—	—	—	—	—	1
Cinder	—	—	1	—	—	—	—	—	—	—	—	1
Bone	—	—	1	24	37	28	27	—	2	—	—	119
Brick fragments	—	—	2	1	—	—	—	2	1	—	—	6
Slate pencil	—	—	—	1	—	—	—	—	—	—	—	1
Leather	—	—	—	5	1	—	—	—	—	—	—	6
.22-caliber cartridge	—	—	—	—	1	—	—	—	—	—	—	1
.22-caliber shell casing	—	—	—	—	—	1	—	—	—	—	—	1
Clay pipe fragment	—	—	—	—	1	—	—	—	—	—	—	1
Button	—	—	—	—	4	1	—	—	—	—	—	5
Wood ^a	—	—	—	—	—	—	—	—	—	—	2 ^a	2
Earthenware	1	—	—	10	82	4	4	—	2	—	—	103
Redware	—	—	—	5	3	1	1	—	3	—	—	13
Stoneware	—	—	—	9	12	1	—	—	—	—	—	22
Porcelain	—	—	—	7	8	—	—	1	—	—	—	16
Curved glass	1	1	1	67	79	9	5	—	1	1	—	165
Flat glass	5	2	—	31	74	3	5	—	6	—	—	126
Plate glass	4	1	—	—	—	—	—	—	—	—	—	5
Metal	—	—	—	2	6	4	3	—	—	—	—	15
Cut nails	5	—	—	68	133	41	28	2	15	1	—	293
Wire nails	1	—	—	2	5	—	—	—	—	—	—	8
Total	18	4	5	232	446	93	73	5	30	2	2	910

^atwo vials of wood from Level 5 make up a 2.1-g sample.

Level Key: 6a = brown silty clay north of brick and planks; 6b = ashy brown silty clay south of brick and planks; 7a = dark brown clay north of footing; 7b = very dark brown clay south of footing; 7c = ash lens; 8a = wood sample from backyard wall of barn.

Table 27. Artifact groupings by level, east yard, S 4–6/E 1–2.

Description	Level														Total	
	1	2	3	4	5a	5b	6a	6b	6c	7a	7b	8a	8b	9a		9b
Wood	1	—	—	—	—	1	—	—	—	—	—	—	—	1	—	3
Mortar	1	2	—	1	—	1	—	—	—	—	—	—	—	—	—	5
Concrete	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2
Brick fragments	1	2 ^a	—	3	6	3	1	—	3	—	—	—	—	—	—	19
Rubber washer	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Wood toothbrush frag ^b	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Buttons	—	—	1	—	1	1	—	1	—	—	—	—	—	—	—	4
Plaster	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
Cinder	—	—	—	1	2	—	—	—	—	—	1	—	—	—	—	4
Bone	—	—	—	6	8	—	7	—	3	—	7	—	—	—	2	33
Coin	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
Charcoal	—	—	—	—	—	1	—	—	—	1	2	—	—	3	3	10
Earthenware	1	4	4	17	10	—	4	1	—	6	—	6	1	—	1	55
Porcelain	—	1	2	2	—	1	—	—	—	—	—	1	1	1	1	10
Stoneware	1	—	2	6	3	2	2	—	—	—	—	—	—	1	—	17
Redware	—	—	1	5	11	—	3	—	5	1	—	—	—	—	—	26
Curved glass	3	8	24	66	45	2	9	3	6	2	—	1	1	1	5	176
Flat glass	4	—	21	10	7	—	—	9	—	—	—	—	—	—	—	51
Plate glass	6	—	1	—	—	—	—	—	—	—	—	—	—	—	—	7
Glass slag	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
Metal	—	—	1	2	4	—	—	—	—	1	—	1	—	—	—	9
Cut nails	—	1	28	70	34	2	15	3	2	2	—	9	2	2	8	178
Wire nail	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Non-ferrous metal	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Total	20	19	86	191	132	15	41	17	16	16	10	18	5	9	25	620

Table 27. Concluded.

^aincludes burnt brick and slag from Level 5a; ^b frag = fragment.

Level Key: 5a = general fill; 5b = coal area; 6a = general fill; 6b = dark gray brown clay; 6c = yellow clay; 7a = general fill; 7b = coal and silt; 8a = general fill; 8b = coal and ash; 9a = general fill; 9b = feature in SW corner.

