Curating Architecture: An Investigation of the Motives and Practice of Architectural Collection and Exhibition with Recommendations for Interpretation of the Architectural Study Collection at Independence National Historical Park

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Curating Architecture: An Investigation of the Motives and Practice of Architectural Collection and Exhibition with Recommendations for Interpretation of the Architectural Study Collection at Independence National Historical Park

Abstract
This thesis examines the history, theory and practice of collecting and exhibiting architecture as a context from which cultural resource management guidelines for the interpretation of architectural fragment collections is generated. The Independence National Historical Park Architectural Study Collection serves as a case study to apply this framework as the National Park Service prepares to design and curate an interpretive exhibit for a representative selection of the collection.

Keywords
Historic Preservation; Independence National Historical Park

Disciplines
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CURATING ARCHITECTURE: AN INVESTIGATION OF THE MOTIVES AND PRACTICE OF ARCHITECTURAL COLLECTION AND EXHIBITION WITH RECOMMENDATIONS FOR INTERPRETATION OF THE ARCHITECTURAL STUDY COLLECTION AT INDEPENDENCE NATIONAL HISTORICAL PARK

Sarah Elizabeth Hawes

A THESIS

In

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements of the Degree of

MASTER OF SCIENCE IN HISTORIC PRESERVATION

2010

_________________________
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When you put things together that other people have thrown out, you're really bringing them to life - a spiritual life that surpasses the life for which they were originally created.

-Louise Nevelson

For my grandparents, who were right here the whole time.
And for my parents, who were confident, especially when I wasn’t so sure.
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Introduction

Architectural fragment collections are difficult cultural resources. They are at once museum artifacts, historic building fabric, primary source reference materials and teaching tools. While these potential values are vast, they are often obscured by the object’s detachment from historic buildings, most altogether lost. As the preservation field professionalized through the 1960s, many institutions accumulated stores of architectural bits and pieces from salvage activities, restoration projects and donations. Often uncataloged, and poorly cared for, these resources are seen as a nuisance because of their demanding conservation needs. In the 1990s, there was a swell of interest in the care and use of architectural fragment collections by historic preservation professionals, causing a brief notice of their value. Still, the wealth of architectural fragments has been little addressed as a cultural resource for a public audience. This thesis investigates the history, theory and practice of collecting and exhibiting architecture as a context for current collections of architectural fragments. An analytical framework has been created as a guide for the development of interpretive strategies for their exhibition. The prominent architectural study collection at Independence National Historical Park serves as a case study to apply this framework as the National Park Service prepares to design and curate an interpretive exhibit for a representative selection of the collection.

Study of the History, Theory and Practice of Collecting Architecture

In this portion of the study, historical research tracks the development of the collection of architecture in order to gain a deep contextual understanding of the nature of this connoisseurship. A complementary representative study of currently exhibited architectural collections surveys contemporary methods of display and interpretation.
Common characteristics and themes are indentified to inform an analysis of the significance of the collection and display of architecture.

The collecting of architectural fragments is a practice that has evolved over time and is example of the human propensity for assembling collections of many different types of objects. It is also an expression of the larger human fascination with the design and construction of the built environment, as an articulation of both art and engineering. Historic architectural artifacts have a special connotation, celebrated for their value in fine craftsmanship and durable quality, especially as industrial manufacture and digital technology overwhelm civilization.\(^1\) The historical research gives a narrative to the chronology of collecting architecture in Europe and the United States. It identifies examples of individuals and institutions that have been important collectors of architecture, having an influence on trajectory of the practice. The question of why people collect and specifically why architecture is collected is addressed by an assessment of the motives of these collectors.

Common themes about collecting are drawn out to inform the analysis of the significance of collecting architecture whether it is as a whole building, fragment, or facsimile. These collections manifest as examples of the history of building technology and architectural aesthetics. Architecture has been exhibited and interpreted with a range of approaches and for a variety of purposes through time. The history of these practices puts contemporary architectural fragment collections in the context of their predecessors, adding to their significance.

In a study complementary to the historical research, selected contemporary exhibitions of architectural fragments are examined. Because there are many possible factors of significance involved in the assembly of architectural examples, the interpretation and focus of exhibits can vary widely. This study compares interpretive strategies currently employed by museums and institutions. A survey of thematic approaches with consideration of the content of these collections is conducted to add characteristics to the developing framework of criteria for interpretive consideration. In this survey, particular attention is paid to the origin and history of each collection, making an assessment of what that circumstance may have contributed to the collection’s interpretation. Instances of the inclusion of preservation practices are noted as an additional aspect of the interpretation of architectural collections.

The conclusions drawn from the historical research of collecting architecture and the survey of existing exhibitions of architecture are analyzed, looking for common trends, themes, and characteristics of significance to lay the groundwork for the analytical framework. Current scholarship about and management of architectural fragment collections are added to this. In addition, theory relating the cultural value and particular significance of architectural fragments is reviewed. In this effort, museum and cultural resource interpretation theory is incorporated into the analysis.

**Analytical Framework and Criteria for Interpretation**

With these surveys and analysis as contextual research, the thesis addresses the topic from a cultural resource management perspective, creating a framework for consideration of the significance of architectural fragments. The framework is intended for use by curators and cultural resource managers and other stewards of architectural...
fragment collections, as interpretive exhibitions are designed. Architectural fragments are material culture to be interpreted with many layers of significance, including design, materials, construction techniques, regionalism, aesthetics and historical associations. Intended to encourage broad thematic thinking rather than focus on the details of a collection, the framework bridges the gap between a set of architectural artifacts and the interpretation of their cultural meaning. In addition, an emphasis is placed on the history of the collections themselves, why and how they were assembled, with a consideration to that self-conscious layer of history. With an inclusive approach, the wealth of information architectural collections have can be made accessible to today’s scholars, preservation practitioners and the public.

**The Architectural Study Collection at Independence National Historical Park**

The architectural study collection at Independence National Historical Park in Philadelphia has provided an opportunity to implement the analytical framework. The inception and particular history of this collection as a component of the larger museum collection at Independence National Historical Park has been put into a historical narrative to document its origin. Primary sources relating to the genesis of the collection, in the form of administrative records have been reviewed to understand the context of the collection in the history of the Park itself. Accounts from key individuals, including interviews with those who observed and worked with the collection as it was accessioned, were undertaken in order to document and understand the origins and history of the collection and those responsible for assembling it. This collection has a strong relationship to the beginnings of historic preservation in Philadelphia and is directly related to a desire for appropriate restoration of historic buildings in the initial
efforts of the park. The curatorial staff has expressed an interest in not only interpreting the fragment collection, but making the historiography of the collection a part of the exhibit.

The important fragment collection is currently undergoing planning for a future permanent exhibit is used as a central case study to apply the analytical framework in order to prepare recommendations for the collection’s display and interpretation. The Independence National Historical Park’s Architectural Study Collection and its historical context are processed through the analytical framework developed from the thesis research. The results of this procedure bring to light features and layers of significance, strengths and special considerations of the collection. With this analytical evaluation, a set of recommendations for the development of the exhibition for this collection are made. These recommendations include suggestions of interpretive typologies and themes that could be incorporated into the exhibit design.

**Thesis Scope and Limitations**

In order to focus the scope of this thesis, the following limitations were placed on the project. Though the discussion of the history of collection and exhibition of architecture must include European development of the practice, the review of contemporary collections and exhibits were be limited to discussion of a few representative American resources. The guidelines for management of architectural fragment exhibitions are also limited to collections held in the United States, though they might be adapted to address resources in other countries. This thesis does not address documentation, cataloguing or conservation techniques for architectural fragment collections, instead limiting the scope to cultural resource management in
terms of interpretive needs of such collections. The value of interpretation of supporting documentary and archival materials and conservation methods is addressed as an asset to architectural fragment exhibitions. Some of the challenges regarding cataloging and storing architectural fragments are referred to by the review of where stewardship conventions now stand and in recommendations for further study to be done in coordination with exhibition planning.

**Thesis Justification**

A study of the history of collecting and exhibiting architecture adds needed content to the subject of resource management for architectural fragment collections. Although the collection of architectural examples has occurred for centuries, little has been studied regarding the significance of the act of collecting architecture or the importance and subsequent use of these collections. This study traces the history of collecting and exhibiting architecture, asking which aspects of the practice are significant and why. With a historical perspective which addresses human interest in collection of the built environment, informed stewardship of architectural fragment collections can be developed. This broad perspective can then be conveyed through exhibitions which include interpretation strategies allowing the public to connect with ex situ historic architecture and the process of preservation.

The problem of managing architectural fragment collections merits attention because fully developed guidelines for exhibitions of architectural fragments have not been established. Methods and criteria for defining the significance of today’s architectural fragment collections are needed in order to develop comprehensive interpretive strategies for their exhibition. The recommendations proposed by this
thesis are intended to go a step beyond the fundamental Williamsburg Resolutions, addressing the significance to the preservation field and the public and representing these ideas through exhibition.

**Research Methods and Fieldwork**

The research process for this thesis followed two distinct courses. Traditional critical reading was undertaken to trace the history of collecting architecture. This section reviews the chronology of the practice, citing particular trends, individuals and collections involved. From this, ideas about connoisseurship patterns and collection typologies developed into a basis for the framework for evaluating the significance of today’s architectural fragment collections. As a parallel activity, site visits were made to select contemporary architectural collections and exhibitions to assess and compare significance, management strategies and interpretive approaches in use. Interviews with curatorial staff, publications about the exhibits were reviewed to research the history of the collection and theoretical perspectives involved in preparing the exhibition.

Information gathered from site visits and research on current exhibits has been synthesized with the historical research to build a theoretical structure which considers common themes to be reviewed when developing interpretation for an architectural fragment exhibit. Within this framework, the variables and concepts of significance evolved into a matrix format where the content of a collection can be evaluated to find themes for interpretation. As a case study example of how these guidelines could be put to use, the thesis will apply them to the architectural study collection at Independence National Historical Park. An examination of the content of the collection was
undertaken by review of the existing catalog. In addition, the Park staff was integral to the process of researching and recording the history of this collection. Collaboration with the collection provides a practical field test of the analytical framework as a guide for interpretation. Following this, recommendations for interpretive strategies for the architectural study collection at Independence National Historical Park were devised.
CHAPTER 1: The Development of Architectural Collecting in Europe & the United States

Collecting Material Culture

In order to understand architectural collecting, the practice must be placed into the wider phenomenon of the collecting of material culture. In the museum field, material culture is defined as objects of the physical world to which cultural value has been ascribed.\(^2\) This explanation extends the meaning of an object itself, to include its role within the context of the customs and values of the human world. Material culture is the physical manifestation of human intelligence, creativity and beliefs. These objects both prove and represent how humans have responded to their environment, both individually and collectively. Anthropologist James Deetz notably characterized material culture more broadly, as “that sector of our physical environment that we modify through culturally determined behavior.” Deetz reinforced the idea that material culture is a reflection of human society and ideals. This definition indicates that material culture is not limited to mere objects, but includes more complex forms of cultural constructs, such as the built environment, including landscape.

Deetz asserted that with prudent study, artifacts can convey information about social history and cultural systems.\(^3\) When material culture is collected, it is removed from active service to society, putting cultural values in the past tense.\(^4\) Because architectural fragments are components of larger wholes, it is difficult to re-establish

their social and cultural value, but upon close examination, there is much to be discovered and conveyed. Collection is an unanticipated direction of an object’s life, but one that often is “an alternative to the destruction or neglect of the object.” This pull between destruction and preservation appears frequently through the history of collecting architecture, as many opportunities to save architectural objects occur at the threat of demolition. While perhaps not the most conservative view of historic preservation, the salvage of architectural artifacts is a way to take advantage when the evolving built environment takes another course. The theme of collecting as preservation, affecting a renewed course of life for an object can be found throughout this study as the meaning of architectural fragments is revealed.

An individual’s act of collecting demonstrates related psychological motivations. Collecting is at once a personal and cultural construct. It is a way of imposing order or classification on objects. By collecting material culture, one can appropriate desirable qualities, including: knowledge, taste, power, status and wealth. Ownership of a collected artifact can link the possessor with the object’s original maker and intervening owners, increasing one’s own worth. Assembling objects of art and antiquity is a way for collectors to assert knowledge and experience of the world. A collection can be an outward expression of refined taste representing proper morals, a result of good breeding. Collecting enterprises can have a pedagogical or philanthropic objective. No matter the motive or content of a collection of material culture, the practice has been prevalent through history.

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Architecture is a challenging subject of collections, because the scale of architectural objects seems an obstacle to their removal and assembly in a group. Yet, a desire to understand and classify architecture has led collectors to find strategies to gather these objects in image, facsimile, fragment and whole. In the case of architectural collections, the question of collecting as preservation is particularly relevant as artifacts of the built environment often must be removed from their context in order to join a collection. This study investigates in detail the “second life” values of collected architecture. A history of the evolution of architectural collecting, identifying themes and trends in this particular thread of the collecting phenomenon is investigated in the following chapter.

Ancient Spolia

The activities and ideologies of architectural collecting are rooted in the early practice of placing salvaged building fragments into new constructions. “The modern concept of ‘spolia’ refers to the reused parts of architectural constructions that are taken from a demolished building.” This activity was initiated in the Roman Empire with Constantine’s imperial art policy and building campaigns. Though reuse of building materials, such as quarried and cut stone surely was common prior to this, Constantine

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legitimized the practice. Incorporating spolia became a ubiquitous custom, continuing with Byzantine and Medieval architecture, and seen again in the restoration activities and romantic conceits of the 18th and 19th centuries. Even in the 20th and 21st centuries, spolia appears as a mitigating strategy in modern preservation policy. Author Beat Brenk argues that Constantine’s motivation for projects of demolition and new construction, incorporating spolia are associated with an ideology of absorbing the power expressed by the demolished building in the new monument. Indeed, throughout the following examination of the history of collecting architecture, the themes of possession and order of the rhetorical values of architecture repeatedly emerge.

The Cabinet of Curiosities

From the art patron’s ancient practice of collecting paintings and sculpture, the earliest European trends in formal collection of natural and man-made objects emerged in the 16th and 17th centuries. Beginning in the Renaissance, cabinets of curiosity, or collector’s cabinets were popular with the aristocracy across Europe, with notable examples in Italy, France, Austria, the Netherlands, England, Germany, & Spain. With a rising interest in the natural world and the arts in order to “establish the

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10 Beat Brenk, "Spolia from Constantine to Charlemagne: Aesthetics Versus Ideology," 106.
11 See Chapter 5 for more on this practice in modern historic preservation.
position of mankind in the grand scheme of things,” scholars and the elite began to keep cabinet collections. The cabinets were first rooms set aside for the display of collections, then were followed by elaborate cabinet furniture, often with open shelves and drawers custom fit to display the contents of a collection. Flemish paintings of *wunderkammern* (cabinets of curiosity) and *kundstkamers* (art galleries) depict rooms densely packed with a variety of collected objects, including; paintings, sculpture, decorative arts, books, scientific instruments, plants, sea shells, insects and bones. These rooms also housed artifacts of human imprint on the world, or material culture from antiquity and exotic cultures. A preoccupation with learning about unfamiliar cultures was evident in representative artifacts, such as coins, costumes and tools. Collector’s cabinets also could contain items representative of technical virtuosity and craftsmanship, sometimes a difficult distinction to make from objects viewed solely for their artistic value. Other worthy objects were appreciated for their association with famous historical figures or events. Cabinet collections epitomized the attempt to catalog and classify specimens. Cabinet collections were displayed to provide close study to small numbers of people. Objects were arranged in prescribed “programs typically devised to evoke a microcosm of the observable world, with the owner is a central position of power.” This brief description of the earliest documented assemblies of objects already begins to lay out the themes of collecting that reoccur through history and also apply to the collecting of architecture in particular.

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14 Ibid, xviii.
16 Impey and MacGregor, *The Origins of Museums*, xviii.
17 Ibid, xix.
The Antiquarian Interior and the Landscape Garden

In the 18th century, elite estates were the center of social life for European privileged classes. Manor houses, villas and townhouses were the material expressions of the prominence held by a family. By social necessity, a fashionable sense of taste and design appeared in the decoration of prominent houses. Following much the same model as the cabinets of curiosity, 18th century interiors continued the convention of the display of artifacts relating to natural science, the arts, and antiquarian relics as important elements of a proper collection. Collecting and displaying artifacts was part of conveying a set of social messages that indicated intellectual prowess, wealth and status, a part of the Enlightenment program of rationalizing the known world. This endeavor is perhaps most remembered by the iconic 18th century illustrations in Diderot’s *Encyclopédie*.¹⁹

An appreciation of art and design was an important extension of the genteel education. An intellectual interest in the ancient world and antiquities was at the center of this motivation, and understanding classical models of aesthetic theory and design was a prerequisite to assembling a collection. The interiors of villas and manor houses were treated as galleries, often displaying paintings and sculptures among other furnishings. In these interiors, architectural examples joined other examples of art and design of antiquity. Architectural examples presented a comprehension of geometry, engineering, design and theory. Scholar travelers on their Grand Tours to ancient sites in Italy and Greece brought back antique fragments which necessitated display as souvenirs proving their experience and education abroad.

It is with these interiors decorated with antiquarian curiosities that architectural collections appear and advance as a fashionable trend. Leaders of popular fashion not only practiced interior decoration in the antiquarian style, they helped promote an interest in historical decorative arts and architecture through the network of social elite. Stylistic categories were popularized, creating a common understanding of ‘periods’ of design styles in architecture and furnishings. Antiquarian interiors were characterized by their variation in style, representing an eclectic mix of aesthetics, although often focused on Medieval and Renaissance designs. This practice was a part of the larger Romantic Movement, which encouraged enthusiasm for art and literature of those periods.20 Some 18th century decorators took general curiosity collecting further, mounting architectural details on interior walls or even installing fragments into the fabric of a house.

Sir Horace Walpole’s (1717-1797) ideas about design evoked historical nostalgia as he introduced the Neo-Gothic mode into fashionable taste, incorporating ornamental fragments from cathedrals and castles into his English villa, Strawberry Hill, purchased in 1747. Walpole particularly used painted glass windows, ancient tiles and ornamental woodwork salvaged from sites and purchased at estate sales throughout England and Europe.21 These architectural fragments were installed into the fabric of Strawberry Hill, as Walpole added to and customized the house. The interiors came together with Walpole’s reliquary and decorative arts collection to make a completed romantic antiquarian interior that was a suitable display for his collections.

The designed expanse of landscape gardens were well suited for expeditions and parties devised to capitalize on the settings created by the landscape. Also termed “pleasure gardens” in the 18th century, the variety of spaces and structures made a type of theme park for exploration and entertainment. As the gentry would promenade around planned gardens, they could discover buildings, monuments, ruins and plantings which essentially served as theatrical scenery (Illustration 1.1). Formal gardens and architectural features built to accentuate natural landscapes were exhibition space displaying the wealth of the fashionable elite and providing an extravagant location for amusement. The popular interest in antiquarianism pervaded into the garden, where it was fashionable to assemble a collection of representative architectural and decorative styles of different periods. The renowned gardens at Stowe and Stourhead in Britain exemplify this practice with their Classical temples and Gothic follies positioned throughout the landscapes. These decorative architectural elements could be authentic or sham ruins, such as the Bristol High Cross, moved from its monumental place at a crossroads and reconstructed at Stourhead pleasure garden when salvaged by designer Henry Hoare in 1764.22 The preference was to have many examples of a variety of architectures, situated to take advantage of prescribed views, often of other architectural features. Romantic antiquarian collections, both interior and exterior reinforced the showy social-centered culture of entertaining in the 18th century. Objects were carefully placed to assemble lavish displays of taste, emphasizing a culture of aesthetic appreciation, leisure and privileged education.

Collecting Specimens as a Political Competition for Antiquities

The first national museums which included architectural examples originated through the removal of antiquities from ancient sites. What began as the collection of plaster casts eventually became the large scale importation of actual specimens to fit out “universal survey museums,” those presented to improve the aesthetic taste of the receiving nations through collection of romanticized ideals of Classical design. At the turn of the 19th century, during the compilation of the first organized museum collections, much of the wealth of Europe’s art and antiquities was being trafficked to England and France, where the following early museums stand out, having developed largely in competition with one another.

In France, the Musée des Monuments Français grew out of the French Revolution. Alexandre Lenoir (1761-1839) was appointed in 1790 to confiscate artifacts and artworks from the collections of the aristocracy to preserve French national heritage. These collections contained spoils from Grand Tours, as well as examples of French architecture. Lenoir’s influential plan for the Musée des Monuments Français arranged the collection of artifacts by century, initiating the concept of a chronology of design history represented in comparison and contrast (Illustration 1.2). Large architectural fragments were used outside the museum to create a picturesque garden. The Musée des Monuments Français opened to the public in 1793. In 1816, under the Bourbon Restoration, the museum’s collection was disbursed.
The notorious removal of the Parthenon marbles from the Acropolis in Greece was part of the English government’s charge for Thomas Bruce, the 7th Earl of Elgin (1766-1841) to counter the French collecting efforts.\textsuperscript{27} Lord Elgin, as British ambassador to the Ottoman Empire, was originally sent to Athens to document antiquities in 1799 by making drawings and taking casts. During the project, he discovered architectural examples from the Acropolis temples could be removed from the site with relative bureaucratic ease. Records of correspondence with his agents confirm his desire to get examples of each architectural order and his feeling of competition with French agents in this endeavor. Controversy over the Parthenon marbles occurred even as they were shipped back to London starting in 1801.\textsuperscript{28} Elgin claimed his intention was philanthropic; he wanted the architectural specimens to serve as models for taste and aesthetic practice in English art.\textsuperscript{29} The government found Elgin’s justification adequate, and the architectural specimens were purchased and deposited at the British Museum to be publicly viewed.

With the advent of public museums in the 18\textsuperscript{th} century, visitor movement became controlled by constructed schemes of display. Visitor experiences shifted from that of a contemplative appreciation of aesthetics to a didactic course in history.\textsuperscript{30} Lenoir’s chronological arrangement of artifacts marks a change in strategies of display, where architectural and art history was deliberately interpreted with a classified

\textsuperscript{29} Kaufman, \textit{Place, Race, and Story}, 139.
\textsuperscript{30} Newhouse, \textit{Art and the Power of Placement}, 14.
historical context. This demonstrated his association between art and history, a new perspective on the display and classification of art, and especially architecture.\textsuperscript{31}

**Collections of the Professional Architect**

As the 18\textsuperscript{th} century progressed, architectural designers became increasingly esteemed and the occupation began to professionalize. Formal training in aesthetics and design was established to sponsor and encourage aspiring architects. Along with the compilation of architectural drawings and plates came the extraordinary collection of specimens of models, plaster casts and architectural fragments. These resources brought together architectural specimens for comparison and contrast, serving as reference materials and inspiration for students and practicing architects.\textsuperscript{32} Instructive architectural collections allowed students to experience by representation the antiquities found on Grand Tour. Even if cataloged, collections of 18\textsuperscript{th} century professional architects seem not to have a chronological, material or contextual arrangement, instead indicating a range of aesthetics and wonder of variety.

Sir John Soane's (1753-1837) collection of architectural fragments and casts is the preeminent example of this type of collection from the 18\textsuperscript{th} and early 19\textsuperscript{th} centuries. Even before he was appointed professor of architecture at the Royal Academy in 1809, Soane had begun establishing his house at Lincoln's Inn Fields as a studio and museum for students (Illustration 1.3). Soane did not return from his Grand Tour bearing artifacts. Instead, his collection was established over time by purchase from auctions and sales, gifts from friends and admirers and salvage from construction and demolition.
sites. Of particular note was his purchase of casts from the sale of Robert Adam’s estate, indicating that other professionalized architects were accumulating similar reference collections. Though used as instructional reference, the display of Soane’s collection also draws from the collector’s cabinet and antiquarian interior models in its display. The architectural fragments, casts and models are integrated with many other decorative arts objects and artifacts. The objects were treated as décor, each carefully cataloged item was hung in its place on the walls, specially devised shelving and ceilings. In addition, Soane included his own models and drawings in the collection. These were deliberately displayed in association with the celebrated buildings of antiquity, intended to form part of the bequest to posterity as a museum.

Institutional Architectural Museums

As the 19th century progressed, architectural collections which had been assembled and displayed by gentlemen antiquarians, professionalized architects and organized by government entities were funneled into institutionalized museums that supported educational endeavors. This came at a time where architectural history was becoming a recognized study. Architectural writers, such as John Henry Parker (1806-1884), who published *A Glossary of Terms Used in Grecian, Roman, Italian, and Gothic Architecture*, began to classify architectural styles, articulating the study with a vocabulary.

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34 Ibid, 124.
35 Kaufman, *Place, Race, and Story*, 195.
36 Dorey, "Soane as a Collector," 125.
The content of the institutional collections was distinguished by the origin of the inheritance. Traditional collections of casts and specimens of antiquities from Greece and Rome were represented by institutions founded on classical principles, but as these institutions developed, more pressure was put on the academies to teach the aesthetics of Medieval and Renaissance design. This was an effect of a change in aesthetics through the late 19th century when the later historical styles that Walpole had promoted far earlier were embraced and romanticized formally into a canon of architectural history. More notably, the origins of the collections which represented later examples grew out of a new initiative, the restoration of historic architecture. Used professionally, pedagogically and for public presentation, the institutionalization of architectural collections applied a formal legitimacy to the practice of collecting architecture.

After the 1816 redistribution of the fragments collected for the Musée des Monuments Français, the remainder of the collection went to the Louvre and the merged Académie Royale d'Architecture and the Ecole des Beaux-Arts. New buildings for the Ecole des Beaux-Arts were planned and built on the site of Lenoir’s museum 1820-1838, with many improvements made through the 19th century. The central building, Palais des Etudes, included a courtyard for display of the Ecole’s expanded architectural fragment and cast collection. Architect Felix Duban (1798-1870) also incorporated fragments into the fabric of the new buildings. Like Soane, this collection would be used as three-dimensional study examples for students of architecture. The inherited fragment collection here also was used to fulfill an aesthetic role. Duban

38 Kaufman, *Place, Race, and Story*, 198.
placed architectural fragments in niches and archways, often installing them as part of the fabric of the Palais des Etudes, much like in the earlier antiquarian interiors.39

The Royal Architectural Museum in Westminster was established by Sir George Gilbert Scott (1811-1878), himself a noteworthy collector, in 1851 as another museum and school of art and architecture. Scott brought together several important architectural collections from professional architects, many in a new enterprise, the restoration of Medieval and Renaissance architecture. Significant model, cast and fragment collections from restoration architect Lewis Nockalls Cottingham (1787–1847) and writer, critic and artist John Ruskin (1819-1900) joined a growing traditional architectural collection to support the school. Eventually, the collections were absorbed by the Victoria and Albert Museum, which had been established in 1852, as a public museum. The Victoria and Albert Hall of Architecture collections added the Royal Architectural Museum’s Medieval and Renaissance collections into a more classical ornamental cast collection formerly of the Governmental Schools of Design (Illustration 1.4). Born out of a fusion of the gamut of sources, the Victoria and Albert Museum’s architecture collection comprehensively represented a history of architecture, placing the exhibit on display to edify the public rather than just for students of art and architecture.40

World’s Expositions

In the late 19th century, a series of extremely popular international expositions used architecture as a vehicle to expose the masses to architectural design. Exhibits of

40 Kaufman, Place, Race, and Story, 198-199.
structures from both native and exotic cultures showed traditional styles and craftsmanship. At the 1867 Universal Exposition in Paris, Eugene-Emmanuel Viollet-Le-Duc organized an exhibit that associated the evolution of architecture with the civilization of man as in his *Habitations of Man in All Ages*, which recounts a chronology of the building technology of domestic architecture from primitive man. Historical displays featuring “ways of life” exhibits were prevalent exhibitions. The 1876 Centennial Exposition in Philadelphia lauded an invented “New England Log Cabin” (*Illustration 1.5*) endorsing a new sense of American history, and a growing nationalism as the country recovered from the Civil War.

National pavilions erected at the fairs were a creative type of museum that induced knowledge of culture by experience, intended for an audience without means to view and learn about architecture and other cultures. Examples of architecture pointed out cultural differences, underscoring variation in native building materials, technologies and designs. “The house itself was the most complete and expressive of domestic artifacts, the portrait not only of its owner, but its society – and so the display of foreign, ethnic, or historic architecture came to be deeply affected by this preoccupation with social customs.”

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43 Kaufman, *Place, Race, and Story*, 205.
incorporating decorative arts objects, tools, “native” people in costume, sometimes accompanied by food and entertainment.\textsuperscript{44}

The fairs also influenced the spread of architectural revival aesthetics. The 1876 Centennial Exposition in Philadelphia exhibited a village of state pavilions, buildings in Italianate and Gothic and Exotic Revival styles. Chicago’s 1893 World’s Columbian Exposition, planned by Daniel Burnham (1846-1912) and Frederick Law Olmstead (1822-1903) introduced America to the Beaux-Arts City Beautiful Movement.\textsuperscript{45} Into the 20\textsuperscript{th} century, world’s fairs became increasingly about emerging industry, emphasizing progress in engineering and modernism in architectural design.

**American Plaster Cast Collections**

In America, plaster cast collections were used as a less expensive and more practical option for instructional models by art academies as early as the beginning of the 19\textsuperscript{th} century.\textsuperscript{46} In the last quarter of the 19\textsuperscript{th} century, new institutional museums were established which emulated their European counterparts. A desire to display antiquities and examples of architecture from foreign cultures was present, but these museums did not have the means to acquire original artifacts, either by purchase, spurious removal or bequest. To this end, important European museums, including the Louvre and the British Museum, made casts of their sculpture and architectural fragments available for purchase. Through the reproduction of originals, specimens were multiplied, allowing many museums to hold comprehensive collections of architectural samples. These

\textsuperscript{44} Ibid.
\textsuperscript{46} Pauline Saliga, "Plaster Casts, Period Rooms, and Architectural Fragments," in *Fragments of Chicago's Past* (Chicago, IL: Art Institute of Chicago, 1990), 52.
“encyclopedia collections” showed a chronology of examples, increasing their educational value. Institutional collections of plaster casts were an opportunity for the general public to have an immersive experience into the architecture of a range of unfamiliar cultures without the need to travel overseas. The display of cast collections was commonly arranged following their chronology in a wide open hall that would accommodate the scale of the pieces. A predisposed interest in antique sculpture limited the content of architectural cast collections to favor examples of architectural ornament originally carved in marble. Columns, portals and friezes were also commonly represented, but as illustrations of artistry rather than building technology.

Cast collections appeared at all of the major museums established at this time, including; the Metropolitan Museum of Art, the Museum of Fine Arts, Boston, the Corcoran Art Gallery and the Art Institute of Chicago. Because there were enough casts for all, the institutions supported and endorsed one another’s efforts to secure, install and care for plaster casts. Andrew Carnegie (1835-1919) was inspired to amass an unsurpassed collection of plaster casts for his Hall of Architecture at the Carnegie Institute through visits to the cast gallery at the World’s Columbian Exposition, the Metropolitan Museum of Art and the less well known Slater Memorial Museum in Norwich, Connecticut. Carnegie is well documented in his intent to edify the people of

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47 Mattie Schloetzer, "Andrew Carnegie's Original Reproductions; The Hall of Architecture at 100," *Western Pennsylvania History* 90, no. 3 (Fall 2007): 39; and Saliga, "Plaster Casts, Period Rooms, and Architectural Fragments," 53.
49 Saliga, "Plaster Casts, Period Rooms, and Architectural Fragments," 55.
50 Ibid, 52.
52 Ibid.
Pittsburgh, who might not have any other opportunity to see the objects found in the cast collection.\textsuperscript{54}

**Period Rooms**

Following the ethnographic and historical tableaux created for world’s expositions at the end of the 19th century, European museums began to fundamentally change their methods of display for collections of decorative arts objects. Objects previously displayed in categories by material were now placed into domestic settings by style and period. These three-dimensional scenes incorporated architectural interior elements with decorative arts and furnishings to complete the experiential effect made popular by exhibits at world’s expositions.\textsuperscript{54} In the United States, the period room did not become popular until the 1920s. It began with individual collectors turned curators interested in colonial decorative arts from New England. Charles Presby Wilcomb (1868-?),\textsuperscript{55} and later, George Francis Dow (1868-1936)\textsuperscript{56} used their collections to open early museums and exhibits in California and Massachusetts that used the period room model. Through the 1920s, every major museum had a series of period rooms, notably the Metropolitan Museum of Art’s American Wing (1924), Philadelphia Museum of Art (1928) and the Brooklyn Museum (1929).\textsuperscript{57} Each of these required the search and accession of architectural interiors to suit their decorative arts collections. This pursuit

\textsuperscript{53} Ibid, 39, 43.
\textsuperscript{55} Wilcomb’s collections were exhibited both at fairs and museums in California in the 1890s. He was involved in the development of several decorative arts collections in that region early in the period of this transition in display. Kaufman, *Place, Race, and Story*, 195.
\textsuperscript{56} Dow was responsible for establishing the Essex Museum in Salem, Massachusetts in 1907. He was expressly influenced by the museum developments in period rooms in Europe. Kaufman, *Place, Race, and Story*, 195.
\textsuperscript{57} Saliga, "Plaster Casts, Period Rooms, and Architectural Fragments," 57.
did not always maintain a sense of integrity to the architecture and it became common practice to alter and combine elements as needed.\textsuperscript{58} It was not the authenticity that was prioritized, but the use of architecture to complete the evocative setting.

Period interiors became popular in another realm as well; the homes of wealthy private collectors. Henry Francis du Pont (1880-1969) exemplifies this group at his estate, Winterthur, in Delaware. du Pont’s interest was inspired by fellow collector, Electra Havermeyer Webb (1888-1960) who introduced him to early American decorative arts in 1923, while visiting her estate, Shelbourne, in Vermont.\textsuperscript{59} In 1918, du Pont began to remodel and add on to Winterthur to accommodate his growing collection of American furnishings, which he presented in period room settings.\textsuperscript{60} In addition to decorative arts, du Pont was a keen collector of architectural interior elements. Securing wood moldings, plaster ornament, doors, an entire staircase and other fragments from properties slated for demolition became a fascination. Many of the interior fragments installed in the fabric of Winterthur are important examples from the Philadelphia region. They illustrate a cross-section of periods, craftsmanship and social class, offering examples to set exhibit the breadth of du Pont’s object collection. Alterations were again common with installation of period interiors at Winterthur, although du Pont had a strong interest authenticity in his decorative arts collections, he was not a purist when it came to the architecture.\textsuperscript{61}

\textsuperscript{58} Ibid, 58.
\textsuperscript{60} Ibid.
\textsuperscript{61} Ibid.
The Outdoor Museum

Another model of architectural collecting has origins in the proliferation of large scale exhibits at world’s expositions; the outdoor museum. This iteration of the architectural museum developed in parallel to the period room. In outdoor museums, buildings were grouped into clusters resembling a complete settlement. Buildings could be restored or reproduced and were often relocated to complete the assemblage. The content of the specimens ideally had a variety of building types to make up the necessary streetscape of a village. Following the convention of world’s fairs, outdoor museums offered not only architecture and furnished period interiors, but also usually included costumed guides demonstrating traditional crafts and lifestyle using period furnishings and props as necessary. In outdoor museums, architecture was used to focus attention on the details, commemorating a threatened historic and ‘native,’ way of life. In Europe, the first fully independent outdoor museum was a Swedish village called Skansen, established by folklorist Artur Hazelius (1833–1901), in 1891. The American outdoor museum, did not begin have a presence until the 1920s, and rose in popularity through the 1950s. In the same way as period rooms, the outdoor museum begin as an extension of the wealthy private collector’s interest in early American life. John D. Rockfeller (1874–1960) Colonial Williamsburg (1926) in Virginia, and Henry Ford’s (1863-1947) Greenfield Village (1929), in Dearborn, Michigan are notable early examples.

At Greenfield Village, Henry Ford embarked on a philanthropic effort to create a model town which would convey the “traditional past of agrarian America,” displaying

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62 In America, this meant colonial life, rather than Native American life.
64 Ibid.
a complete collection of representative historic buildings. This was an educational effort that grew out of Ford’s nostalgic attachment to his roots in rural life. His admiration of the idealized pioneer values of independence and hard work would be illustrated by a comprehensive village museum that displayed working life in such a community. From 1927, Ford began to collect historic buildings and relocate them to the 14 acre site. The collection included houses, farm buildings, stores and traditional craft shops, moved from various small towns nationwide, many of them endangered because of their ordinary type. The massive effort required the buildings to be carefully deconstructed and rebuilt at the Dearborn site. Though the outdoor museum opened to visitors in 1929, the construction continued into the 1940s until over 100 buildings made up the living museum at Greenfield. In keeping with the standard contextual methods of display at world’s fairs and in period rooms, the buildings were furnished with objects and active demonstrations that gave the visitor an immersive experience. The emphasis of Ford’s architecture collecting was on vernacular structures. Through the buildings and their furnishings, he wished to convey the life of the everyday family and technological progress in common America. Again, in their efforts to collect buildings together in order to restore and display historical values, a relationship between preservation and demolition appears to cloud the meaning of the architectural collection.

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68 Ibid.
69 This strategy creates a product with questionable integrity. Bringing together buildings from across regions can confuse ideas about building technology and materials. However, the preservation assets of Ford’s vision at Greenfield Village have outweighed the drawbacks in scholarly study.
Conclusions from the Historical Survey

Tracing the chronology of collecting architecture to place it within the history of collecting material culture and the history of museums, gives this study a context. The historical survey begins to draw out themes and aspects of significance, which can be used to inform today’s management of architectural fragment collections. The central theme to be identified from the historical survey is that the desire to collect architecture is derived from a preoccupation with admiration for and learning about the ability of the human mind to design the environment.

The origins of architectural collecting are tied to the duality of preservation and destruction. Collections have been assembled through salvage, pillage, purchase, inheritance and reproduction. The collecting of architecture draws attention to the risk of the loss of artifacts, and the ideas they represent. Architectural collections have been used for both aesthetic and pedagogical purposes over time. Whether used as decorative objects or teaching models, the collecting of architectural artifacts puts a focus on elements of design and construction, but also commemorates ways in which human life interacts with its environment. The display of architectural collections is related to their use, evolving from decorative placement to arrangements over time, and later, coordinated in a complete contextual setting. The history of architectural collecting shows its development in an organic, iterative process, drawing one trend out of another. Private individual collections have turned into instructive collections, then bureaucratic and institutional collections, collections for the consumption of the general public, then returning to private collections. Several reoccurring motives for architectural collecting can be identified as they appear through the history of the practice. Architectural artifacts can serve as symbols of social and national status and
prestige. Architectural collections have often been pedagogical, either for students or for the general public. A sense of aesthetic philanthropy appears as collections promote and support design taste and trends, as in architectural revivals. All of these facets of the nature of architectural collecting over time are reinforced by the tangible and three-dimensional quality of architectural material culture.
CHAPTER 2: Methods for Display of Architectural Fragment Collections

The following three reviews of recent and current exhibitions present a variety of approaches to the display and interpretation of architectural fragments. The significant fragments at the Art Institute of Chicago are mainly displayed as the work of renowned designers, but also tell a story about the relationship of architecture and the development of the city. A house from Ipswich, Massachusetts is exposed, from the framing out, to teach visitors about the evolution of the building according to the stories of the families that lived there at the Smithsonian Institution’s National Museum of American History. The Carnegie Museum of Art’s Hall of Architecture celebrated its centennial in 2007 with an exhibit that interpreted the origins of the collection of architectural plaster casts. The distinct focus and content of each exhibit highlights aspects that should be considered as curators generate means of interpretation for architectural fragment collections.

Fragments of Chicago’s Past, Art Institute of Chicago

The Art Institute of Chicago has had a collection of architecture in graduated forms throughout the history of the institution. Plaster casts of antiquities, period rooms, miniature rooms, and fragments representing a focus on English and colonial American styles have all been part of the collection at one time. The original building elements displayed today were acquired most recently in this succession, beginning in the 1960s. At this time, post-war urban renewal resulted in the demolition of many of the city’s exemplary buildings of characteristic design by canonized Chicago School and Prairie

School architects. The acquisition of fragments from these masterpieces became an ethical responsibility for the institution. In the early years of the historic preservation movement, the Art Institute was often on the side-lines of demolition battles, a position requiring diplomatic prioritizing and negotiating, as well as special fundraising efforts.72

Pieces were also collected by donation, many resulting from the Economic Recovery Tax Act of 1981, which encouraged rehabilitation of historic buildings, making available unused architectural fragments. The displayed collection contains fragments that illustrate aesthetic values characteristic of the Chicago and Prairie style; ornamental motifs from both interior and exterior sources; glazed terra cotta panels, ornate cast and wrought iron elements, bronze embellishments, carved stone and stained glass windows.

_Fragments of Chicago’s Past_ is a permanent exhibit hung at the top of the grand stair hall of the Art Institute of Chicago’s Beaux-Arts building (Illustration 2.1). The exhibit opened in 1990 as a new interpretation of the collection of important architectural objects. At first look, the presentation seems purely aesthetic. The fragments are hung on the walls of the gallery or set on pedestals. Taken out of context and placed in this display, the fragments look more like objects of art, to be appreciated for their fine design and artistry. Looking more critically, the viewer will recognize didactic qualities to the installation. An effort has been made to hang objects at heights relative to their original position in situ; as a window keystone overhead, or a column base set on the floor. This display reinforces the aesthetic perception of the exhibit by emphasizing the original design of the fragments. Each fragment is individually labeled with pertinent designer, date, site and medium information, also listing the current

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72 Ibid, 63.
status of the original building, whether demolished or restored. Enriching the
interpretation are historic photographs of the source buildings and detailed text
descriptions which return some context to the fragments, placing them within wider
themes (*Illustrations 2.2 & 2.3*).