Table 28. Artifact groupings by level, east yard, S 1–2/W 2–4.

Description	Level										Total
	1	2	3	4	5	6	7	8	9	10	
Mortar	2	—	1	—	—	—	—	—	—	—	3
Brick fragments	2	2	5	3	2	2	2	2	3	3	26
Bone	—	3	19	16	5	2	1	—	—	—	46
Button	—	—	1	—	1	—	—	—	—	—	2
Brass thimble	—	—	1	—	—	—	—	—	—	—	1
Ceramic insulator	—	—	1	—	—	—	—	—	—	—	1
Slate	—	—	—	1	—	—	—	—	—	—	1
Tooth	—	—	—	1	—	—	—	—	—	—	1
Cinder	—	—	—	1	2	—	—	—	—	—	3
Marble	—	—	—	1	—	—	—	1	—	—	2
Plastic	—	—	—	—	1	—	—	—	—	—	1
Limestone	—	—	—	—	2	—	—	—	—	—	2
Wood	—	—	—	—	1	—	—	—	—	—	1
Charcoal	—	—	—	—	1	—	—	—	1	—	2
Porcelain doll fragment	—	—	—	—	1	—	—	—	—	—	1
Bird cage feed dish	—	—	—	1	—	—	—	—	—	—	1
Earthenware	4	8	17	24	7	1	4	2	4	2	73
Redware	—	—	—	5	3	3	2	1	—	—	14
Stoneware	—	—	—	1	3	—	—	—	—	—	4
Porcelain	2	2	9	3	—	—	—	—	—	—	16
Curved glass	1	7	20	59	111	70	2	—	1	—	271
Flat glass	8	2	27	10	10	8	1	1	—	1	68
Metal	1	—	2	4	4	3	—	—	—	—	14
Cut nails	1	11	53	24	38	20	3	1	2	3	156
Wire nails	—	7	—	86	1	—	—	—	—	—	94
Roofing nails	2	—	—	—	—	—	—	—	—	—	2
Total	23	42	156	240	193	109	15	8	11	9	806

Table 29. Artifact groupings by level, east yard S 2–4/W 0–1.

Description	Level							Total
	1	2	3	4	5	6a	6b	
Concrete	3	—	—	—	—	—	—	3
Plaster	1	—	—	—	—	—	—	1
Coal	1	—	—	—	—	—	—	1
Brick fragments	—	3	1	5	—	1	—	10
Wood	—	1	—	—	2	—	—	3
Mortar	—	—	3	—	—	—	—	3
Bone	—	—	—	15	39	6	—	60
Button	—	—	—	1	2	—	—	3
Hard rubber comb fragment	—	—	—	—	1	—	—	1
Clay marble	—	—	—	—	1	—	—	1
Clay pipe fragment	—	—	—	—	1	—	—	1
Brass milk bottle lid	—	—	—	—	2	—	—	2
Pocket knife	—	—	—	—	1	—	—	1
Slate pencil	—	—	—	—	—	1	—	1
Cinder sample	—	—	—	—	—	1	—	1
Shell fragments	—	—	—	—	—	2	—	2
Glass insulator fragments	—	—	—	—	—	2	—	2

Table 29. Concluded.

Description	Level							Total
	1	2	3	4	5	6a	6b	
Earthenware	—	1	—	1	42	6	2	52
Redware	—	—	—	1	19	1	—	21
Stoneware	—	—	—	—	15	6	—	21
Porcelain	—	—	1	—	2	—	—	3
Bottle	—	—	—	—	1	—	—	1
Curved glass	—	2	6	6	98	21	—	133
Flat glass	3	3	2	—	23	6	—	37
Plate glass	1	2	—	—	—	—	—	3
Glass slag	—	—	—	—	2	—	—	2
Non-ferrous metal	—	—	—	1	3	—	—	4
Metal	—	—	1	2	11	6	—	20
Cut nails	—	—	1	15	83	31	—	130
Wire nails	—	—	—	1	6	9	—	16
Total	9	12	15	48	354	99	2	539

Level Key: 6a = general fill; 6b = black silty clay.

Table 30. Artifact groupings by level, Test Unit 1, west yard, 1992.