The exhibit is arranged in four sections, each illustrating an important theme of
the story of architecture in Chicago. Architects and landmark buildings are introduced
through their contributions to the chronological narrative of the city's development.
“Genesis of the Chicago School” tells the story of the rapid rebuilding of Chicago in the
two decades after the Great Fire of 1871. This mark in Chicago history is essential to
the origins of the Chicago School, establishing the use of fireproof materials and
building methods as a response to the tragedy. Artifacts represent the distinctive
design work of architects such as William Le Baron Jenny and Dankmar Adler.
“Beyond the Chicago School” demonstrates the effect of the 1893 World’s Columbian
Exposition and Beaux-Arts design on Chicago’s architecture for the following 30 years.
Daniel Burnham’s plan is explained to tie city planning into the account of the impact of
the fair. The residential architecture and development of Chicago’s suburbs are
addressed by the third segment, “Frank Lloyd Wright and the Development of the
Prairie School.” The examples here illustrate how Frank Lloyd Wright’s geometrically
stylized organic forms and the connection of living space with landscape prevailed at the
height of Midwestern suburban expansion. The final section, “Louis Sullivan and the
Development of American Architecture,” focuses on this architect’s designs and
concepts which defined a new American style. Architectural examples from Sullivan’s
buildings illustrate his incorporation of organic sculptural embellishment which
decorated early skyscrapers.
The Art Institute of Chicago’s *Fragments of Chicago’s Past* exhibit emphasizes “the ways in which Chicago architecture of the last century has both responded to and shaped the economic, commercial, and residential growth of the city and region.”

This comprehensive didactic approach incorporates individual design ideas into wider trends of development and architectural design. Illustrated by the beautiful decorative features of buildings, this thematic, edifying interpretation is balanced with an aesthetic quality of display. After this viewing this exhibit, visitors are prepared to take an awareness and appreciation of Chicago’s architectural history into their further interactions with the city, whether a commute on the Loop amid second story skyscraper ornamentation or a walk to other tourist destinations.

*Within These Walls*, Smithsonian Institution, National Museum of American History

16 Elm Street, once a house in Ipswich, Massachusetts, has been a part of a number of architectural exhibits at the Smithsonian Institution’s National Museum of American History. The 2 ½ story timber-framed Georgian house was built in the 1760s, but has seen changes over its 200 year history. 16 Elm Street was saved from demolition by the Ipswich Historical Society and the Smithsonian in 1963. The house was initially acquired to exemplify early New England building technology, but it was “also collected it because it represented an ‘ordinary’ or ‘average’ home, as opposed to the

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high-style structures often associated with historic house museums.” The house was documented and dismantled, then rebuilt in the National Museum of American History in 1966.

Today, the Georgian house, with rear ell, serves as the centerpiece to a permanent exhibit at the National Museum of American History, *Within These Walls*. In its current incarnation, the house has been partially dissected and exposed, to show details of its interior and exterior parts, including: the framing, partition walls, finishes, windows, woodwork and cladding (*Illustration 2.4*). Tracing the selected occupants in chronological order, the exhibit circles the house. Visual cues from the exposed construction methods and the decorative choices the residents made drive the narrative stories told through the use of contextual materials. Each portion of the house is fitted with a representation of home life during each period. Interpretive panels placed at intervals around the house draw themes related to residential architecture, while broader historical themes are conveyed through supporting materials and additional panels on the surrounding walls. Primary documents, such as wills, deeds, maps, newspaper advertisements and diaries are used to prove and support the authentic narratives. Additional displays of household objects are woven into the story to emphasize the personal nature of the interpretation. Interactive displays allow visitors to touch reproduction artifacts, enhancing their connection to the narrative.

The experiences of five actual family resident lives in 16 Elm Street, connected to broader patterns of the development of the built environment and American history, are related through the exhibit. The relationship of architectural style and choice of

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building materials to wealth and social class is exemplified by the Choates (1757-1772), who built the house in the 1760s. The “A New England Gentleman’s House” segment underscores the appearance of ornamental woodwork and abundant windows as signs of prosperity (*Illustrations 2.5 & 2.6*). Ties to British lifestyle and the rebellion of the colonies’ obligations to Britain are made apparent by the Dodges (1777-1789), “A Revolutionary Household.” This family’s use of the house’s interior and record of slave holding show distinctions of public and private spaces, again linking patterns of social class. The “Home of Reformers” tells of an antebellum family, the Caldwells (1822-1865), who made their house active in the religious revivalism that promoted abolition. The way in which a rising sense of domesticity valued morals associates the physical home with social trends in this segment. In the late 19th century, the house at 16 Elm Street became a “Home of Immigrant Workers,” rented by the Lynches (1870-1891), an Irish mother and daughter, with their boarders and other families. This section of the exhibit points out the way the context of the industrial revolution caused the subdivision of the property creating many shared spaces for which the residents did not have a sense of ownership. During the Depression and World War II, the Scott family’s (1927-1961) single apartment dwelling epitomized “A House on the Home Front,” where home economics, including gardening and rationing made ends meet and contributed to the war effort. The small first floor apartment was dominated by the kitchen and partitioned to accommodate multiple generations.

*Within These Walls* also addresses the investigative research process involved in generating the museum exhibit. The exhibit’s first interpretive panel begins with the story of the preservation of 16 Elm Street and its transfer to the Smithsonian. Facsimiles of primary documents used in the research of the five families are consciously
used throughout the interpretive materials. As the visitor circulates through the exhibit, the interior and exterior of the structure are displayed with levels of exposure, revealing building technology and materials. A final interpretive section explicitly displays techniques of archival research, architectural archeology and analysis of architectural style to detect the history of a house. This serves as segue to invite visitors to research their own houses, using the *Within These Walls* interpretive website as a resource.

The five families represented in the *Within These Walls* exhibit were selected, like the house, for their capacity to relate vernacular American stories.\(^{79}\) The use of the narrative model synthesizes chronological, thematic, and contextual approaches to display, compelling visitors to put themselves in the place of the families that resided at 16 Elm Street. The presence of the full scale house both anchors and guides the interpretation, as each narrative gives the exhibit a sense of continuity, while developments in American history are reflected in the transformation of the house from a prominent address to a modest subdivided rental property. From the exposed structure, and in the framework of events in American history, curators have extended their interpretation to include conceptual patterns in domestic architectural history. Asking visitors questions, such as, “What would a visitor to Ipswich 250 years ago know about the Choates from the size, height, and style of this new house?” provokes thinking about how architectural design shapes not only the built environment, but social perceptions.

On a Grand Scale, The Hall of Architecture, Carnegie Museum of Art

The plaster cast collection at the Carnegie Museum of Art consists of representative examples of the world’s architectural treasures as assembled by Andrew Carnegie and his staff. Opening in 1907, the Hall of Architecture was motivated by Carnegie’s philanthropy and interest in architecture as a democratic art, to be shared by the general public. Carnegie’s interest was inspired by his observations of the plaster cast collections displayed at the 1893 World’s Columbian Exposition, the Metropolitan Museum of Art and the Slater Memorial Art Museum. With the guidance of Slater’s curator, Henry Watson Kent, Carnegie’s Director of the Department of Fine Arts, John W. Beatty assembled the casts. The collection was primarily ordered from various museums and dealers in Europe. Though many contemporary collections were focused on sculptural casts, Carnegie expressly assembled a collection of architectural examples. The casts in this collection range from the entire façade of the Abbey Church of Saint-Gilles-du-Gard to fragments of architectural ornament; a capital, a volute or a frieze. The examples illustrate Classical, Romanesque, and Gothic architecture. Carnegie’s intention was to bring the architectural marvels of the ancient world to the people of Pittsburgh bring “knowledge to the masses.”

In planning the art museum for the Carnegie Institute, architects Frank E. Alden and Alfred B. Harlow designed a grand skylit hall specifically to accommodate the

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80 Mattie Schloetzer, “Andrew Carnegie’s Original Reproductions,” 46.
81 Carnegie visited these exhibits from 1891-1895. For detailed accounts of these endeavors and further communication between institutions regarding assembling the collection, see: Schloetzer, Mattie. “Andrew Carnegie’s Original Reproductions; The Hall of Architecture at 100.” Western Pennsylvania History 90, no. 3 (Fall 2007): 37-47.
82 Ibid, 40-43.
83 Ibid, 46.
84 Andrew Carnegie’s Presentation of the Carnegie Library to the People of Pittsburgh, with a Description of the Dedicatory Exercises, November 5, 1895, as quoted in Ibid, 39.
collection of plaster casts. The hall is a large open space lined with Ionic columns that echo the collection’s Classical content. The space today has a dual function as gallery for the plaster casts and as an event venue, causing larger pieces to be kept to the edges of the central space (Illustration 2.7). An arcade along the perimeter of the hall houses the smaller pieces, many mounted on boards, and most in the same wall locations as they were originally hung. The pieces are arranged in a roughly chronological order, but no historical interpretation is offered beyond new labels, which identify the casts by the original’s site, date, designers and artists, then listing the present location of the original fragment (Illustration 2.8).

The *On a Grand Scale* exhibit was developed to celebrate the centennial of Carnegie’s plaster cast collection in 2007. A wealth of archival information informed the curation of the exhibit, which articulated the history of the collection’s inception and the role it played in Carnegie’s mission. The exhibit’s divergent interpretation of the historiography of Carnegie’s plaster casts placed the collection in the context of its contemporaries and the widespread manufacture of plaster casts to suit the demands of American museums and art schools. The large scale casts were moved to the center of the hall, joined by displays of interpretive materials that supported the exhibit, providing better access and important to the collection. Documents such as annotated plaster cast catalogs and communications between Carnegie, Beatty and Kent, were included to give a narrative to the collection’s assembly. A video was shown in the gallery to illustrate the process of producing plaster casts. With this background foundation, the significance of this important collection was made clear to visitors,

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85 The Hall of Architecture was specifically modeled on the Mausoleum at Halicarnassus. Ibid, 28.
86 Ibid, 44.
drawing attention and understanding to an otherwise generally unfamiliar and overlooked asset.

Since the return of the Hall of Architecture to its traditional installation, the Heinz Center for Architecture at the Carnegie Museum of Art is now preparing to plan a permanent reinterpretation of the collection. This includes formally accessioning each cast and building object files for each, legitimizing their importance to the museum’s overall art collection and their role in the museum’s initial objectives. The museum will cease offering the Hall of Architecture as an event venue, and return the plaster cast collection to the use Andrew Carnegie intended; an instructional display meant to enlighten and fascinate visitors. A principal goal to develop thematic educational programming on antiquities and the Classical world using the plaster cast collection will guide the reinterpretation planning. Some of the lessons from the On A Grand Scale exhibit may be used to put the plaster cast collection in contextual perspective.87

Conclusions from Current Exhibits
Lessons for future interpretive exhibits can be drawn from these three examples of current exhibits of architectural fragments. Though the breadth of fragment typologies ranges from individual ornamental material to the large assembly of an almost entire house, to facsimiles of sculptural elements and variously scaled assemblies, the exhibits reveal similarities in interpretative strategies. Architectural fragments are effective artifacts for display because of their visual power. As design, they are attractive; as crafted objects, they are valued for the skill and material that went into their creation;

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87 Plans for the reinterpretation are in the early stages of development. Tracy Myers, Curator, The Heinz Architectural Center, Carnegie Museum of Art, interview by author, February 19, 2010.
and as artifacts the past, they possess an aura of authenticity in their age and purpose. Architectural fragments are material culture, that when interpreted, are easily accessible by visitors. The arrangement of architectural fragments in modern institutional museums associates didactic messages beyond aesthetics, implicating their craft and technology. Further, architectural fragments can be used to suggest broad themes in architectural and social history. Whether an exhibit shows a chronology of regional methods of construction technology and styles of ornamentation, provides a constantly reinvented platform for the lives of ordinary citizens, or brings monumental architectural achievements to a working class city, each demonstrates the way larger ideas can be expressed through artifacts.

A narrative model of interpretation can increase the viewer’s recognition and ability to identify with the objects. Supporting materials, such as photographs and primary documents provide visual and informational context for fragments. It is also important to consider how exhibits might have an extended outcome for visitors. Exhibits of architectural fragments can initiate a broader appreciation for historic architecture, particularly if a connection is overtly made to comparable architecture which is extant, restored or destroyed. Illumination of the process of collecting and interpreting architectural fragments can foster an awareness of historic preservation, making evident the significance historic building fabric. When developing methods of display and interpretation for architectural fragments, taking into consideration the associative qualities of the objects is an important planning component in the creation of a rich and compelling exhibit.
CHAPTER 3: Analysis of Historic and Current Architectural Collections

An analysis of the history of architectural collecting and review of current exhibits draws together common practices that inform the evaluation of today’s architectural fragment collections for exhibition. This examination of precedents identifies patterns in origin to assess how architectural collections have been acquired. Typologies of architectural collections are classified in order to specifically define architectural fragments and to delimit this study to these artifacts. A description of theoretical motives for collecting architecture articulates the objectives for the practice. Finally, the history of the methods of display and interpretation for architectural collections is reviewed to consider ways these collections are valued and accessed. For the purpose of close study, these ideas are broken down to discrete concepts to extract common ideas. This analysis is the groundwork for creation of an analytical framework to assess architectural fragment collections for display.

Origins & Acquisition

The history of architectural collecting reveals only a few means by which artifacts have been acquired. Perhaps the earliest method of acquisition was salvage. Demolitions and restorations of buildings are prime opportunities to collect fragments. As evidenced by the use of spolia in ancient Roman and Byzantine cultures, the salvage and reuse of simple building fabric and ornamental details has taken place throughout the history. This continues with a more aesthetic tenor as 18th century gentlemen created romantic sham ruins on their country landscape estates. Again, in the 19th century, the activities of Elgin and Lenoir, and others collecting antiquities for national museums can be
considered salvage. In the 20th century, salvage was at the center of the cultural museum and preservation movement, as historic buildings were rapidly moved and demolished with urban development. Many modern institutional architectural fragments collections have origins in salvage.

A rather uncomfortable, yet common, method of acquisition was by theft. Probably given rise from the customs of pillage and plunder during wars, abandoned and partially ruined ancient sites were vulnerable to thievery. A widespread rediscovery of ancient Greek and Roman vestiges in 17th through the 19th centuries, brought gentlemen on grand tour to Europe’s sites of antiquity, pilfering fragments of architectural ruins to add to collections of curiosity and antiquarian interiors. Unauthorized removal continued, and somewhat legitimized, as 19th century museums in Europe and America sought to acquire specimen collections. Whether the removal of antiquities occurred with malice, ignorance, entitlement or outright purchase, the practice has resulted in artifacts deployed far from the context of their original sites, prompting questions of appropriate rights and ownership today.88

Through both the methods of salvage and theft, artifacts made their way into the hands of private dealers as well as collectors. Architectural specimens were a commodity among the elite, appearing with frequency at auction in the 18th and 19th centuries. An informal inheritance is seen through the professional collections of 19th century architects; acquisitions through estate sales and auctions passed architectural collections from one to the next.89 As early as the turn of the 19th century, museums were established to introduce the public to great artworks, particularly architectural

examples. This trend rapidly advanced in the late 19th and early 20th centuries, as a desire to share collections with a wider public audience impelled the rise of the museum. Many collections were donated or bequeathed to institutions set up to display the artifacts.

**Typologies of Architectural Collections**

Architectural fragments exist amid a myriad of types of architectural collections, appearing in a range of scales and in some forms that are purely representational. Architectural collections often begin with two-dimensional images, scaled models and facsimiles, such as plaster casts. The earliest museum collections of architectural sculpture from ancient sites blur the line between architecture and fine art, offering more wonder in their sculpted forms than their former relationship to a building. Period rooms are elements that can be reconstructed to form a complete interior. Purposely built, preserved or arranged groups of architectural examples, such as historic museum villages or an avenue of mausolea at a rural cemetery can be considered architectural collections on a landscape scale. To delimit the subject of this study, the above typologies will not be discussed in terms of exhibition and interpretation. The remainder of this study is focused on architectural fragments, original fabric that has become detached from a historic building.

**Original Artifacts: Fragments**

This group of typologies describes the core of this study, original architectural fragments. These are pieces of buildings, of various sizes, that have become disengaged

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90 Though many period rooms are reconstructed with alterations from the original configuration.
from their primary sites, or “could be the only surviving pieces, separated by weathering
[and] time.”91 Despite their name, architectural fragments are not necessarily broken
pieces; often intact elements of buildings are also called ‘fragments.’ Artifacts from this
group have great value to potential exhibits because they are familiar and accessible to
the public visitor, making them suitable for interpretation. For the purpose of
description for this study, original architectural fragments have been divided into
objects, and assemblies. These artifacts are the subject of the analytical framework and
criteria for interpretation.

**Objects:** Simple objects are the first of the fragment typologies. These are
generally one component, such as a nail, or can be comprised of several working
components, but usually are limited to a single material, as in hardware, e.g. a hinge.
Another kind of fragment object might be a broken element, such as an ornamental
detail which was part of a greater whole. Fragment objects come in a range of sizes
from a mortar sample to a framing timber. Their values cannot be judged on size or
level of completeness; a tiny chip of paint might hold great value in potential
conservation information, or an ornamental medallion might epitomize a design
aesthetic, but does not usually reveal information about construction techniques.

**Assemblies:** An assembly is a fragment consisting of a multiple components
which can be functional or static. They can be made of a single type of material, such as
a stone fireplace surround made of several pieces, or can be constructed of multiple
materials, such as a window, including wood and glass. Assemblies could be complete
elements, as an entire door entablature, or partial pieces, such as a broken fragment of

91 United States of America, Department of the Interior, National Park Service, Preservation Assistance
lathe and keyed plaster. The scale of assemblies has an effect on their display and interpretational advantages and limitations. Some assemblies, such as a portion of flooring, might be classified as either small or large, depending on their size and weight. Examples of small assemblies are; a mortise and tenon framing joint, a sample of masonry construction, or a door rail with hardware attached. Large assemblies might be as big as a staircase, a building cornice or a large portion of a house.

**Rationale for Collecting Architecture**

Collections are defined by their content together with the motive for their collection. Motives can be consciously didactic or purely decorative impulses to collect. Several themes arise when examining the reasons collectors have accumulated architectural collections. Personal and psychological reasons for collecting are contrasted by the aesthetic and pedagogical qualities of architecture as a collected subject. Architecture holds a special fascination because it combines art and engineering with culture, influencing the built environment. These qualities have long been honored and considered a path to intellectual improvement. Esteem for architects and architecture is the root of most of the motivations identified.

Psychological factors figure prominently in rationales for individual collectors. Collecting architectural artifacts as souvenirs is an extension of an admiration and nostalgia for the past. Not only do items collected serve as keepsakes of personal memory, but architectural objects are associated with the ingenuity of designers and creators of buildings. This is exemplified by the collection of souvenirs of Classical

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specimens from the Grand Tours of the 17\textsuperscript{th} through the 19\textsuperscript{th} centuries. Souvenirs were a way to commemorate a tangible piece of the experience, a testament to accomplishment of this rite of passage, as well as possess a bit of the ancient monuments and the genius behind their creation.

The idea of trophy is closely related to that of souvenir. Architectural artifacts as trophies surpass the evocative memory of mere souvenirs, serving as evidence of achievement, conveying a sense of triumph over the intellectual principles associated with architecture. This leads to an end of maintained or advanced social status. The prestige associated with understanding the values of cultural objects, especially architecture’s combined aesthetic and scientific characteristics, provided a mark of distinction and good taste for the elite. Architectural artifacts brought home as souvenir and trophy from the Grand Tour could then be displayed in private collections of curiosity or as decorative elements in antiquarian interiors, offering verification of one’s place in society.

Another theme apparent in the history of collecting architecture is the desire to educate the collector, professionals and the public. As seen by the collections of Sir John Soane, architectural collections have a tremendous pedagogical role. Images, such as prints and drawings, offer a certain illustration to students of architecture, but seeing actual examples allow a more vivid visual training. In particular, the three-dimensional characteristics of architectural examples show forms and use of materials that two-dimensional representations cannot. This follows with the establishment of architectural collections by the Ecole des Beaux Arts and other architectural academies.

An important extension of the concept of pedagogy and the educational qualities of architectural specimens is a persistent trend of aesthetic philanthropy in architectural
collecting. Architectural collections have been continually assembled in order to edify the public masses who could not afford to travel. Architectural exhibits at world’s expositions, public museums with cast collections and period rooms, as well as museum villages, had a democratic and philanthropic ideology.

The motive of prestige reappears on a greater scale with national collections, like those assembled by Lenoir and Elgin for France and Britain, respectively, in the early 19th century. There was a sense of political competition in these acquisitions. National collections are often intended to affirm the authority of a state, but also have a benevolent quality, as the intended audience is the nation’s citizens; the combination of these is a powerful source of national pride.94

Methods of Display for Architectural Collections

When gathered in a collective display, as in a private collection or a museum exhibit, the merits of architectural collections are enhanced in collaboration with one another. Seen in various forms of comparison and contrast, architectural objects convey meaning and values to their audience. Throughout this analysis, questions of value have emerged, influencing the origins and practical uses of architectural collections. Judging the value of architectural fragments is a difficult matter because their original meaning is derived from their part in a whole building. The loss of context removes the original intent of the designer and user, the relationship to the other parts, a sense of scale and relationship to the surrounding environment.95 The removal of architectural fragments from original sites puts their authenticity as parts of a whole at odds with their aesthetic

95 Lowenthal, The Past is a Foreign Country, 282-283, 287.
and educational values. Interpretation is the act of sorting out and expressing these values to make them comprehensible to an audience. The following discussion will review historical and current methods of display and extract themes of value that will help to conceive criteria for interpretation of architectural fragment collections today.

The initial attraction of architectural illustrations, replicas and specimens are their visual representation of design. Artistic talent has historically been celebrated and patronized in European and American cultures. This has arguably been more true for architects, whose discipline has such an evident impact on the built environment, an arena where the general public, across socio-economic class, can be the audience. Architecture from pedigreed designers has been given a premium aesthetic value through history. Beginning with the Arts and Crafts movement in the late 19th and early 20th centuries, a respect for building techniques has placed an emphasis on the architectural craftsmanship in addition to design. The accessible aesthetic attributes of architectural collections lends them to presentation. Three-dimensional architectural ornaments are particularly compelling for their sculptural qualities. Prior to the implementation of much classification or chronological information in the display of architectural collections, the use of architectural *objets d'art* in antiquarian interiors as Walpole decorated his Strawberry Hill, exemplifies the display of architectural artifacts for aesthetic reasons. The architectural fragment exhibit at the Art Institute of Chicago relies on the aesthetic value of their pieces to initially engage visitors, but as with most modern exhibits, also offers subsequent layers of value with interpretive panels.

Collections of architectural examples are a way to visualize the history and variety of architecture in the built environment. With artifacts and other representations, architecture can be compared in order to interpret variations in
historical and regional style, differences in building types, even variation among similar building types that cross lines of social class. When Lenoir arranged the artifacts for the Musée des Monuments Français, he initiated the idea of studying examples in a chronological succession. Displays of regional building types were common at world’s expositions, where architecture was exhibited to represent exotic cultures. In a related approach, examples of historical and regional architectural styles can be put into context to provide interpretation. Period rooms put architectural interiors in the contexts of their content; decorative furnishings, fine arts and utilitarian implements convey information by interpreting a detailed experience of architecture. Outdoor museum villages add to this, creating an environment where architectural examples are observed as a collective whole, interpreting the exterior context of a building and its environment. The Smithsonian National Museum of American History’s Within These Walls exhibit displays architecture using this contextual and historical approach, implicating other themes that tie in with the style and alterations of the house from both resident and external forces. The historical values of architectural collections are lies in their ability to illustrate architectural history, and the development of the built environment.

Architectural collections also demonstrate technological aspects of design and construction. Two-dimensional prints and drawings show proportion, structure and engineering. Three-dimensional specimens provide an opportunity interpret the way architectural objects are made, including their materials, construction and technology. They are inherently primary documents that illustrate building technologies make excellent teaching tools to architectural students as well as students of building crafts. As such, architectural collections have multifaceted educational values, which are
compounded by information from historical values, above. Sir John Soane’s many images, models, plaster casts and fragments were assembled as a study collection for his students. The *Within These Walls* exhibit incorporates elements of this technical and educational interpretation, for example; an explanation of the timber framing system that is the structure of the house.

**Interpreting Historic Preservation Methodologies**

A current growing trend in architectural exhibits involves explicitly interpreting the methodologies of historic preservation. This type of self conscious interpretive program runs parallel to some archeological excavations, which invite visitors to observe their worksites. At historic house museums, it is not uncommon to see an open investigation portal in a plaster wall or a place where layers of paint have been exposed. All three of the current exhibits reviewed involved an element of this approach, with a notable effort by Carnegie Museum of Art’s *On A Grand Scale*, which includes the story of the collection as a main theme in the exhibit. Making the work of preservation and conservation fields accessible to visitors invites them to gain insight into the technical academic values of a cultural resource. These efforts, combined with the display of architectural collections and the aesthetic, historic and educational values,

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have the potential to make an impact on the way visitors appreciate and experience their own built environment.
CHAPTER 4: Managing Architectural Fragment Collections as Cultural Resources

Collecting Architectural Fragments for Historic Preservation

The value of architectural fragment collections as cultural resources has emerged through the development of the historic preservation field. Instances of historic building fabric salvaged for preservation purposes occur from the time of Viollet-le-Duc in the mid-19th century. This practice continued with the construction of outdoor museums by private collectors through the early 20th century. Under director Horace Albright (1890-1987), the United States National Park Service began to take charge of historic sites in the 1930s, bringing a new focus on architectural history and cultural resources to the Department of the Interior. As the preservation field professionalized and was made formally legitimate by the National Historic Preservation Act of 1966, conservators, historians, architects, site managers, and many others continued to place increasing importance on the authentic building fabric as the preferred focus.

It was in this context that many historic parks, villages, and single building sites accumulated collections of architectural fragments. Fragment collections can be found in the private offices of architects, craftsmen and engineers. Historical societies and municipal historical commissions have also become repositories of architectural fragments with ties to their communities. With little overt thought or discussion, the pervasiveness of the practice indicates the value placed in these artifacts by the preservation field. Many collections were initiated to gain immediate knowledge for

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restoration projects and the preservation of the artifacts as long term resources was not considered. Yet, the saving of architectural fragments by preservationists often represents the promise of further information gained from future study.

In particular, National Park Service historical architect Charles E. Peterson was an early booster of the value of architectural fragments, spearheading the collection of two important institutional collections in the mid-20th century. In the late 1930s, Peterson led a campaign to salvage architectural artifacts from 40 city blocks being cleared to make way for the Jefferson National Expansion Memorial on the Mississippi River in St. Louis, Missouri. A museum of American architecture was planned to house and display this collection in St Louis, but instead, the pieces were distributed to various museums, including the Smithsonian in Washington, DC. In the early 1950s, Peterson was the force behind architectural salvage as the collection was established at Independence National Historical Park. Other architectural study collections were gathered at such important institutions as; the Society for the Preservation of New England Antiquities, Colonial Williamsburg, and English Heritage.

Discourse through the 1990s

A shortage of scholarly discourse on the subject through the early years of historic preservation has impeded proper stewardship of architectural fragment collections. It

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100 United States, Department of the Interior, National "Second Lives," ix.
was not until the early 1990s that an open dialogue about the importance, meaning and consequences of maintaining these collections emerged between preservation professionals. With the advocacy of a few determined individuals, informal conversations evolved into research regarding the use of fragment collections. In 1987, National Park Service program analyst Emogene Bevitt, in collaboration with historical architects Hugh C. Miller and Lee H. Nelson, began to develop a self-directed learning program for National Park Service personnel, called *The Skills Development Plan for Historical Architects and Others with Historic Preservation Responsibilities*. Research for this project recognized architectural fragment collections as a resource. An initial survey was carried out to identify a preliminary list of architectural fragment collections held by National Park Service sites and to determine their impact on preservation work in the field. The responses to this survey lay a baseline for common interests in the value and stewardship of fragment collections. This research was developed into a guideline for the Smithsonian Institution’s architectural fragment collection at the National Museum of American History. A presentation entitled, “Historic Materials and Architectural Artifacts as Prototypes for Substitute Materials,” followed at the 1991 Association for Preservation Technology International annual conference, bringing the subject to the attention of the wider field.

The following year, a panel discussion about architectural fragment collections was presented at the 1992 Association for Preservation Technology International

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102 The individuals responsible for early advocacy of architectural fragment collections are a relatively small group, most of whom wrote articles for the 1993 and 1994 *Cultural Resource Management* publications cited in this chapter.

annual conference.\textsuperscript{104} As a result, a wider group of preservation professionals involved with stewardship of these collections began to trade ideas about this particular cultural resource type, drawing attention to its significance. In 1993, an article by Bevitt was published defining and explaining “architectural study collections” in the National Park Service journal, \textit{Cultural Resource Management}. The article was followed by a call for response to an expanded survey form about existing collections held by museums and parks nationwide.\textsuperscript{105} A subsequent thematic issue of \textit{Cultural Resource Management} focusing solely on architectural fragment collections was published later in 1993, in which 14 contributors wrote about the significance of architectural fragment collections in various aspects of the preservation field.

\textbf{Second Lives Survey}

The results of the National Parks Service nationwide survey of architectural fragment collections were reported in 1994 by Bevitt in a publication entitled, “Second Lives: A Survey of Architectural Artifacts in the United States.” The survey identified the institutions that held architectural collections and ascertain details about their content and use.\textsuperscript{106} Respondents included a cross-section of large and small institutions with collections of varied scopes. Though the survey found collections were common among cultural heritage institutions, they were characterized as “a largely undiscovered resource for research or study. Of the 170 collections in this listing, only 54\% have even one object on exhibit. Only 33\% can state that any publications have referred to


\textsuperscript{106} See Appendix A for a copy of the \textit{Second Lives Survey} form.
items from their collection.” 107 The published report gives a review of each institution’s response in the form of a directory with an abstract about each collection in order to encourage a network of resources. In index listing the collection by their content is also included. The Second Lives survey was instrumental in providing initial data to the cultural resource managers and researchers interested in promoting recognition and better care for architectural fragment collections.

After the National Park Service survey report was released, the Association for Preservation Technology International took the lead in advocating for architectural fragment collections. At the professional organization’s 1994 meeting a committee was formally established to advocate for the recognition and preservation of architectural fragment collections. The following official objectives of the committee were declared:

1. Establish a network of individuals and institutions who collect, own, or manage architectural fragments.
2. Promote better management of architectural fragments by identifying their value as collections.
3. Teach collections management practices for architectural fragments.
4. Publish useful documents, such as recommended guidelines for collecting, accessioning and deaccessioning architectural fragments. 108

A third issue of Cultural Resource Management, published in 1994, announced the committee’s first venture, a partnership with Middle Tennessee State University’s Center for Historic Preservation, to expand the data from the Second Lives survey with a new questionnaire regarding collections management of architectural fragment collections. 109 The attention on architectural fragments was transmitted through the

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museum community, stimulating additional related events, such as a panel discussion on collections management for fragments held by the Mid-Atlantic Association of Museums.

1995 Williamsburg Resolutions

Through the first 25 years of the formal preservation movement there was little policy to guide the use and care of these collections. The responses to the 1994 Association for Preservation Technology International survey were used to develop a pilot workshop in collections management tailored to the needs of architectural fragment collections. In 1995, the Seminar on Current Collections Management Practices for Architectural Fragments was held in Williamsburg, Virginia. The seminar was sponsored by the National Park Service’s Cultural Resource Training initiative, the Association for Preservation Technology International, the Center for Historic Preservation at Middle Tennessee State University and the Colonial Williamsburg Foundation. At this seminar, a set of principles, called the Williamsburg Resolutions on Architectural Fragments, laid down basic ethical and procedural principles regarding the ethics of salvage and documentation of architectural fragments.

The focus of the Williamsburg Resolutions was the practical and ethical collections management, an intention that the Architectural Fragments Committee of the Association for Preservation Technology International felt was a priority with consideration of the increased effort in the preservation community to accession and properly store architectural fragment collections.

111 See Appendix B for The Williamsburg Principles.
Addressing Collections Management Challenges

Storage is a difficult problem for collections management of architectural fragments, as their needs are so complex. The range of specimen sizes requires multiple systems to organize and accommodate. Awkward three-dimensional forms at varying weights add to the requirements of the necessary facilities. Some larger assemblies can be dismantled but need numerous pieces kept coordinated. In addition, accessibility for use by researchers and staff is essential.112 Catherine Anderson, who worked with the Smithsonian Institution’s architectural collection as a post-graduate fellow in 1991 and 1992, made detailed recommendations regarding proper storage conservation of architectural fragments.113

Conservation of architectural artifacts is another curatorial concern complicated by the multiple materials of individual assembled artifacts and the composition of collections as a whole. It is important that damaged and fragile specimens be stabilized or considered for deaccession rather than stored arbitrarily. Determining proper temperature, humidity and lighting control for storage facilities is made difficult by assemblies consisting of varied materials.114 Some objects may come with other risks demanding attention, such as asbestos or lead. Many of the common conservation concerns will be addressed by providing the artifacts with sensitive housing to prevent further deterioration.

The task of accessioning and cataloging architectural collections comes with another set of dilemmas. Authors John Maounis and Elizabeth Banks recommended

112 John Marks, "The Collection at Independence NHP: Source of Information "Not Found in Books""
113 Catherine Anderson, "The Care of Architectural Collections: a Research Project at the Smithsonian,"
that museums make a formal commitment to the care of architectural collections by recognition of their contribution to the overall collection. Institutions should operate within criteria of collection to limit the scope and guide acquisition objectives.\textsuperscript{115} Cataloging should be done in a database which allows streamlined numbering system. Catalog records should include an object name, description, date, provenance and historical association or criteria for collection.\textsuperscript{116} Objects must also be labeled with their accession numbers, a problem whose solution will depend on the necessary sensitivity to an individual object’s composition.\textsuperscript{117} Documentation, including photographs, drawings,\textsuperscript{118} original context and provenance records also need to be managed in coordination with the object catalog database.\textsuperscript{119} At the time of the \textit{Cultural Resource Management} thematic issue in 1993, the contributing authors represented a cross-section of efforts to address these concerns various institutions.

\textbf{A Resource for Treating and Understanding Historic Architecture}

The use of architectural fragments by preservation professionals has generally occurred by two methods. Architectural fragments in good condition can be reused in reconstruction or restoration projects.\textsuperscript{120} As early as 1928, the \textit{Decalogue} standards at Colonial Williamsburg impelled “the use of old materials and details of the period and

\textsuperscript{116} Marks, “The Collection at Independence,” 10.
\textsuperscript{120} Reid. "Colonial Williamsburg's Architectural Fragments," 5.
character” when undertaking restoration and reconstruction.\textsuperscript{121} This approach follows in the \textit{United States Secretary of the Interior Standards for the Treatment of Historic Properties} developed as mandated by the 1966 National Historic Preservation Act, in which retention of original materials and their accurate reproduction, based on documentary evidence is recommended.\textsuperscript{122} These guidelines illustrate the enduring preservation principle that materials, technology and design original to a historic building should steer physical conservation efforts. When the fragmentary evidence is too damaged or fragile to be reused, it can be modeled for new materials that retain the historic style and character as originally designed and built.

More often, material fragments that have become detached from their structures are the only surviving primary documents to convey the record of a historic building which has been lost or altered.\textsuperscript{123} Collections of these artifacts have served as three-dimensional reference materials for preservation professionals. In addition to providing appropriate examples from which to replicate new building elements, specimens can illustrate rich information about the history of building technology and design that might not be learned from a print library.\textsuperscript{124} Bevitt described the content of


architectural study collections as building elements that have a chance at a second life as educational artifacts.\textsuperscript{125}

When examined closely, fragments can inform the observer about the people “who designed, crafted and used them over time.”\textsuperscript{126} Information regarding the construction and performance of a building, including the way it was assembled, the tools and materials used to construct it, and why it may have failed can be garnered from study of the remaining artifacts.\textsuperscript{127} Collections of architectural fragments offer an opportunity to look at pieces of buildings which are usually out of reach for close study. A tactile interaction with an object reveals even more about materials and building techniques as the handler can feel dimensions and textures, and move mechanical parts, combining multiple senses to the observation process. In a collection, the fragments gain value from their comparison and contrast to one another.\textsuperscript{128} Following in the convention of collectors and architects over time, modern preservationists agree architectural fragments are an incomparable tool to a better understanding of historic buildings.

A Multidisciplinary Resource for Architectural Investigation

The diverse disciplines that make up the historic preservation field are well structured to benefit from architectural fragment collections as a cultural resource. Developing in parallel with the burgeoning archeology field, above ground architectural investigation became an essential part of the preservation work to understand a historic site. Following a careful investigation combined with historical research, treatments to

\textsuperscript{125} Bevitt, "Architectural Study Collections," 1.
\textsuperscript{126} Ibid.
\textsuperscript{127} Ibid, 3.
preserve, rehabilitate, restore or reconstruct can commence. In the 1993 thematic *Cultural Resources Management* publication, representatives from various phases of this work related their perspectives on the value of architectural fragments in an anthology of short essays. An ornamental plasterer used an experience with a pair of elaborate ceiling medallion to assert the claim that together with molds and patterns, plaster models seen closely show the level of detail necessary to understand the complexity of the plaster work. From these examples, a craftsperson can see how the elements of the ornamental assemblies are put together, allowing for proper replication of the process. 17th century casement window specimens reviewed by an architectural historian illustrate building technologies brought from European traditions to the colonies. An additional example from the 1930s, modeled on the 300 year old predecessor an attempt to replicate a historical look while advancing technology.

The importance of artifacts supported by records, such as Historic American Buildings Survey drawings for a set of 18th century framing joists, showing a range of joinery techniques, each adapted for the joist’s individual original context, was discussed by a historical architect. This author also compared hardware to show the hierarchical use of various qualities of hinges distributed through a single late 18th century house in relationship to the best rooms. The more expensive hinges with newer technologies were sourced to an illustrated period hardware catalog, where the hardware could be ordered from England. A structural engineer points out that even failed building elements can be useful examples for developing effective repairs with close study of

pathologies to the artifacts. These detailed descriptions epitomize the extent of practical use of architectural artifacts by preservation professionals from any expertise.

**Teaching Historic Preservation with Artifacts**

The 1990s publications make a strong endorsement to the value of architectural study collections as an asset to educational curriculum. In an educational setting, texts, lectures and images are supplemented by a student’s first-hand interaction with objects. Architectural fragments complement examination of the history of construction technologies in the context of a building, revealing hidden components and methods of assembly. The essential preservation task of understanding construction chronology is clarified by looking at building elements in comparison with those of different periods and styles. Studied in tandem with the tools that created them, students make tangible connections between design and craft. On the job training for engineers, architects and craftspeople is improved by architectural fragment collections when their formal training has lacked curriculum covering construction in historic structures.

**Interpretation & Exhibition of Architectural Fragment Collections**

As important a role architectural study collections play in the work of preservation professionals, they have an equally vital role as cultural resources with value to the general public. Museum exhibits with interpretive displays are the conventional method by which cultural aesthetic and educational information about architectural fragments has been conveyed to the public. This has not been an uncommon practice,

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confirmed by over half of the respondents to the *Second Lives* survey who reported exhibition as part of their collections practice.\footnote{United States Department of the Interior, *Second Lives: A Survey*, xii.} In the thematic issue of *Cultural Resource Management* in 1993, two exhibits were highlighted to exemplify the method and approach of these displays. A chronology of window styles, from 1630-1930 was developed for a conference on historic windows in 1986, going on to travel to four cities. The *Windows Through Time* exhibit illustrated how chronological comparison between building elements of a type can become a compelling didactic display.\footnote{"Windows Through Time: An Exhibit of American Windows 1630 - 1930," *Cultural Resource Management* 16, no. 8 (1993): 28.} Architect and professor of architectural archeology John Milner explained how artifacts from architectural investigations can be used to demonstrate historic building technologies and the construction chronology of a building.\footnote{Milner, "Useful Teaching Aids," 25.} At his project, the Mulenburg House, the intent of the exhibit included a self conscious interpretation of preservation work to analyze, document and restore the house.\footnote{Ibid, 25.} In both cases, the objects were displayed in the context of supporting documentation, whether drawings, photographs or historical description. Such exhibits were also notably organized by the Society for the Preservation of New England, the Historic Charleston Foundation, the Smithsonian, and Independence National Historical Park\footnote{Early architectural fragment exhibits at Independence Park with be reviewed in Chapter 7.} During this period of resolute dialogue, the focus remained on curatorial assessment of architectural fragment collections, leaving little room for analysis of appropriate interpretation and exhibition.
Related Concepts in Museology

Concepts from the general study of museums can be consulted to guide the display of architectural fragments. The studies of the evolution of art, decorative arts, anthropology, industry, technology, and science share the aspiration to convey a better understanding of human life and material culture. Museums exist to hold objects and specimens which have been inherited from the past and to give those objects a new role, by interpreting them as material culture.¹⁴⁰ This is not a straightforward prospect. Just as politics and ideology can have a great impact on the content of a collection, they also can influence the premise and reception of an exhibit.¹⁴¹

The organization and placement of objects on display has much to do with the way in which an audience perceives them and takes meaning from them.¹⁴² Five typologies of display can be identified which might contribute to the conception and structure of an exhibit of architectural fragments. These can be seen on a conceptual scale related to the amount of textual and visual material employed to support the interpretation of the objects on display.¹⁴³ An aesthetic display relies on the qualities of an object itself to make an impression with little expository information available to further inform the viewer.¹⁴⁴ Aesthetic displays imply a privileged understanding between the experience of the viewer and the object, effectively removing the need for the voice of the curator. The chronological arrangement of objects is a method of

showing an evolution in design, technology and craftsmanship over time.\footnote{Newhouse, \textit{Art and the Power of Placement}, 254.} Traditional in historical exhibits, the chronological strategy’s use of additional material can be as minimal as a timeline, relying heavily on comparison of the objects in relation to one another to show progression. Thematic exhibits capitalize on objects grouped together compare, contrast or to draw attention to a shared a trait, such as a function, genre classification,\footnote{Ibid, 258-259.} a design or social idea.\footnote{Vergo, “The Reticent Object,” 54–55.} In a thematic display, objects are used as tangible evidence of a theme\footnote{Spencer R. Crew and James E. Sims, "Locating Authenticity: Fragments of a Dialogue," in \textit{Exhibiting Cultures: The Poetics and Politics of Museum Display}, ed. Ivan Karp and Steven D. Lavine (Washington, DC: Smithsonian Institution Press, 1991), 169.} which requires substantial additional material. Exhibits organized through a narrative display place objects together to tell a particular story. Objects selected for a narrative display should evoke a relatable story, using ample additional materials to weave and reinforce the details, connecting the objects and ideas.\footnote{Though a subset of the thematic display according to Newhouse, the “narrative” display is isolated here because of its accessibility and exceptional ability to compel audiences. For more on the ways in which audiences relate to narrative exhibits, see: Christine Johnstone, “Your Granny Had One of Those! How Visitors Use Museum Collections,” in \textit{History and Heritage: Consuming the Past in Contemporary Culture}, ed. John Arnold, Kate Davies, and Simon Ditchfield (Donhead St. Mary, Shaftesbury: Donhead, 1998), 68–75.} A contextual display returns objects to settings where they might have been found in their original life.\footnote{Smith, "Museums, Artifacts', and Meanings," 20; Newhouse, \textit{Art and the Power of Placement}, 254 & 279; and Vergo, “The Reticent Object,” 48–49.} Requiring the most associative material, contextual displays immerse objects within an environment to present their meaning. These typologies are typically used in combination to shape an exhibit, taking care to balance between the object content and the historical ideas that drive an exhibit.\footnote{Crew and Sims, "Locating Authenticity," 169.}
Heritage Interpretation Theory

In the heritage preservation field, interpretation is generally defined as the transmission of historical significance from scholars to the public. It includes written, visual and verbal information and can take the form of exhibits, tours, published material or other programming. Many constructs and guidelines have been established by national and international heritage preservation groups to aid curators and site managers in planning interpretations for heritage resources. Two of these stand out with clear and sound principles which can inform the development of an interpretive exhibit for architectural fragment collections: Tilden’s Principles and the International Council on Monuments and Sites Ename Charter.