Description	Level																	Total	
	1	3	4	5	6a	6b	6c	6d	6e	7a	7b	7c	7d	8a	8b	8c	9a		9b
<i>Ceramics</i>																			
Whiteware	—	1	14	22	1	6	13	—	3	12	2	—	8	5	6	5	2	3	103
Porcelain	1	—	2	3	—	2	—	—	2	—	1	—	—	1	—	—	—	—	12
Yellowware	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	2
Stoneware	—	—	1	1	—	—	—	—	—	1	—	—	2	—	—	—	—	—	5
Redware	—	—	4	22	—	12	2	—	1	1	3	—	3	1	3	—	—	2	54
Clay pipe frags ^a	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	2
Ceramic drain tile	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2
Flat glass	8	2	22	46	1	12	4	1	1	12	6	1	7	9	6	5	—	7	150
<i>Curved Glass</i>																			
Colorless	2	4	10	23	2	13	—	—	2	8	1	2	6	4	6	—	—	4	87
Aqua	—	—	—	3	—	2	2	—	—	—	—	—	—	—	1	—	—	1	9
Amber	—	—	1	2	—	2	—	—	—	1	—	—	—	—	—	—	—	—	6
Purple	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Pink tint	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Yellow	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Green	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Blue opaque	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Dark green	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	2
Melted glass	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	2
Buttons	—	—	—	—	—	2	1	—	—	—	—	—	—	—	—	—	—	—	3
Bone	—	2	4	19	1	16	8	1	—	4	4	—	6	8	6	3	1	9	92
Shell	—	—	—	1	—	—	—	—	—	—	2	—	—	1	—	—	—	—	4
Brick	—	—	1	1	—	—	1	1	—	—	—	—	—	—	—	3	—	—	7
Mortar, plaster	—	—	—	4	—	3	6	1	—	—	1	—	2	—	7	4	—	2	30
Insulated wire ^b	—	—	—	—	—	—	—	—	—	2	—	—	1	—	—	—	—	—	3
Wheel caster ^b	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Metal key plate	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
<i>Non-Ferrous Metal</i>																			
Copper	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Brass	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Lead	—	—	—	2	—	—	—	1	1	—	—	—	1	—	—	—	—	—	5

Table 30. Concluded.

Description	Level																		Total
	1	3	4	5	6a	6b	6c	6d	6e	7a	7b	7c	7d	8a	8b	8c	9a	9b	
Metal																			
Cut nails	2	4	7	52	—	17	2	1	2	12	2	—	3	5	10	2	—	13	134
Wire nails	1	—	4	3	1	1	—	—	—	2	—	—	7	—	3	—	—	—	22
Roofing nails	—	—	1	3	—	1	—	—	—	—	—	—	—	—	—	—	—	—	5
Tin	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Miscellaneous	5	—	2	2	—	—	—	—	1	4	1	—	—	4	2	—	—	1	22
Total	20	13	76	215	6	91	39	6	14	61	23	3	48	41	51	23	4	42	776

^a frags = fragments; ^b items consisting of, or including, plastic.

Level Key: 6a = post mold; 7d = light brown clay; 6b = medium brown clay loam; 8a = medium brown clay with brick, charcoal; 6c = light and dark brown clay with ash and charcoal and yellow brown mottled clay; 6d = dark brown compact clay; 8c = trench fill; 7a = medium brown clay; 8b = light brown compact clay; 7b = light and dark brown clay; 9a = medium brown clay; 7c = yellow brown clay; 9b = light brown clay.

Table 31. Artifact groupings by level, Test Unit 2, east yard, 1992.

Description	Level				Total
	1/3	4	5	6	
Ceramics					
Whiteware	3	3	1	—	7
Porcelain	2	—	—	—	2
Yellowware	1	—	—	—	1
Stoneware	2	2	—	—	4
Redware	2	—	—	—	2
Porcelain doll fragment	—	—	—	1	1
Ceramic drain tile	1	—	—	1	2
Flat glass	—	2	—	—	2
Curved Glass					
Colorless	1	3	—	—	4
Aqua	—	2	—	—	2
Bone	4	—	—	—	4
Shell	1	—	—	—	1
Metal					
Cut nails	2	16	5	—	23
Wire nail	—	1	—	—	1
Miscellaneous	—	4	1	—	5
Chert Flake	—	—	—	1	1
Total	19	33	7	3	62