Though these guidelines were drafted 50 years apart, the core messages are constant. The interpretive process is should take place in a compelling manner which both educates and stimulates curiosity. Interpretation must establish a link between the viewer and the resource. Like the thematic and narrative exhibit typologies above, interpretation should tell a story, relating individual narratives to greater trends in social history and the history of the built environment. Recently, the field has been expected to consider multiple layers of history, addressing cultural pluralism and consciously seeking to tell the story of the vernacular cultural landscape as well as the prominent.\textsuperscript{152} The result of these efforts not only conveys the significance of heritage sites to the visitor but, ideally, can have the secondary effects of fostering a sense of public ownership of heritage, as well as engendering an interest in the fate of heritage

resources. To this end, there has been a largely unstudied trend to interpret the work of historic preservationists as a self-conscious supplement to heritage interpretation.\(^{153}\)

**Tilden’s Principles**

Perhaps one of the most steadfast philosophies articulated about heritage interpretation is that of early National Park Service consultant Freeman Tilden. From the 1940s through the 1970s, Tilden traveled through national, state and local parks observing and teaching interpretation. His book, *Interpreting Our Heritage*, originally published in 1957, is known as a textbook among park rangers, environmentalists, preservationists and heritage professionals. Tilden defines heritage interpretation as “an educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.”\(^{154}\) This accessible perspective easily applies to a range of heritage resources including historic sites and artifact collections.

In the book, Tilden laid out six principles of interpretation to guide those responsible for conveying the value of heritage resources to the public.\(^{155}\) Tilden’s philosophy revolves around the central idea of interpretation as a means of making a connection between an audience and the cultural resource. Effective interpretation is relevant because it elicits a response by touching common ground. Interpretation is at its most successful when it incites a response that extends beyond attention to an


\(^{155}\) See Appendix C for Tilden’s Principles.
exhibit or tour. Tilden wanted a visitor’s experience to transcend the boundaries of a cultural resource, influencing their daily lives with continued relevance and awareness.

**International Council on Monuments and Sites Ename Charter**

The International Council on Monuments and Sites ratified the Ename Charter in 2008, setting an international standard for heritage interpretation. The Ename Charter “seeks to encourage a wide public appreciation of cultural heritage sites as places and sources of learning and reflection about the past, as well as valuable resources for sustainable community development and intercultural and intergenerational dialogue.” The document reflects current scholarship regarding heritage management toward public participation, responsible research practices and an inclusive approach toward multiple values. Each of the seven principles of the Ename Charter are followed by objectives which briefly explain them.

The Ename Charter principles fold modern perspectives and current issues into the guidelines for interpretation. Still, the message emphasizes public involvement, reinforcing the idea that the preservation of cultural resources is done for the benefit of the public. Hence, preservation professionals are obligated to make the values and stories of cultural resources accessible to the public. This includes not only telling the stories and conveying the meaning of significant places, but seeking public engagement in their preservation.

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158 See Appendix D for the seven principles of the Ename Charter.
Scholarship on current architectural fragment collections reached a peak in the early 1990s, as preservation professionals addressed managing these resources as assets. The initial discourse was limited to technical curatorial concerns of cataloging and storing these sometimes difficult collections. Further scholarship had experts of diverse perspectives assessing and articulating the various values of these collections. After the formal Williamsburg Resolutions were drawn up in 1995, published professional dialogue diminished. To date, little has been written regarding the interpretation and exhibition of architectural fragments for public audiences. Taking into account exhibit typologies from the study of museums and guidelines for heritage interpretation, lays a foundation for developing a framework to assess architectural fragment collections in order to design appropriate and compelling interpretation to the public.
Architectural fragments are material culture. They represent information about the way people have designed, constructed and lived in the build environment. Their diverse and layered facets of significance, including design, fabrication\textsuperscript{159} and historical associations, make it difficult to comprehend the full extent of their value as cultural resources. Furthermore, the value of architectural fragments can be obscured by their removal and disassociation from their original context. The capacity of architectural artifacts to provide reference information to historic preservation professionals has been well established, but approaches to interpretation of the resource type for the public have not been discussed in a collective manner. Because of their complicated significance, determining which aspects of architectural fragments to emphasize in an interpretive exhibit is a challenge. The analytical framework provides a method to explore the content of a collection with thematic concepts in mind, in order to discover what facets of importance might be conveyed to the public in an exhibition.

To rationalize the process of sorting the diverse items that make up an architectural fragment collection and the complicated corresponding thematic ideas, a guided procedure by which cultural resource managers may evaluate these collections for display and interpretation has been developed. The framework examines the content of collections, extracting themes of aesthetic, educational and historical value. A matrix format has been devised to direct the steward to first sort objects into broad categories of building components in the y-axis, then asking for further information regarding areas of potential significance which might contribute to the objects’ meaning.

\textsuperscript{159} Materials selection and construction techniques.
in the x-axis. The analysis takes the evaluation an additional step to stimulate consideration of the ways in which the areas of significance identified might lead to interpretive exhibitions.

The analytic framework is not intended to be a meticulous survey concerned with the fine grained details of a collection’s content, but a generalized way to steer thinking about architectural objects in terms of thematic exhibitions. Each institution will have a particular cataloging and nomenclature system used to record the accession of artifacts into their collections, so the requirements of this study’s framework were to simplify that information and synthesize it with the criteria for significance. In the process of developing the matrix, several systems were tested for registering a collection’s object content on the y-axis. Traditional museum classification systems, such as Chenhall’s Nomenclature, provide a controlled vocabulary, but do not sub-categorize objects by type or material. Very technical and comprehensive systems, such as the Construction Specifications Institute’s MasterFormat, proved to be too extensive to reasonably manage the range of objects in terms of thematic concepts. While the advantage of a system universally accepted in the building trade makes sense for potential study collection users, the framework of this study seeks to address an audience of curators at art and history institutions who wish to evaluate a collection for exhibition. The objective of this process is not to duplicate the catalog of the collection,

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160 See Appendix E for a copy of the analytical matrix form.
but rather, to simplify the content inventory, placing focus on the appraisal of the collection’s associated values. Instead, this system assumes the work of cataloging a collection has been done, using general terms to group the content by building components.

From these trials, it was determined that grouping building components in a format that acknowledged their relationship to the construction systems that comprise a whole building contributed to the success of the framework’s reasoning process. Returning to the 1990s literature and research about architectural fragment collections, the terms for the groups of building components are drawn from the 1993 *Second Lives Survey* questionnaire. Author Emogene Bevitt identifies broad categories that provide a method of conceptually managing architectural fragment collections, which are often large groups of diverse objects, in terms of their role in the assembly of a building.163 The 20 building component categories identified by the *Second Lives Survey* are as follows: structural parts, exterior features, wall cladding, roofing materials, rain conductor parts, window parts, doors and related features, interior features, heating devices and stoves, flooring, lighting devices, plumbing equipment, hardware, metals, streetscape and small-scale elements in the landscape, molding samples, plaster samples, paint samples, wallpaper samples and mortar samples. In addition, a row for any other objects is included for items unclassified above.164 The cultural resource manager is asked to complete the y-axis by filling in the “object” column with items from their

collections which fit into each of the types of building components form the y-axis of the matrix.

To prompt thinking about themes of significance, the x-axis of the matrix presents eight topics regarding the context, design and manufacture of the objects in each category of building components. These topics: building type, architect or designer, architectural style and period, regionalism, materials, ornamental craftsmanship and technological craftsmanship, are the criteria for interpretation; ideas by which to evaluate the content of a collection. They describe the intersections of traditional building techniques and cultural heritage. The steward is asked to complete the matrix by synthesizing the information about the content of the architectural fragment collection and what is known about the objects in each of these areas. Again, this assignment is not intended to replicate a catalog, but find commonalities that point toward interpretive themes. The criteria for interpretation are described below:

**Building Type**

Defining the building types from which the artifacts in the collection come from is important in order to recall the context of their original situation, placing the part within the whole. Many connections between aspects of significance are seen through this qualification. Distinctions between landmark and vernacular buildings indicate the intention of their design and use. Choices of materials, ornamentation, even technologies employed can be related to the building type. Describing a building as commercial, domestic, industrial, civic or religious helps characterize the context in which the parts were made.
**Architect or Designer**

The establishment of a connection between a building fragment and a known designer places the fragment in the context of that designer’s other work and associated style trends. Both architects and more specialized designers, such as interior designers, should be noted in this category.\(^{165}\) A characteristic ornamental motif or use of a certain window form might illustrate a designer’s aesthetic. The particular characteristics of a designer’s work are influenced by proximate architectural trends, and can also affect architectural modes themselves. Additionally, there are often historical and regional associations to a particular designer’s work. It is important to ascertain and understand contextual aspects implied by the work of a known designer.

**Architectural Style and Period**

Identifying the architectural style and period of a fragment’s source gives the object a temporal layer of context and meaning. Fragments are often characteristic examples of the features which define an architectural style. Both decorative and technological objects themselves can date a building and knowing the form of the whole can help define a part. The classification of architecture into a neat chronology of “styles” should be done with caution, but doing so in this situation places the artifacts into a time frame in architectural history, which is helpful in determining their significance. Architectural styles are responsive to taste and fashion trends, and often have a relationship to social status and conventions which can be conveyed by architectural fragments. For instance, 18\(^{th}\) century Georgian interior fielded paneling might have

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\(^{165}\) Craftspeople who specialize in specific decorative work, such as sculptors or ornamental metal workers should be noted in the “ornamental craftsmanship” category. More technical craftspeople, such as carpenters or masons should be registered in the “technological craftsmanship” column.
been placed in the most public room of house, indicating wealth and taste to visitors received there, an example of hierarchical finishes, where less detailing would be found in more intimate family spaces.

**Regionalism**

Regionalism describes certain architectural qualities characteristic of a particular locale. This goes beyond the features of architectural style, though the two can be complementary. Regionalism focuses on the way something is designed, put together or the material used to construct it as a response to the geographic environment where it is built. Materials and styles of construction often reflect the ethnography of a locale’s inhabitants. Distinctions of urban and rural construction and design could also be noted under this heading. A fragment which exemplifies regionalism might be a locally quarried stone used in masonry cladding, or a truss joint system which reflects the work of local joiners.

**Materials**

The material compositions of architectural fragments are central to understanding their manufacture and use in construction. The manufacture of building materials includes methods of production of the raw goods and fabrication of the finished component. Stone, wood, metals, terra cotta and many other building materials have different properties, strengths and limitations, and understanding these is essential to making sense of an architectural artifact. The use of certain building materials can also indicate the expense necessary to craft materials of varying degrees of quality. Accounts of
building materials manufacture are useful additions to interpretation, and can feature an explanation of the process and include the associated tools.

**Ornamental Craftsmanship**

Examples of embellishment are common in architectural fragment collections. These might have a link to a designer, but also tell of their production. Sculptors, carvers, blacksmiths, painters and like artisans, have plied their trades in the architectural field by contributing decorative elements. Notations in this category should include the ornamental work of known craftworkers. Ornamental specimens can be from interior or exterior locations and take numerous forms, whether the object is a functional building component itself, as a wrought iron gate or structural column or simply a decorative addition, as a floor mosaic or bargeboard. Like building materials, the practice of the artisan’s craft can be a theme for interpretation, showing how the ornament is designed, worked and shaped, then installed in a building.

**Technological Craftsmanship**

Architectural fragments are less recognized as evidence of traditional construction methods, but the underlying structure of a building may be equally represented. Specimens which show the manufacture and joinery of building components provide dimensional clues to the craftsmanship of the more technical building trades. The techniques of skilled craftspeople who constructed the fundamentals of a building; foundation, framing, stairs, flooring, walls and roof, are illustrated by fragments of these building components. If these builders or craftsmen are known, they should be noted in this category. Artifacts that demonstrate mechanical systems, such as heating,
plumbing and electricity, should also be included in the technological category. It is important to note fragments which show the methods used to join these components together, including parts of the same material, as in pegged floor boards and those of different materials, as in plaster and lathe. The design and use of hardware is another important subject in this category. The interpretation of technological examples connects the visitor with deeper significance to objects they are already familiar with.

**Synthesis**

Using the analytical framework, the stewards of architectural fragment collections compile an index of topics the objects represent. Interpretive strategies are best when more than one of the rubrics are combined to create a theme. If a collection has a wealth of terra cotta specimens *19th Century Terra Cotta Masonry* might be an appropriate exhibition theme, where a building material is qualified by a time period. A more refined theme could link several categories, such as, *Terra Cotta Ornamentation on Skyscrapers in the Prairie Region*. This theme could be expanded by including the process of manufacturing the terra cotta building material, the design and production of sculpted ornaments by molds, glazing techniques and their assembly in place. The interpretation might be enhanced by the first person narrative of a terra cotta craftsman or history of a manufactory. If the collection includes pieces by a particular designer, that individual’s biography and work could be explored, emphasizing their design vocabulary and use of terra cotta ornament.

Two other wide-view topics should be considered when planning an exhibit of architectural fragments. The history of planning and development of the city or region the artifacts represent adds a holistic perspective to an exhibit script. When the
audience is introduced to the contextual built environment, especially using visual tools, such as historic images and maps, this orients the visitor to the place. Architectural fragments often have factors of significance that relate to the development of their areas of origin. This relationship to the environment and its change over time to the present is an important concept that connects the visitor’s experience of a place to the artifacts.

Interpretation of the preservation and historiography communicates the nature of the circumstances in which an architectural fragment collection came to be. How the artifacts were collected and who collected them are important facets of the scope of a collection. Perhaps even more significant are the reasons why a collection was assembled and whether a set of criteria were used in the selection of artifacts. A consideration of the methods of historical and preservation scholarship add a self-conscious layer of significance to architectural fragment collections that can multiply and direct their meaning and interpretation.

Cultural resource managers should not limit their evaluation to determination of the factual details about the content of a collection, but to implicate the social and cultural histories the objects illustrate as well. Taking into account how and why architectural objects were designed and made enriches the potential interpretive themes. Narrative approaches which show the way individuals participated in the design and craft of traditional construction give visitors a personal connection with the objects. Extending interpretation to look at the bigger picture, the role architectural style and building technology played in the development of a city or region places fragments in the context of the wider built environment. Portraying the history and motives of a collection itself promotes the valuable afterlives of fragments. Architectural fragments
are discrete objects an audience can comprehend and appreciate for their aesthetics or ingenuity, but their true value lies in the ways they represent human civilization.

The task of completing the matrix is intended to reveal thematic ideas by exploring significant attributes about the content of architectural fragment collections. In the process of examining the patterns and connections between building components and categories of significance, a number of possible interpretive strategies may emerge. The challenge presented by Freeman Tilden and the Edame Charter is to select and weave the appropriate discovered values together and relate them to the visitor in an accessible, compelling and provocative manner. To advance this purpose, the analysis gathers the categories of significance to raise questions which probe broader themes associated with the cultural aspects of the development of the built environment. When synthesized with meaningful themes, architectural fragments will resonate in the public’s awareness, reflection and engagement with the historic built environment.
Chapter 6: The History and Ideology of the Architectural Study Collection at Independence National Historical Park

Under the auspices of the Historic Sites Act of 1935, which mandated the federal protection of historic properties on behalf of American citizens, the National Park Service began to acquire historic property in Philadelphia in 1938 without a notion of creating a cohesive park site. Though interrupted and delayed by World War II and various political obstacles, a local impulse to create a national park celebrating the founding of the nation gained widespread support and motivation by the mid-1940s. Amid a tough political atmosphere and without a streamlined planning process, the Park’s establishment was an uphill climb that tested the philosophies of historians and architects, cultivating systems that would define the field of historic preservation.

By 1947, the federal, state and municipal governments were involved in a series of planning negotiations for the first national historical park in an urban setting. At this time, restoration architect Charles E. Peterson, respected for his work with the National Park Service since 1929, in particular his expertise on historic architecture and development of the Historic American Buildings Survey, was asked to join the effort. Peterson’s recommendations emphasized the retention of the city’s historic urban fabric, including vernacular colonial buildings and the historic street grid. This plan contrasted with other proposals which called for demolitions to create an open park-like setting to highlight Independence Hall and other nearby landmark buildings to be preserved. Peterson advised against demolitions which would leave buildings deemed

167 Ibid 40–49.
168 Ibid, 50.
worthy of preservation without their urban context, skewing the perception of the historic urban landscape.\textsuperscript{169}

After numerous revisions and legislative moves, a local commission authorized to research the endeavor sent their report to Congress in 1948. Once passed through Congress, President Truman signed the bill establishing Independence National Historical Park into law on June 28, 1948.\textsuperscript{170} The law did not provide approval of any comprehensive plan to the physical fabric of the park, though it did specifically list properties to be included. The details of the master plan were to be left to the National Park Service. By 1949, the Commonwealth of Pennsylvania, in cooperation with the City of Philadelphia, had taken charge of land acquisitions north of Independence Hall in order to create an open mall. The National Park Service also began the process of acquiring area properties for the development of the Park.

In these early stages, Charles Peterson collected documentation in the form of historic images, current photographs and measured drawings on the historic buildings in the Park areas to be developed.\textsuperscript{171} These would be put to use in restoration activities, but also aided him in his duties as historical architect and for his contributions to the master planning effort.\textsuperscript{172} Peterson continued to endorse the preservation of buildings to be used for park facilities, “Clearly, Peterson viewed Independence [National Historical Park] as incorporating preservation on a scale far grander than specified in the authorizing legislation. His view went beyond the restoration of a handful of historic buildings to preservation of the historic ambience of the entire area and the

\begin{itemize}
\item \textsuperscript{169} Ibid, 54–55.
\item \textsuperscript{170} Ibid, 68.
\item \textsuperscript{171} Ibid, 73.
\item \textsuperscript{172} Ibid, 74, 78–79.
\end{itemize}
integration of the National Park Service’s project with the existing neighborhood.”

In 1952, Peterson’s position was reflected in four objectives identified for the master planning of the park: “restoration of structures and sites mandated by legislation; reconstruction of certain historic buildings; preservation and rehabilitation of other buildings, including those of the mid-nineteenth century; preservation or construction of other buildings and landscape features to interpret the area’s urban character.” These objectives continued to be hotly debated with much difference of opinion among National Park Service staff as the master planning efforts progressed through the 1950s. By 1957, many of the buildings Peterson fought to save, especially those east of Independence Hall, between 3rd and 5th Streets, along the south side of Chestnut Street, were demolished (Illustration 6.1).

Architectural Fragments: “Information Not Found in Books”

Charles Peterson began to collect architectural fragments early in his residence in Philadelphia, intending to build a reference library about 18th and 19th century design and building technology for his staff. In Peterson’s view, “It was well known that many things architects need to know for historic restoration can seldom be found in...”

173 Ibid, 73.
174 Ibid, 79.
reference books that exist.” This phrase, “information not found in books,” became an often quoted sentiment regarding the architectural study collection, alluding to the idea that the restoration work being done at Independence National Historical Park was part of a nascent field with few resources and guidelines. Even the careful drawings to document historic buildings required by Peterson’s Historic American Buildings Survey didn’t analyze the construction details of a building with enough depth to work from. The efforts of the staff to garner their own foundation of knowledge about traditional building techniques were the result of a “need for architectural specimens to study and imitate – or adapt – for restoration details.” The work at Independence National Historical Park launched the restoration careers of many architects, who learned the intricacies of working with historic buildings on the job. The necessary skills were passed among those Peterson assembled on the team, creating a colloquium of specialists from diverse backgrounds. The architectural fragment collection was a part of this resourceful approach, “a resource invented by architects for architects.”

Another important advocate for the architectural study collection was Penelope Hartshorne Batcheler (Illustration 6.2), who came to the Park as a restoration architect in 1955. Batcheler emphasized the use of the collection as a tool, more useful than a two-dimensional image, “It is never the same as having the thing...in your hand —

178 Charles E. Peterson to Pearl M. Grika, Executive Director, Friends of Independence National Historical Park. September 18, 1992. Independence National Historical Park Archives; Accession No. 4278: Box 1: Folder 13, Philadelphia, PA.
179 William Bolger, interview by author, April 5, 2010.
180 Charles E. Peterson to Pearl M. Grika.
181 Greiff, Constance M. Personal interview with Penelope H. Batcheler. November 20, 1980. Independence National Historical Park Archives, Accession No. 3925: Series I: Batcheler, P.H., Box 1, Folder 9, 2; and Doris D. Fanelli, interview by author, March 29, 2010.
182 Charles E. Peterson to Pearl M. Grika.
183 Although Hartshorne trained under Ludwig Mies van der Rohe at the Illinois Institute of Technology, a love of history sent her to work at historic museum villages in Sweden and Norway after her graduation in 1953. Greiff, Independence: The Creation of a National Park, 115; and Doris D. Fanelli, interview by author, March 29, 2010.
because you not only want to see the front side, you want to see the back side. And you really want to see how things are joined.”184 She pointed out that “it gives a person a chance to handle an object that came from part of a building.”185 Batcheler was known for her lessons while walking her staff and visitors through the park, encouraging her audience to observe architectural and technical details.186 By the use of the architectural artifacts as primary documents, architects and craftspeople could understand the texture and scale of early architectural components, and how they were put together. In their undertaking to restore 18th century buildings, the close study of these artifacts made possible informed restoration with a high degree of historical accuracy.

Architect Lee H. Nelson, who arrived at the Park in 1960, also brought with him an interest in historic building technology and naturally joined the efforts to grow and promote the architectural fragment collection. “He would say, ‘Let’s go read that building and find out what information it has to tell us, but first, we must understand its vocabulary.’”187 The architectural fragments served just that purpose, providing a ready word bank of examples relating the details of 18th and 19th century construction materials and methods. In addition to his work at Independence National Historical Park, Nelson went on to participate in the founding of the Association for Preservation Technology International, and in the 1990s, advocated for a specialist committee in this organization to advance the position of architectural fragment collections in the field.188

The architectural study collection at Independence National Historical Park was collected from restoration projects and salvage from demolition sites. These efforts

185 Ibid, 3.
188 Reid, "Architectural Fragments and APT: A Lee Nelson Legacy.”
were increased by external offers and donations. Led first by Peterson, then by Batcheler and Nelson, the whole restoration staff was involved in the collecting activities.189 There was no documented policy which made an object suitable for the collection, but several unofficial rules of thumb applied. Both decorative and technological artifacts were worthy of collection if they were of a distinctive design, or exemplified a detail or method of construction new to the staff.190 The staff was particularly interested in the way objects worked mechanically and the way they were put together.191 It was important that the collection grow in representation of building techniques of the Delaware River Valley region.192

Architectural Archeology

Because the master planning was still in process, it was in a controversial atmosphere that restoration activities commenced in the Park in 1951.193 Peterson and a carefully chosen staff of architects, including William Campbell, Donald F. Benson and George Willman, among others, with a team of craftsmen, carried out restorations within the National Park Service’s emergent preservation philosophy which favored “conservation of what was original, removal of later accretions, and the accurate retention of missing elements.”194 Peterson and his staff continued to develop preservation methodologies that would characterize the work of the field as it began to professionalize.

189 Greiff, Constance M. Personal interview with Penelope H. Batcheler. October 23, 1980, 1-2.; and
191 William Bolger, interview by author, April 5, 2010.
193 Greiff, Independence: The Creation of a National Park, 74.
194 Ibid, 113.
For each building, it was necessary to systematically collect information that would aid architects in accurate restoration. This was done with a multidisciplinary approach that involved not only architects, but archeologists, historians and curators. First, research was conducted to gather primary archival documents and historic images relating to the property. Documentation by measured drawings and photographs was performed in order to record a building’s current state. It was common to find layers of alterations obscuring the earliest configurations of a building, making an examination of the sequence of construction necessary in order to reveal the original composition.195

At the core of this process was a methodical investigation into the fabric of the building, searching for clues about its original construction and detailing. With the help of a “day labor” staff of skilled carpenters and other craftsmen, organized by Peterson and assistant Henry A. Judd, layers of alterations were carefully removed to reveal evidence of the building’s history.196 With close observation, discovery of in-filled plaster, nail patterns and impressions of moldings told architects about the former configurations of a building. Batcheler described the process as parallel to that of archeology in the way each layer was documented and excavated.197 Indeed, the approach transferred below ground archeological methodologies to structures, separating fabrics to reveal campaigns of construction.198 This technique was informally dubbed, ‘above ground archeology’ or ‘architectural archeology,’199 and is the

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198 David Orr, interview by author, April 21, 2010.
199 Tracking the specific derivation of these terms has proved difficult. They seem to have emerged in the 1970s, during work on Franklin Court at Independence National Historical Park, but may well have had consequent roots at other sites. There is a clear relationship here to not only archeology, but an interest in vernacular architecture, cultural geography, and the folklore and folk life movement. Multidisciplinary
The results of the archival and physical investigation and documentation, supported by a historical narrative, became the content of a new official document, the Historic Structures Report, upon which decisions about the restoration of a building were based. Determination of a discrete period in which to restore a building typically left some excavated architectural elements unused in the restoration. These could be accessioned into the architectural study collection for future reference.

Demolition and Salvage

Redevelopment efforts in Philadelphia from the 1940s through the 1970s required demolition in some of the oldest neighborhoods in the city. Prior to the establishment of Philadelphia’s historic preservation ordinance in 1955, there were no municipal legislative protections for historic buildings. This stimulated Charles Peterson’s persistent attempts to prevent demolitions as the Park planning was underway in the early 1950s. Once the ordinance was passed, individual historically significant buildings were listed on the Philadelphia Register of Historic Places, but many buildings were left

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201 Comprehensive reports on historic buildings were initiated by Peterson in his work on the Moore House in Yorktown, Virginia. At Independence, this technique was refined and became a procedure required by the National Park Service before restoration of a building in 1957-1958. Historic Structure Reports are an industry standard today. Greiff, *Independence: The Creation of a National Park*, 118.


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basis for the method of investigation used by restoration architects today. The studies in culture and anthropology began to take an inclusive and holistic look at material culture which encouraged the professionalization of historic preservation. Key individuals involved in this movement included archeologist John Cotter, American studies scholar Bernard Herman, folklorist Henry Glassie, architectural historian Abbot Lowell Cummings and anthropologist/archeologist James Deetz. David Orr, interview by author, April 21, 2010.
unprotected until historic districts were designated in these areas more than four decades later.\footnote{The Society Hill Historic District was designated in 1999 and the Old City Historic District was designated in 2003. Files of the Philadelphia Historical Commission, Philadelphia, PA.} When historic buildings could not be saved, Park architects saw an opportunity to salvage architectural fragments to add to the architectural study collection.

Several redevelopment plans were defined adjacent to Independence National Historical Park that impacted its contextual historic built environment. Reports on these areas cited unsafe and unsanitary conditions, including; abandonment, congestion, and dereliction, that required demolition for remediation. The earliest scene of redevelopment was the clearance of the three blocks north of Independence Hall to create Independence Mall, a greenway leading to the monumental building. This plan was authorized by ordinance as a Pennsylvania State Park, in cooperation with the City of Philadelphia, in 1949.\footnote{Greiff, Independence: The Creation of a National Park, 68-69.} A city redevelopment plan, in the area surrounding the mall, called for closure of many smaller streets and demolition of historic buildings to create safe pedestrian passages.\footnote{City of Philadelphia, Philadelphia City Planning Commission, Independence Mall Redevelopment Area (Philadelphia, 1966), 19, http://sceti.library.upenn.edu/pages/index.cfm?so_id=2592&pageposition=14&level=2 (accessed February 20, 2010).} Demolition also took place through the 1950s in the three blocks to the east of Independence Hall in order to complete the master plan of the Park, which excluded buildings that did not contribute to the central interpretive period. “Peterson had advocated retention of some of the 19th century buildings of architectural importance: the Jayne building, the cast iron Penn Mutual building, and
Frank Furness’s Guarantee Trust that stood in front of Carpenters’ Hall…Because these buildings were unrelated to the park’s main story, they came down.”206

Through the 1950s, 60s and 70s, redevelopment areas were identified city-wide, including two areas near Independence National Historical Park. The Old City Redevelopment Area, located east of the park to the Delaware River contained many domestic and commercial vernacular buildings from the 18th and 19th centuries. Though isolated streets, such as Elfreth’s Alley, were recognized as historically important, other entire blocks were slated for demolition to improve the area.207 In the Washington Square Redevelopment Area, or Society Hill, urban renewal initiatives sought to demolish older commercial and industrial structures in order to build new residential high rises.208 Both the Old City and Washington Square redevelopment plans indicated the presence of historic structures in these neighborhoods as an asset worth capitalizing on, at the same time recommending clearing of obsolete buildings. In addition, the Federal-Aid Highway Act of 1956 provided for the construction of Interstate 95, requiring the demolition of some of the city’s earliest houses along Water Street, over which the highway would be built.209 These were historically important commercial and residential neighborhoods, densely developed as the early settlement

207 The Old City Redevelopment Area extended east from Independence Mall, bounded by Vine Street, the Delaware River, and Chestnut Street. This area was identified in 1948, amended in 1956 and superseded in 1963, and was renamed “Society Hill.” Many 18th century houses were notably restored in this area, but demolitions occurred where new construction took place. City of Philadelphia, Philadelphia City Planning Commission, Philadelphia Redevelopment Areas (1965), 3, http://sceti.library.upenn.edu/pages/index.cfm?so_id=4131&pageposition=4&level=3 (accessed February 20, 2010).
208 The Washington Square Redevelopment Area was bounded by Walnut Street, the Delaware River, South Street and 13th Street This area was published in 1957 and amended in 1961. City of Philadelphia, Philadelphia City Planning Commission, Washington Square Redevelopment Area Plan (Amended 1961), 4, http://sceti.library.upenn.edu/pages/index.cfm?so_id=4283&pageposition=1&level=3 (accessed February 20, 2010).
grew out from the river port. 18th and 19th century architectural design and construction characterized the area, ideal for recovery of specimens for the architectural study collection. An arrangement was met between the Philadelphia Redevelopment Authority and the Independence National Historical Park restoration architects, that Peterson, Batcheler, Nelson and their teams, were given permission to enter the condemned properties in order to remove any valuable architectural details for the study collection (Illustration 6.3). This increased the collection’s base of vernacular examples, beneficial as a resource for the restoration work.

The restoration architects were in the habit of reaching out to nearby sources for comparative models when necessary details were not extant in the buildings they were working on. Other buildings in the neighborhood were often built by the same master builder, with the same details, and could be used as a contemporary guide for restoration decisions. This followed as 18th and 19th century vernacular buildings that did not fit within redevelopment plans were among those slated for demolition. A driving force in the collecting, Batcheler described the salvage activities with enthusiasm, “at every opportunity when we heard that there was a building vacated, and that it was going to be demolished, either by the State Highway Department or the Redevelopment Authority, or any motive, or even the Park Service itself in its demolition program, we..canvassed these buildings, and where there was something of merit..we liberated it, but usually with permission.” The redevelopment initiatives in Old City and Society Hill had positive historic preservation results as well. Many private property owners were motivated to conduct rehabilitations of their houses and

210 Greiff, Constance M. Personal interview with Penelope H. Batcheler. October 23, 1980, 1; and Doris D. Fanelli, interview by author, March 29, 2010.
commercial buildings. Where this occurred, too, the Independence National Historical
Park restoration architects and craftsmen were not far behind, accepting donations as
building elements were removed.213

Salvage from other sites in the Delaware Valley also took place, expanding the
breath of the collection with regional examples. Peterson recalled the “first big
accession came from the 18th century farmhouses demolished by U.S. Steel and the
Fairless Works, Bucks County. On that occasion we got a Park Service truck with Park
carpenters to go up and select, detach and haul away all the choicest specimens we could
identify on a one day trip.”214 Donations of already salvaged objects were also accepted
from institutions with comparable holdings of historic buildings, such as the
Pennsylvania Museum and Historical Commission.215 Opportunities like these are
evidence that the restoration work at Independence National Historical Park was
recognized through the region as a laudable endeavor.

It was important to the restoration architects that they keep good records of the
objects they collected from these properties. “We followed the rules of the Park Service
accessioning and cataloging system and immediately wrote up accession sheets on
items…we at least have identified address, where in the building and what part of the
building it was from, what part it was playing.”216 This resulted in a very well
documented collection, a crucial quality which confirms its utility as an accurate
reference.

213 Doris D. Fanelli, interview by author, March 29, 2010.
214 Charles E. Peterson to Pearl M. Grika.
215 Penelope H. Batcheler to Bruce Bazelon, Chief of Collections Services, Pennsylvania Museum and
Historical Commission. 1990. Independence National Historical Park Archives; Accession No. 4278: Box
1: Folder 10, Philadelphia, PA.
A Three-Dimensional Library

The architectural study collection was used as a reference library and laboratory by a number of different groups of users. The primary users were, of course, the restoration architects and their team of craftsmen who did the restoration work on the Park buildings. The collection served as a repository of examples from which to learn about traditional building technologies and construction methods. The artifacts could also be used as prototypes for reproduction of architectural elements and decorative ornaments.

In the new field of historic preservation, opportunities abounded for new scholarship based on items in the collection. There are several specific groups of artifacts in the collection which were used to research and publish notable guides. Lee Nelson took a special interest in the chronology of nail manufacture. His research described and illustrated the distinguishing characteristics of nails as their manufacture evolved. Comparing the distinctive features of nails depending on the way they were made, the research is a tool to dating elements of buildings using nails as evidence.217 Batcheler, and colleague Frank Welsh, pioneered research into historic paint colors for restoration while working on projects at Independence Hall and other historic Park buildings. She studied samples of layers of paint, using a stereo microscope to determine original paint colors for a restoration.218 Both of these publications are important restoration tools and techniques are fundamental scholarship in the field.

Employees involved with restoration were far from the sole users of the collection. The contents were made available for the research of colleagues and scholars, both internally and externally. There was a particular effort to serve Park employees, such as interpreters, curators and maintenance staff, by inviting them to use the collection to expand their knowledge of the built environment they worked with. Batcheler was often looking for more ways in which she could serve these groups, offering brown bag lunch discussions with the collection and surveying various departments for their input.219

As the restoration work at Independence National Historical Park became renowned, delegates from other historic sites frequently visited to examine the processes developed by the restoration team and to view their results. These tours included a look at the architectural study collection as an example of the methodologies employed by the staff in their exemplary work. In this way, the newly developed practices were disseminated through the field, also advertising the architectural study collection as a resource open to scholars who might make use of it in their own research. This was a source of great pride for those responsible.220 Students have also been great patrons of the collection. Academic historic preservation programs, from Columbia University, the University of Pennsylvania and other institutions, made use of the architectural study collection as an educational laboratory, taking advantage of the inventory’s technological information and comparative properties.221 Projects including conservation research, measured drawings and scholarly papers are included in the

work done by students. In addition, homeowners in nearby neighborhoods have sought documentary evidence from the collection as they have embarked on restoration projects.

The Architectural Study Collection on Exhibit

The restoration architects and subsequent stewards have always had an aspiration to share and interpret the wealth of information offered by the architectural study collection to public visitors. The motivation to interpret the mechanics of restoration work began with Peterson, but was quickly taken up by Nelson and Batcheler, who saw the public’s interest and organized several displays to explain their work at Independence Hall. Several interpretive exhibits were mounted at the Park to display the study collection to both professional guests and the general public. As early as 1953, architect Donald Benson set up an exhibit of the study collection in the McIlvaine House on the occasion of a conference of the Society of Architectural Historians.

In 1970, Batcheler and Nelson curated a larger exhibit on the first floor of the First Bank of the United States, to commemorate the 200th anniversary of the Building of Carpenters’ Hall (Illustration 6.4). Titled See What They Sawed, this three year exhibit interpreted selected specimens of architectural objects described and illustrated in

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224 Charles E. Peterson to Pearl M. Grika; and Greiff, Constance M. Personal interview with Penelope H. Batcheler. October 23, 1980, 2.
226 Charles E. Peterson to Pearl M. Grika; and Donald F. Benson to Charles E. Peterson, July 1, 1980, Independence National Historical Park Archives; Accession No. 4277: Box 5: Folder 6, Philadelphia, PA.
Carpenters’ Company Rule Book (1786). The idea of separating the part from the whole, emphasizing the discrete details of a building was the exhibit’s objective. Peterson explained, “...It will make people focus on things they see everyday [sic]. Isolated out of context, the details of a house have greater meaning.” Batcheler also organized a program to be presented in schools, called *The House That Jack Built*, which interpreted traditional construction for children using architectural fragments. This program invited children to interact with the objects, again focusing on small parts to get a sense of the whole.

Elements from the collection have also been lent to other institutions for exhibits. In 1973, The Philadelphia Museum of Art put together a program about historic houses for schools at the Mount Pleasant mansion in Fairmount Park, called *Touch-It*. The Philadelphia Historical and Museum Commission mounted a traveling exhibit called *Pennsylvania Lost - Pennsylvania Found* in 1986, using architectural fragments to promote historic preservation in the state. Two exhibits at the National Building Museum, *Windows Through Time* (1986) and *Sheet Metal Craftsmanship* (1987) were supplemented with items from the Independence National Historical Park collection.

In 1974, space was allocated to store the collection in the basement of the First Bank, with access for researchers. Here, the collection was inventoried and organized. To augment this arrangement, Batcheler conceived of an interpretive display driven by

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228 Greiff, Constance M. Personal interview with Penelope H. Batcheler. October 23, 1980, 7.
231 Ibid.
an 18th century builder’s estimate.\textsuperscript{232} Installed in 1983, the \textit{Built By Hand} exhibit provided an introduction to the scope of the collection, illustrating 18th century construction techniques with fragment examples (Illustration 6.5). During the 20 years the collection occupied this space, its organization was improved by interns funded by the Friends of Independence National Historical Park. From 1992-1993, more space was freed to allow intern John Marks to reorganize the collection for improved curation and better access for researchers. Though the architectural artifacts had always been accessioned into the museum collection, Marks also began to enter the collection inventory into a digital database.\textsuperscript{233} This task was continued 1993-1994 by a second intern, David Conradsen, who entered the collection into the National Park Service’s Automated National Catalog System. The two interns also conducted research regarding management, use and possible future interpretations of the collection. These assessments include the valuable input of Peterson and Bacheler, who had both retired from the National Park Service, but remained advocates of the collection, registering their hopes that an accessible, permanent exhibit be created to spotlight the architectural study collection.\textsuperscript{234} In 2009, the collection was packed and moved to the restored rowhouses at 311-317 Walnut Street, where a new exhibit will be installed, to fulfill the early Park restoration architects ambitions for the architectural study collection.

\textsuperscript{232} David Conradsen, Working Files, Folder 21; and William D. Brookover, interview by author, April 19, 2010.
\textsuperscript{233} Ibid, 9.
The Architectural Study Collection at Independence National Historical Park and the History of Collecting Architecture

The intent and use of the architectural study collection at Independence National Historical Park merges the legacies of the pedagogical collections of late 18th century professional architects and the philanthropic collections of 19th and 20th century public museums. Sir John Soane’s reference collection of ornamental architectural artifacts began an educational rationale for collecting architecture that followed with fragment collections assembled by the Ecole des Beaux Arts and other architectural academies in the 19th century. At the same time, museum collections and exhibitions at world’s fairs displayed historical and ethnographic architectural works to the general public. With the rise of early 20th century museum villages, an interest grew in the work of restoration, shifting the focus of architectural collecting from the gathering of specimens to the preservation and creation of holistic cultural landscape examples. The ventures of private, wealthy collectors, such as John D. Rockefeller at Williamsburg and Henry Ford at Greenfield Village, necessitated technical specialization of their advising architects and laboring craftsmen.235

The restoration work at Independence National Historical Park marked a distinct transition which resulted in the professionalization of historic preservation practice. A serendipitous set of factors induced an atmosphere of fervor and creativity in the Park. Charles Peterson’s leadership drew together a talented group of architects and skilled craftsmen, fostering their enthusiasm for the burgeoning field. Lee Nelson

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and Penelope Batcheler continued to reinforce this environment. It was important that the architectural team worked alongside other departments, “historians...archeologists and museum curators, — and it was a very good relationship between those disciplines, working together..feeding each other information, which stimulated ideas.”

With the establishment of Independence National Historical Park in 1948, the National Park Service set up a strong philosophy of historic accuracy. Primary documents, both archival and architectural, were insisted upon in order to assure a precise restoration. Under Peterson’s high expectations, methodologies were generated to systematize the process of historic preservation. The collection of architectural fragments joined measured drawings and historic structures reports as another means to gather reference materials and documentation for the restoration work. An evolution in collecting philosophy is exemplified by the emphasis on technological examples, in addition to those which are solely ornamental. The architectural study collection played an essential role in the restoration procedure, informing the first generation of professional preservationists what books could not about the early building techniques employed to build 18th and 19th century Philadelphia.

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236 Greiff, Constance M. Personal interview with Penelope H. Batcheler. November 20, 1980, 2. This sentiment was reinforced in other interviews the author conducted regarding this project: Hobart G. Cawood, telephone interview by author, March 28, 2010; Doris D. Fanelli, interview by author, March 29, 2010; and Nick Gianopulos, interview by author, March 30, 2010.
Chapter 7: Analysis and Recommendations for Interpretation of the Architectural Study Collection at Independence National Historical Park

The architectural study collection at Independence National Historical Park consists of examples of building components fabricated and used in construction in the Delaware Valley, with a majority of examples from Philadelphia, dated 1730-1850. Multiple layers of significance are expressed by the collection. The artifacts are primary documents from the early history of the colony and nation, representing design, materials, technology and craftsmanship that built the city and region. “The collection represents the technical and social aspects of architecture in the era of the Park’s focus as a means of exploring aesthetics, taste, class, and innovation among a variety of societal groups.”237 The architectural study collection is also important because the resource was part of a set of tools conceived by restoration architects to undertake their work with a high level of integrity. The collection’s objects have been carefully documented, accessioned and catalogued, providing accurate records to their origin and context.238 Using this three-dimensional library increased understanding of historic building techniques and established authenticity as a foundation of professional preservation work. This measure of significance was extended as Independence National Historical Park went on to train staff and guides in conservation and interpretation using the collection. Finally, the architectural study collection earned an

238 William Bolger, interview by author, April 5, 2010.
appreciation from the academic and professional preservation field as a valuable resource for research.\textsuperscript{239}

This collection presents an opportunity to put the analytical framework to use. In preparation for a new exhibit featuring a selection of artifacts from the important fragment collection, the matrix has been employed in order to make sense of the over 4500 items in the content of the collection, connecting them through the criteria for interpretation.\textsuperscript{240} This process underscored the assets of the collection in terms of local and technological examples collected by early historical architects as a method of understanding and authenticating their work to restore park buildings. The following explains the significant themes found through the analytical framework that best contribute to the recommendations for interpretation concluding this study.

**Philadelphia Vernacular Architecture**

Though it includes specimens from the renowned buildings such as Independence Hall and the Second Bank of the United States, the strengths of the architectural study collection at Independence National Historical Park lie in the wealth of evidence from 18\textsuperscript{th} and 19\textsuperscript{th} century vernacular rowhouse buildings (Illustration 7.1). The artifacts shape an important visual account about urban life in the colonial and early Federal city. Distinctive features of the buildings which began the city’s development are illustrated by the fragments of dwellings, warehouses and shops held in the collection. The


\textsuperscript{240} See Appendix F for the completed matrix for the Independence National Historical Park Architectural Study Collection.
ubiquitous rowhouse form characterized the streetscape, taking high style architecture found in more monumental buildings and elite country houses and adapting them for the urban form.\textsuperscript{241} As the city developed, Thomas Holme’s ample lots were subdivided to accommodate dense growth in sought-after real estate close to the busy port and civic center, populating streets with the rowhouse form.\textsuperscript{242} An economical use of space, the rowhouse was adjusted to suit varying lots sizes, tastes and incomes. Both inside and out, the design of a rowhouse in materials and craftsmanship illustrated the wealth and social status of the owner or tenant. No matter the level of expense or style, rowhouses were essentially built using the same framing and plastering techniques, simply expanded to meet the requirements of the contract. Fragments of exterior cladding, sash windows and moldings may show degrees of fashion in their design, but the methods by which these elements were assembled exemplify the traditional way rowhouses were built. In the architectural study collection, the salvaged building components show these common construction techniques in three dimensions, also revealing the range of variation in rowhouse styles and decoration.

**Regionalism in the Delaware Valley and Philadelphia**

Another aspect of significance is seen in the Independence National Historical Park’s architectural study collection is its representation of a relationship to regional characteristics of building. The methods builders and craftspeople used to fabricate and assemble building components were part of a larger pattern where traditional building


designs were transmitted from the home country to colony. This is evident in the designs used to build the vernacular fabric of Philadelphia, where the typical rowhouse form emulated those in London, England, where brick Georgian rows were established as a standard form of building after the 1666 fire. English colonists brought the design preference to the Philadelphia colony. The transmission of traditional building techniques from mother country to colony was continued as skills from master to apprentice created a community of building tradesmen using common techniques in the construction of Philadelphia buildings. Examples of masonry pointing and framing joinery establish these shared practices.

A second level of regionalism in the represented by the architectural study collection’s strong representation of vernacular architecture is the local nature of the materials employed in construction. Philadelphia’s settlers were fortunate to arrive in a fertile region with natural resources suitable for building materials. The forested area between the Schuylkill and Delaware Rivers provided an abundant source of lumber. The old growth forests offered lumber for the cheapest frame houses and wide widths found in early floorboards, both exemplified in the collection. The location of the valley in the piedmont between the Atlantic coast and the eastern foothills of the Appalachian Mountains supplied schist fieldstone used in foundations and exterior walls of buildings. In addition, limestone could be found in the Delaware Valley for stone quarry and production into plaster and mortar. Plentiful clay beds in the Delaware Valley made local brick making possible, demonstrated by the popular use of brick for

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243 Ibid, 5.
cladding on Philadelphia rowhouses. The architectural study collection’s masonry specimens include window sills and bricks, as well as mortar and plaster samples which represent the material regionalism in Philadelphia’s architecture. Fragments that show these regional details are best shown in comparison with one another, a strategy entirely possible with the quantity of items in the architectural study collection.

Technological and Ornamental Craftsmanship

Every imaginable building trade traditional in the 18th and 19th century Delaware Valley is represented by the artifacts in the architectural study collection at Independence National Historical Park. Both functional and decorative examples abound, illustrating the techniques used to fabricate and install elements of engineering as well as the finished appearance. There are examples of each technological system required to construct a building; framing, roofing, stairs, partitions and all the rest. Ornamental specimens are plentiful in samples of woodwork trim and finishes. Many artifacts blur the line between the building technology and ornament, such as wrought iron railings, which are functional and decorative. These fragments convey the significance of craftsmanship in building materials, the venerable property of something made by hand with superior skill. The wide range of objects in the collection demonstrates the construction of a whole from numerous parts, requiring a variety of trades and artistry. Further research and connections could be made with specific makers, unearthing narratives of builders and artisans that might give more context to examples of craftsmanship. It is important to note the early Park architects’ interest in

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collecting fragments to provide models for study and replication, indicating a focus on objects of technological evidence. The collection is particularly rich with architectural fragments that have mechanical functions or which show the fastening of building components, those that convey the innovation and ingenuity of 18th and 19th century craftsmen.

**Recommendations for Thematic Interpretation: The Anatomy of a Philadelphia Rowhouse**

The architectural study collection at Independence National Historical Park has infinite possibilities for interpretation. The objective is to find an exhibit theme that will capitalize on the assets of the collection and fit into the Park’s wider story, featuring Philadelphia at the time of the founding of the nation. The initiation of the study collection by the Park’s early restoration architects in the 1950s combined with the urban renewal efforts through the 1970s, dictated its content in examples of 18th and 19th century building technologies common to the Delaware Valley region. The collection’s tremendous representation of Philadelphia’s vernacular rowhouses provides an opportunity to interpret the characteristic building type so pervasive in the city.

Building on the exhibit models laid out by Penelope Batchelor in the collection’s earlier exhibits, *See What They Sawed* and *Built By Hand*, based on the Carpenters’ Company Rulebook and a builder’s receipt, respectively, this exhibit would use the rowhouse form as a core from which a number of inter-related themes could be interpreted. Architectural fragments can be used to interpret the anatomy and construction of a rowhouse, picking out the traditional building techniques featured by their detail. Given the adaptation of the traditional English urban housing form to varying
architectural styles and scales depending on taste, social class and economic means, the rowhouse is also an effective central theme for interpreting aesthetic and social themes associated with Philadelphia’s early development.

An exhibition of the architectural study collection is an opportunity to extend interpretation to stories which have traditionally gotten less attention. As an anchor exhibit to a special subject tour on architecture, a focus on rowhouses would contribute to a needed emphasis on the vernacular architectural style to the interpretation repertoire at Independence National Historical Park. This premise would provide a contrast to the interpretation of Independence Hall and other celebrated buildings and narratives and complement the Park’s restored rowhouse buildings on Market Street at Franklin Court and those at Third and Walnut Streets, where the exhibit will be installed.

The exhibit structure should begin by giving a geographical and social context to the Philadelphia rowhouse, emphasizing the importance of the role of the form in the city’s physical development. The 1683 William Penn and Thomas Holme plan of Philadelphia is a means to introduce the way historic city planning was altered by the organic settlement pattern on the river edges of the city. The subdivision of blocks, survey of lots, speculative housing and “ground rent” are critical concepts where social history and urban geography intersected affecting the course of Philadelphia’s

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247 There are four Park rowhouses at 3rd Street and Walnut Street: The Bishop White House, the Todd House, the Kidd House and the McIlvane House.
development and the continued success of the rowhouse. William Murtagh’s seminal article, “The Philadelphia Row House,” explores four typologies of early rowhouse forms could be used to introduce the variation in style and scale of the form. Maps, historic views and floorplans will introduce the visual context of the rowhouse, interpreting the colonial urban cultural landscape. The interpretation of Philadelphia’s city and regional growth through the 18th and 19th centuries, especially in relationship to the rowhouse form is a theme worth threading through the exhibit to maintain a wider context.

The construction sequence of an early rowhouse could be used as a device to interpret the design and structure of the city’s prevalent vernacular buildings. Interpretation of the phases of construction necessary to build a rowhouse from foundation to finishes, grants an opportunity to relate architectural fragments as building components contributing to the assembly of a rowhouse whole. Each phase of construction should be interpreted with a consistent format of themes which emphasize the significance of the collection using architectural artifacts as illustrative examples to examine use of materials and craftsmanship. The following is a recommended list of construction phases that would organize the exhibit:

- Foundation & chimney flue
- Framing
- Façade cladding & party walls
- Roof & rain conduction
- Windows & doors
- Interior features and stairs
- Partition walls & trim

250 The recommended list of construction phases is adapted from: Lindsay Falck, "American Building Technology: Philadelphia Rowhouse, Basic Construction Sequence" (lecture, University of Pennsylvania, Philadelphia, PA, October 8, 2008).
• Floors
• Finishes

Architectural Artifacts

Specimens from the fragment collection can be used to illustrate the required building components for each phase. A consistent image, such as a floorplan, elevation or section drawing should be used as a key to visually show where each fragment would be located to reinforce the relationship of part to whole. When possible, several examples showing variation or a choice made by designers, several artifacts could be compared. In addition, a hands-on artifact should be included in each section, to give the visitor a chance to experience the value of handling an object, provoking inquiry about the way an object was made by hand.

The fragments lead the interpretation to the origins and manufacture of building materials. Here the theme of regionalism as it relates to local materials should be brought in. The types of materials used to construct each section should be covered, relating their manufacture from raw material source to processed building material, including wood milling (Illustration 7.2), stone quarrying and cutting, brick making and others. The interpretation of materials can also discuss variations and choices of building materials, for example, clapboard or brick cladding.

Ornamental & Technological Craftsmanship

Interpretation of the craftsmanship in order to fabricate or assemble materials into building components and install them into the rowhouse is the focus of this theme. Here, the builders and craftspeople themselves should be featured along with their skills. Each type of trade involved in the particular construction phase should be
described, along with the appropriate task. Further research could involve the biographies of actual builders and tradesmen.\textsuperscript{251} A discussion of work practices and description of the actual craft or trade performed should be included to give a personal context to the fragments. Images and examples of tools could support this part of the exhibit. The distinction between the practical and decorative types of craftsmanship shows the degree of style and a difference in fine work, indicating level of skill or a difference in training. A focus should be maintained on building technology, especially the way components were joined and assembled.

\textbf{For Example: The Construction of Partition Walls}

To demonstrate the use of this format, the interpretation for the partition walls phase of construction would first show drawing of the rowhouse, indicating where in structure of the whole the partition walls are built; between rooms on each floor. The room configurations’ variance between styles of rowhouse could be discussed here. Following the orientation, the steps in erection of a partition wall can be described. Carpenters rough in the structure of the partition with wood planks or stud framing, fastening it by nails to the heavy framing joists and beams of the building. Next, wood trim moldings are installed; baseboards, chair rails, door encasements, are also nailed into the rough partition. Lath is then nailed to the substructure, over which a brown coat of plaster is applied by plasterers. Once dry, second and third skim coats of finish plaster are

\textsuperscript{251} It is suggested that the Philadelphia Architects and Builders Project could contribute to this research. See: Philadelphia Architects and Buildings. http://www.philadelphiabuildings.org/pab/index.cfm (accessed April 10, 2010).
applied. An applied plaster cornice might then be installed to finish the partition to ceiling joint. The partition wall is then painted, and possibly wallpapered.\footnote{Adapted from: Lindsay Falck, "American Building Technology: Philadelphia Rowhouse, Basic Construction Sequence" (lecture, University of Pennsylvania, Philadelphia, PA, October 8, 2008).}

Architectural fragments that might be used to illustrate the partition wall phase of construction might be framing members, molding samples, lath, plaster samples, paint and wallpaper samples. The wood and plaster materials, sourced from local natural resources could be interpreted, showing their likely origins using a regional map. The process from raw materials to the building site should be traced, showing how logs were milled and limestone was quarried and burned in a lime kiln to produce lime for plaster. For the partition wall phase, rough carpenters were required for the structure construction and installation of lath and finish carpenters to mill and install the moldings. Plasters of rough and fine levels of skill were also required, for the wall coatings, fine and ornamental details, respectively. Traditional building techniques used to prepare materials for installation, such as the planing of wood for millwork and the recipe for the brown and finish coats of plaster should also be explained.

**Historiography and Preservation History**

The history of the architectural fragment collection at Independence National Historical Park is an important factor of significance that is itself worthy of interpretation. Independence National Historical Park has expressed an interest in using the fragment exhibit to also interpret the significant role the restoration activities at the Park played in the development of the field and the preservation of Philadelphia’s historic fabric. Each source interviewed for this study expressed a wish to see the restoration,
archeological and historical staff who were a part of the architectural study collection’s inception and continuance honored by telling their story with the fragment collection as a reference.

Interpretation of the historiography of the architectural study collection should follow the rowhouse exhibit with an account of how and why architectural fragments were collected. Biographical information about some of the key individuals who established and advanced the collection, such as Charles Peterson, Penelope Batcheler, Lee Nelson and others should be included, expressing their leadership, enthusiasm and dedication regarding the restoration work at the Park. The preservation philosophies broadcast by Peterson and persisted by Batcheler, especially learning architectural history and traditional building technology from extant buildings and artifacts are crucial to convey. To orient the collection’s origins in comparison with the 18th and 19th century maps used in the rowhouse exhibit and show how the urban fabric was altered by neighborhood change and city planning, the interpretation should include a review of the redevelopment areas in and around the park. It is important to note the way the restoration team took advantage of redevelopment efforts, finding unconventional preservation opportunities by salvaging architectural artifacts from buildings slated for demolition. The architectural archeology methods developed by the early restoration architects should also be explained, drawing the parallel to archeological methods and emphasizing the multi-disciplinary quality of these investigations. The historiography portion of the exhibit is an appropriate place to remind visitors of the important restoration projects that occurred at Independence Hall, the Supreme Court Chamber and Congress Hall, among others, which contributed to the fragment collection in addition to the vernacular examples. These topics should
be supported by photographs, newspaper articles, letters and other documents from the Independence National Historical Park archives, as well as recollections from those interviewed for this study and others as appropriate.\textsuperscript{253}

**Collections Management Recommendations**

Several last recommendations are included here to address administrative and collections management matters concerning the architectural study collection that will facilitate and reinforce the exhibit. As the scope of collections is being revised, the Park staff should consider including the merits related to the history of architectural preservation in the Park to emphasize the significant role the fragments had in the minds of the early Park restoration staff. As noted in the literature regarding architectural study collections in the 1990s, a formal statement legitimizes factors of significance, ensuring their lasting influence on the care and interpretation of the objects.\textsuperscript{254} Use of the architectural study collection as a research resource is essential to maintaining the collection as intended by its initiators. Although the interpretation and display of the fragments is the focus of this study, it is clear an equal consideration should be given to the planning of access to the bulk of the collection for researchers and students. The collection has always been intended to be used as a practical resource for educational purposes, and this is an essential part of its reinstallation in a new facility. Promotion of the study collection will be assisted by the exhibit, but efforts should be made to advertise the resource as well as make access simple and convenient. This resource also fills a need in a city where appropriate treatment of historic buildings

\textsuperscript{253} These interviews from this study will be transcribed and filed Independence National Historical Park archives.

\textsuperscript{254} Maounis and Banks, "Curatorial Concerns with Architectural Collections," 15.
is regulated. The study collection should be recommended as a resource to architects and homeowners when they plan a restoration. An additional recommendation is to build a visually oriented media presentation of the full architectural study collection catalog.\textsuperscript{255} This could begin as an interactive kiosk in the exhibit, but be extended to a website for online access to the resource.

In addition, some consideration should be given to how Independence National Historical Park can partner with other advocates of the historic built environment in Philadelphia to promote the interpretation and use of the architectural study collection. Numerous groups, including neighborhood associations, professional organizations, private institutions and city agencies could connect and contribute to the collection with partnered programming and advocacy. This is especially true as Philadelphia’s wealth of scholarly repositories quickly becomes digitally accessible and coordinated. As stewards of not only the architectural study collection as a significant resource, but the Park as a whole, it is crucial that the National Park Service participate in this dialogue.\textsuperscript{256}

\textbf{Conclusions}

The architectural study collection at Independence National Historical Park has particular significance to Philadelphia as a representation of the city’s vernacular rowhouse form. The rowhouse exhibit was conceived to capitalize on the collection’s


\textsuperscript{256} See Appendix H for a list of recommended organizations for partnership.
strengths in technical and ornamental specimens that demonstrate regional style, materials and craftsmanship. The exhibit highlights the rowhouse bringing into focus the everyday form that was adapted to cross social and economic boundaries, creating an urban housing pattern that remained constant as Philadelphia grew, and still characterizes the city today. A demonstration of the 18th and early 19th century rowhouse construction sequence provides a detailed examination of the building components and traditional building techniques employed as the city first developed.

Talking about the value of the architectural study collection at Independence National Historical Park, Penelope Batcheler pointed out that “it gives a person a chance to handle an object that came from part of a building, instead of it always being composed. It separates the parts from the whole, therefore once you recognize it as a part, when you go back to the whole you will see the part, whereas before you would never even know there was a part to look at.”257 The re-establishment of the association of architectural fragments to their whole historic buildings is at the root of their significance, indicating the many meanings they embody. A fundamental principle of preservation is to incite public awareness and engagement with historic places. The idea that architectural fragments encourage and reinforce the understanding of historic buildings in the context of the broader built environment is essential to their interpretation so this transfer of value can occur. Creating a compelling exhibit of architectural fragments requires the careful examination of the significance of diverse artifacts and extraction of thematic concepts that are relevant to the experience of the audience. Architectural fragments are effective because they are visual, tangible, comprehensible representations of the design and craftsmanship that mold culture.

257 Greiff, Constance M. Personal interview with Penelope H. Batcheler. October 23, 1980, 3.
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Schloetzer, Mattie. "Andrew Carnegie's Original Reproductions; The Hall of Architecture at 100." *Western Pennsylvania History* 90, no. 3 (Fall 2007): 37-47.


Illustration 2.2: Interpretive panel for fish ornament from the facade of the Oliver Building (right), Fragments of Chicago’s Past, Art Institute of Chicago. Source: S.E. Hawes, 2010.

Illustration 2.3: Fish ornament from the facade of the Oliver Building, Fragments of Chicago’s Past, Art Institute of Chicago. Source: S.E. Hawes, 2010.


Illustration 6.3: Demolition of a circa 1750 rowhouse on North Water Street in 1963. Source: *Independence National Historical Park Archives*


Illustration 7.1: 18th century wood milling. Source: Diderot’s Encyclopedia.
APPENDIX A
Second Lives Survey Form

REQUEST FOR INFORMATION
ABOUT
ARCHITECTURAL STUDY COLLECTIONS

This request is intended to identify the existence and location of formal or informal collections of historic building parts, materials, features, and examples of craft practices—which might be thought of as having potential for exhibit and/or research purposes by historical architects, building technologists, preservationists and others. This survey is limited to those objects that are no longer part of an historic building or period room; objects that have lost their context. The information provided will be used to develop a list of architectural study collections in the United States. This effort is part of a Skills Development Plan Study Plan. Your assistance is appreciated.

Name of Owner or Museum or Park: ____________________________
Mailing Address: ___________________________________________

Scope of Collection: (Please describe the contents of the collection including the main type of object or specimen. Are they related to one site or multiple sites? If you have no architectural objects, please write “No collection.”)

Representative dates of collection:

Instructions for filling in the columns:
1. “Number of Parts”: If none, write NA (not applicable). If exact number is not available, use estimates.
   PLEASE LEAVE NO SQUARES BLANK.
2. “Comments”: Use this space to provide information about the period, style, or materials of these items.

<table>
<thead>
<tr>
<th>Parts of buildings in collection</th>
<th>Number of Parts</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>structural parts (wood or iron) for framing</td>
<td></td>
<td>systems and connecting devices.</td>
</tr>
<tr>
<td>exterior features such as column capitals, terra cotta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wall cladding, such as shakes, clapboards, etc.</td>
<td></td>
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<tr>
<td>roofing materials like tile, slate, shingles, tin, etc.</td>
<td></td>
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</tr>
<tr>
<td>rain conductor parts, like heads and downspouts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>window frames, sash, shutters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>doors and related features like frontispieces, transoms, sidelights, pediments</td>
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<tr>
<td>Parts of buildings in collection (continued)</td>
<td>Number of Parts</td>
<td>Comments</td>
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<td>-------------------------------------------</td>
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<tr>
<td>Interior features, such as fireplace mantles, portions of stairs, decorative features such as carved wooden brackets</td>
<td></td>
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<tr>
<td>heating devices and stoves</td>
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<tr>
<td>flooring: wood, encaustic tile, marble, etc.</td>
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<tr>
<td>lighting devices such as gaslighting fixtures, electrical lighting fixtures and wiring</td>
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<tr>
<td>plumbing equipment</td>
<td></td>
<td></td>
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<tr>
<td>hardware for doors and windows, bell systems, etc.</td>
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<tr>
<td>iron and other metals for railing, fences, grilles, cresting, storefronts, spandrels, columns, cornices, etc.</td>
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<tr>
<td>streetscape and small-scale elements in the landscape, such as benches, lights, signs, clocks, memorials, etc.</td>
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<tr>
<td>molding samples</td>
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<td>plaster samples</td>
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<tr>
<td>paints, graining, marbling samples</td>
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<tr>
<td>wallpaper samples</td>
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<tr>
<td>mortar samples</td>
<td></td>
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<tr>
<td>other</td>
<td></td>
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</tr>
</tbody>
</table>

Physical location of collection: 

Is it accessible for research purposes? Yes No

Are any objects on exhibit? Yes No

If yes, where? 

Are there any publications that refer to this collection? Yes No

If yes, please provide title, author and date of publication.

Information provided by: Date: 

Please send completed information to Emogene Bevitt, Preservation Assistance Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127. Thank you for your assistance. rev. April 7, 1993.
APPENDIX B

Williamsburg Resolutions on Architectural Study Collections\(^{258}\)

1. In recognition of the preference for in situ preservation of historic structures, architectural fragments should not be removed if such removal will adversely impact the structures integrity.

2. When architectural fragments are removed from structures, thorough documentation should accurately and permanently record the historic context of the fragments within the structure.

3. Architectural fragments and their associated documentation should be collected, organized, stored, maintained and conserved in accordance with established professional collections management practices of the museum and historic preservation communities.

4. Institutions should adopt a standardized nomenclature system for cataloging purposes which will allow effective sharing of collection information.

5. Institutions which hold collections of architectural fragments have an obligation to share information about those objects through research, exhibits and other educational programs.

6. Analysis, research, exhibition, interpretation and other uses of architectural fragments should be planned and conducted so as to maintain the integrity of those objects and their associated documentation.

7. Architectural fragments should be used in a manner consistent with national and international standards for the stewardship of historic properties.

APPENDIX C
Tilden’s Principles of Interpretation

1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.

2. Information, as such, is not Interpretation. Interpretation is revelation based upon information. But they are entirely different things. However all interpretation includes information.

3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical or architectural. Any art is in some degree teachable.

4. The chief aim of interpretation is not instruction, but provocation.

5. Interpretation should aim to present a whole rather than a part, and must address itself to the whole man rather than any phase.

6. Interpretation addressed to children (say up to the age of twelve) should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. To be at its best it will require a separate program.\textsuperscript{259}

APPENDIX D

International Council on Monuments and Sites

Ename Charter for the Interpretation and Presentation of Heritage Sites

The 7 Principles

Principle 1: Access and Understanding
Facilitate understanding and appreciation of cultural heritage sites and foster public awareness and engagement in the need for their protection and conservation.

Principle 2: Information Sources
Communicate the meaning of cultural heritage sites to a range of audiences through careful, documented recognition of significance, through accepted scientific and scholarly methods as well as from living cultural traditions.

Principle 3: Attention to Setting and Context
Safeguard the tangible and intangible values of cultural heritage sites in their natural and cultural settings and social contexts.

Principle 4: Preservation of Authenticity
Respect the authenticity of cultural heritage sites, by communicating the significance of their historic fabric and cultural values and protecting them from the adverse impact of intrusive interpretive infrastructure, visitor pressure, inaccurate or inappropriate interpretation.

Principle 5: Planning for Sustainability
Contribute to the sustainable conservation of cultural heritage sites, through promoting public understanding of, and participation in, ongoing conservation efforts, ensuring long-term maintenance of the interpretive infrastructure and regular review of its interpretive contents.

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Principle 6: Concern for Inclusiveness
Encourage inclusiveness in the interpretation of cultural heritage sites, by facilitating the involvement of stakeholders and associated communities in the development and implementation of interpretive programmes.

Principle 7: Importance of Research, Training, and Evaluation
Develop technical and professional guidelines for heritage interpretation and presentation, including technologies, research, and training. Such guidelines must be appropriate and sustainable in their social contexts.
## APPENDIX E: Analytical Framework for Interpretation of Architectural Fragment Collections

<table>
<thead>
<tr>
<th>Parts of buildings in collection</th>
<th>Objects</th>
<th>Materials</th>
<th>Building type</th>
<th>Architect or designer</th>
<th>Architectural style &amp; period</th>
<th>Regionalism</th>
<th>Ornamental craftsmanship</th>
<th>Technological craftsmanship</th>
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</thead>
<tbody>
<tr>
<td>Structural parts</td>
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<td>Exterior features</td>
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<td>Rain conductor parts</td>
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<td>Window frames, sash &amp; shutters</td>
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<td>Doors and related features</td>
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<td>Plumbing equipment</td>
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<td>Parts of buildings in collection</td>
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<td>Building type</td>
<td>Architect or designer</td>
<td>Architectural style &amp; period</td>
<td>Regionalism</td>
<td>Ornamental craftsmanship</td>
<td>Technological craftsmanship</td>
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<td>Iron and other metals</td>
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<td>Streetscape and small-scale elements in the landscape</td>
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<td>Molding samples</td>
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<td>Paint samples and decorative painting</td>
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<td>Wallpaper samples</td>
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<td>Mortar samples</td>
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</table>
### APPENDIX F  Analytical Framework for Interpretation of the Architectural Study Collection at Independence National Historical Park

<table>
<thead>
<tr>
<th>Parts of buildings in collection</th>
<th>Objects</th>
<th>Building type</th>
<th>Architect or designer</th>
<th>Architectural style &amp; period</th>
<th>Regionalism</th>
<th>Materials</th>
<th>Ornamental craftsmanship</th>
<th>Technological craftsmanship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural parts</td>
<td>• structural framing: beams, floor joists</td>
<td>• residential: domestic</td>
<td>• Independence Hall</td>
<td>• 18th century</td>
<td>• Delaware Valley</td>
<td>• wood milling</td>
<td>• hand sawn timbers</td>
<td>• framing joinery</td>
</tr>
<tr>
<td></td>
<td>• roof framing: purlins, sashes</td>
<td>• religious: Quaker meeting house</td>
<td>• Andrew Hamilton</td>
<td>• 19th century</td>
<td>• Philadelphia</td>
<td>• cast iron</td>
<td>• structural anchoring</td>
<td></td>
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<tr>
<td></td>
<td>• tie rods, bolts and anchors</td>
<td>• vernacular</td>
<td></td>
<td></td>
<td>• local wood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior features</td>
<td>• column capitals</td>
<td>• commercial</td>
<td>• Edmund Woolley</td>
<td>• William Strickland</td>
<td>• Delaware Valley</td>
<td>• stone quarrying</td>
<td>• stone carving</td>
<td>• bricklaying</td>
</tr>
<tr>
<td></td>
<td>• brick belt course</td>
<td>• residential: domestic</td>
<td>• First Bank</td>
<td>• 18th century</td>
<td>• Philadelphia</td>
<td>• wood milling</td>
<td>• wood turning, carving</td>
<td>• joinery</td>
</tr>
<tr>
<td></td>
<td>• wood cornice molding</td>
<td>• vernacular</td>
<td>• Second Bank</td>
<td>• 19th century</td>
<td>• local stone</td>
<td>• brick making</td>
<td>• decorative brickwork</td>
<td>• masonry</td>
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<tr>
<td></td>
<td>• exterior sheet metal cornice</td>
<td>• vernacular</td>
<td>• Merchant's Exchange Building</td>
<td>• Greek Revival</td>
<td>• local wood used</td>
<td>• sheet metal forming</td>
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<td></td>
<td>• modillons</td>
<td></td>
<td>• James Hoban</td>
<td>• Georgian</td>
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<td></td>
<td>• railings</td>
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<td>• Federal</td>
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<tr>
<td>Wall cladding</td>
<td>• wooden clapboards</td>
<td>• residential: domestic</td>
<td>• 18th century</td>
<td>• Delaware Valley</td>
<td>• stone quarrying</td>
<td>• decorative brickwork</td>
<td>• clapboard lapping</td>
<td>• metal smithing</td>
</tr>
<tr>
<td></td>
<td>• bricks</td>
<td>• commercial</td>
<td>• 19th century</td>
<td>• Philadelphia</td>
<td>• wood milling</td>
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<td>• bricklaying</td>
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<td></td>
<td>• stone</td>
<td>• vernacular</td>
<td></td>
<td>• local stone</td>
<td>• brick making</td>
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<td>• joinery</td>
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<td></td>
<td>• wood shakes</td>
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<td>• local wood</td>
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<tr>
<td>Roofing materials</td>
<td>• shingles</td>
<td>• residential: domestic</td>
<td>• 18th century</td>
<td>• Delaware Valley</td>
<td>• wood milling</td>
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<td></td>
<td>• copper roofing</td>
<td>• commercial</td>
<td>• 19th century</td>
<td>• Philadelphia</td>
<td>• copper &amp; tin manufacture</td>
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<tr>
<td></td>
<td>• tin roofing</td>
<td>• vernacular</td>
<td></td>
<td>• local stone</td>
<td>• brick bond patterns</td>
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<td></td>
<td>• slate tiles</td>
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<td>• local wood</td>
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<tr>
<td>Rain conductor parts</td>
<td>• downspouts</td>
<td>• residential: domestic</td>
<td>• 18th century</td>
<td>• Delaware Valley</td>
<td>• copper manufacture</td>
<td>• pressed copper</td>
<td>• rain collection systems</td>
<td>• metal smithing</td>
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<tr>
<td></td>
<td>• rain conductor heads</td>
<td>• commercial</td>
<td>• 19th century</td>
<td>• Philadelphia</td>
<td>• load manufacture</td>
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<td>• flanges</td>
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<td>• local stone</td>
<td>• local wood</td>
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<tr>
<td>Window frames, sash &amp; shutters</td>
<td>• window frames</td>
<td>• residential: domestic</td>
<td>• 18th century</td>
<td>• Delaware Valley</td>
<td>• wood milling</td>
<td>• light patterns &amp; sizes</td>
<td>• window anatomy &amp; construction</td>
<td>• flashing</td>
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<td></td>
<td>• window sashes</td>
<td>• commercial</td>
<td>• 19th century</td>
<td>• Philadelphia</td>
<td>• glass manufacture</td>
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<td>• shutter construction</td>
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<td>• fanlight</td>
<td>• Greek Revival</td>
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<td>• local wood</td>
<td>• stone quarrying</td>
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<td>• shutters</td>
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<tr>
<td>Doors and related features</td>
<td>• frontispieces, architraves</td>
<td>• residential: domestic</td>
<td>• 18th century</td>
<td>• Delaware Valley</td>
<td>• wood milling</td>
<td>• wood turning, carving</td>
<td>• flashing</td>
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<td></td>
<td>• interior doors</td>
<td>• commercial</td>
<td>• 19th century</td>
<td>• Philadelphia</td>
<td>• decorative brickwork</td>
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<td></td>
<td>• exterior doors</td>
<td>• Greek Revival</td>
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<td>• local wood</td>
<td>• door anatomy &amp; construction</td>
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<td>• transoms, fanlight</td>
<td>• Federal</td>
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<td>• glass manufacture</td>
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<td>• vernacular</td>
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</table>

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<table>
<thead>
<tr>
<th>Parts of buildings in collection</th>
<th>Objects</th>
<th>Building type</th>
<th>Architect or designer</th>
<th>Architectural style &amp; period</th>
<th>Regionalism</th>
<th>Materials</th>
<th>Ornamental craftsmanship</th>
<th>Technological craftsmanship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior features</td>
<td>• molded plaster ornaments • carved wood ornaments • brackets • ceiling ornaments • wood railings • stairs, winder stair unit • balusters, newel posts • mantles • wood paneling</td>
<td>• residential: domestic • commercial</td>
<td>• Independence Hall • Congress Hall</td>
<td>• 18th century • 19th century • 20th century • Greek Revival • Georgian • Federal • vernacular</td>
<td>• Delaware Valley • Philadelphia • local wood</td>
<td>• wood milling • plaster • tin manufacture • marble • ceramic</td>
<td>• paneling profiles and configuration • wood turning, carving • woodwork configuration • pressed tin construction • plaster ornament design and casting</td>
<td>• paneling assembly • stair construction • mantel unit construction • metal smithing • joinery</td>
</tr>
<tr>
<td>Heating devices and stoves</td>
<td>• stoves &amp; stovepipes, plates • firebacks, screens • fire grates, coal grates • flue dampers</td>
<td>• residential: domestic • commercial</td>
<td>• Philadelphia</td>
<td>• 18th century • 19th century • vernacular</td>
<td>• Delaware Valley • Philadelphia</td>
<td>• cast iron manufacture • tin manufacture • sheet metal manufacture • heating systems</td>
<td>• fireback decoration</td>
<td>• heating systems • chimney engineering • cooking systems • cast iron process</td>
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<tr>
<td>Flooring</td>
<td>• floor boards • floor section as part of a frame house</td>
<td>• residential: domestic • commercial</td>
<td>• 18th century • 19th century • vernacular</td>
<td>• Delaware Valley • Philadelphia • local wood</td>
<td>• wood milling</td>
<td>• joinery: butt, doweled, tongue and groove • wood milling</td>
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<td>Lighting devices</td>
<td>• gas globes • gas jet • knob and tube pipes • gas lamps • electric lamps</td>
<td>• residential: domestic • commercial</td>
<td>• 18th century • 19th century • vernacular</td>
<td>• Delaware Valley • Philadelphia • municipal gas • municipal electricity</td>
<td>• lead manufacture</td>
<td>• glass • brass manufacture • lead manufacture</td>
<td>• gas lighting systems • pipe fitting</td>
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<td>Plumbing equipment</td>
<td>• water hydrant • lead pipe • spigot • wood water pipe</td>
<td>• residential: domestic • commercial</td>
<td>• 18th century • 19th century • vernacular</td>
<td>• Delaware Valley • Philadelphia • municipal water system</td>
<td>• lead manufacture</td>
<td>• plumbing systems • water systems • pipefitting</td>
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<tr>
<td>Hardware</td>
<td>• hinges, doorknobs • bolts, locksets • window sash hardware, counterweights • bell systems • nails, rough hardware</td>
<td>• residential: domestic • commercial</td>
<td>• 18th century • 19th century • vernacular</td>
<td>• Delaware Valley • Philadelphia • wrought iron manufacture</td>
<td>• cast iron manufacture • brass manufacture</td>
<td>• ornamental door hardware</td>
<td>• nail chronology • window sash mechanisms • lock technology • bell systems</td>
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<tr>
<td>Iron and other metals</td>
<td>• wrought iron balcony parts • wrought iron railings • vault gate • cornice • cast iron spindle • iron fencing • foot scraper</td>
<td>• residential: domestic • commercial</td>
<td>• 18th century • 19th century • vernacular</td>
<td>• Delaware Valley • Philadelphia</td>
<td>• wrought iron manufacture • cast iron manufacture</td>
<td>• wrought iron design</td>
<td>• wrought iron joinery</td>
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<tr>
<td>Parts of buildings in collection</td>
<td>Objects</td>
<td>Building type</td>
<td>Architect or designer</td>
<td>Architectural style &amp; period</td>
<td>Regionalism</td>
<td>Materials</td>
<td>Ornamental craftsmanship</td>
<td>Technological craftsmanship</td>
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<tr>
<td>Streetscape and small-scale elements in the landscape</td>
<td>marble step • foot scraper • splash blocks • paving stones • paving bricks</td>
<td>landscape features • residential: domestic</td>
<td>18th century • 19th century</td>
<td>Delaware Valley • Philadelphia • stone and brick street paving • local stone</td>
<td>marble • stone quarrying • wood milling • brick making</td>
<td>paving patterns</td>
<td>brick laying • stone paving</td>
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<td>Molding samples</td>
<td>cornice, crown molding • chair rails • baseboards • door and window trim • architraves, friezes • window encasements • door encasements</td>
<td>residential: domestic • commercial</td>
<td>18th century • 19th century • 20th century • Greek Revival • Georgian • Federal • vernacular</td>
<td>Delaware Valley • Philadelphia • local wood</td>
<td>wood milling • plaster</td>
<td>wood</td>
<td>molded plaster ornaments • hand split and sawn lath</td>
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<td>Plaster samples</td>
<td>wall plaster • lath • molded plaster • plaster samples on lath</td>
<td>residential: domestic • commercial</td>
<td>18th century • 19th century</td>
<td>Delaware Valley • Philadelphia</td>
<td>plaster • wood</td>
<td>plaster • wood</td>
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<td>Paint samples and decorative painting</td>
<td>paint chips • paint samples on wood • samples on plaster • samples on wall • Independence Hall • Congress Hall</td>
<td>residential: domestic • commercial • Andrew Hamilton • Edmund Woolley</td>
<td>18th century • 19th century</td>
<td>Delaware Valley • Philadelphia</td>
<td>paint pigments, binders; recipes • varnishes</td>
<td>decorative paint designs, techniques</td>
<td>painting</td>
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<td>Wallpaper samples</td>
<td>samples on plaster • wallpaper samples • wallpaper samples on lath</td>
<td>residential: domestic • Edmund Hamilton • Independence Hall • Congress Hall</td>
<td>18th century • 19th century</td>
<td>Delaware Valley • Philadelphia</td>
<td>wallpaper printing methods • adhesives</td>
<td>wallpaper designs, techniques</td>
<td>wallpaper hanging</td>
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<td>Mortar samples</td>
<td>interior and exterior mortar for brickwork</td>
<td>residential: domestic • commercial</td>
<td>18th century • 19th century</td>
<td>Delaware Valley • Philadelphia</td>
<td>brick making • mortar</td>
<td>brick construction • brick bond patterns • pointing methods • mortar recipe</td>
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<td>Other categories</td>
<td>nailing blocks • lattice partitions</td>
<td>residential: domestic • commercial</td>
<td>18th century • 19th century</td>
<td>Delaware Valley • Philadelphia</td>
<td>wood</td>
<td>wood</td>
<td>fasteners</td>
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APPENDIX G

Architectural Study Collection at Independence National Historical Park:

Scope of Collections

1960:
"ARCHITECTURAL SALVAGE. A smaller but also significant group of artifacts stored in the First and Second Banks consists of about 1,000 architectural specimens salvaged from buildings demolished or restored in the immediate area of the park. As type specimens, these have particular value for architectural conservationists."

2010:
"Architectural Salvage —this collection contains building components documented to Delaware Valley (especially Philadelphia) structures erected between 1730 and 1850. The collection represents the technical and social aspects of architecture in the era of the park’s focus as a means of exploring aesthetics, taste, class, and innovation among a variety of societal groups."*

*This statement is in the process of being re-written as the collection is re-evaluated for the new exhibit.
APPENDIX H

Potential Partnership Organizations

- American Institute of Architects Historic Preservation Community
- The Athenaeum & Philadelphia Architects and Buildings Project
- Elfreth’s Alley Association
- City of Philadelphia Department of Records & PhillyHistory.org
- Greater Philadelphia GeoHistory Network
- Historical Society of Philadelphia & PhilaPlace
- Old City Civic Association
- Philadelphia City Planning Commission
- Philadelphia Historical Commission
- Philadelphia Society for the Preservation of Landmarks
- Preservation Alliance of Greater Philadelphia
- Society Hill Civic Association
- Queen Village Neighbor’s Association
- Washington West Neighborhood Association
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