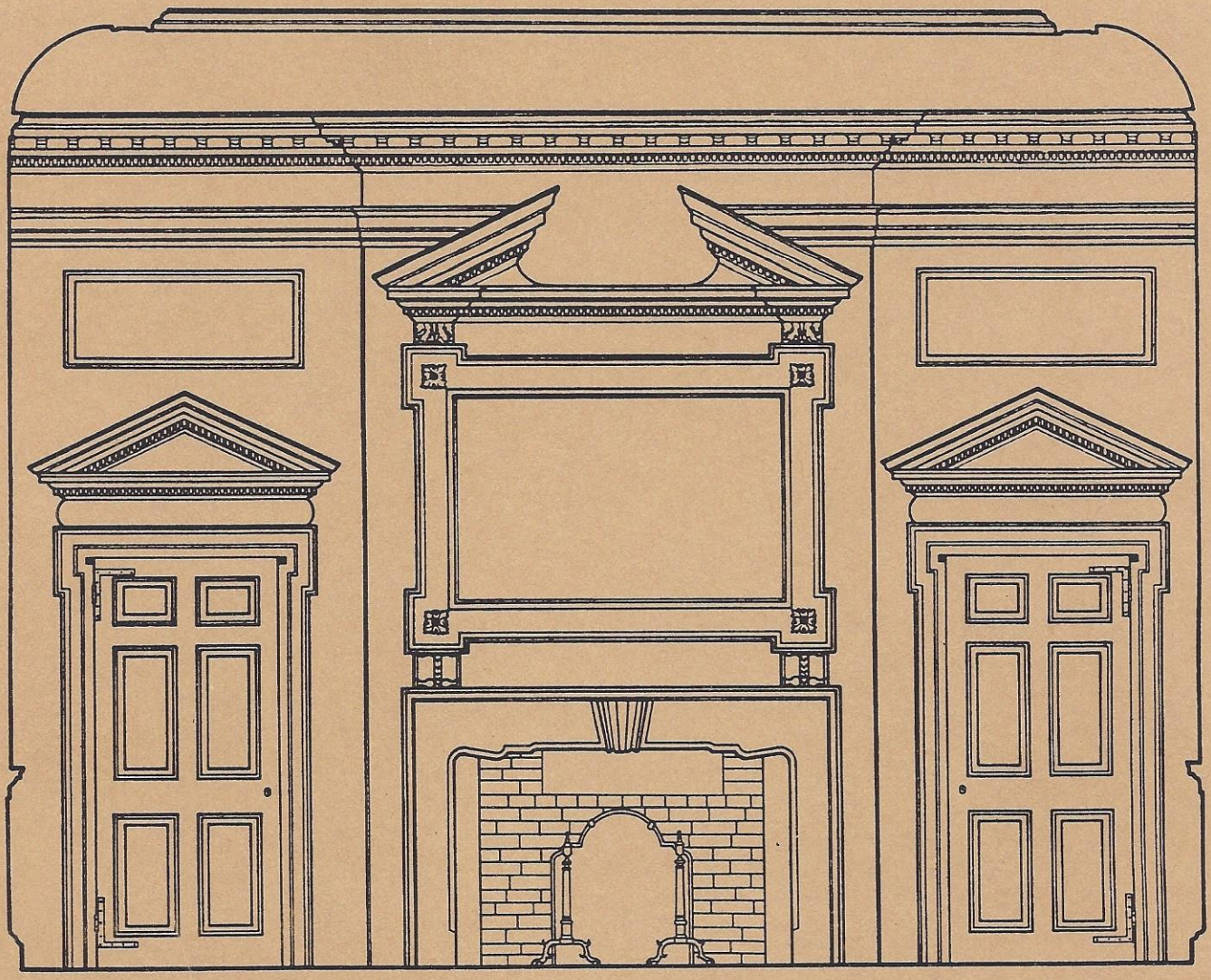


INDEPENDENCE HALL

HISTORIC STRUCTURES REPORT

ARCHITECTURAL DATA SECTION

THE PHYSICAL HISTORY OF THE SECOND FLOOR

Penelope Hartshorne Batcheler

1992

INDEPENDENCE HALL

HISTORIC STRUCTURES REPORT

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PART II PORTION

THE PHYSICAL HISTORY OF THE SECOND FLOOR

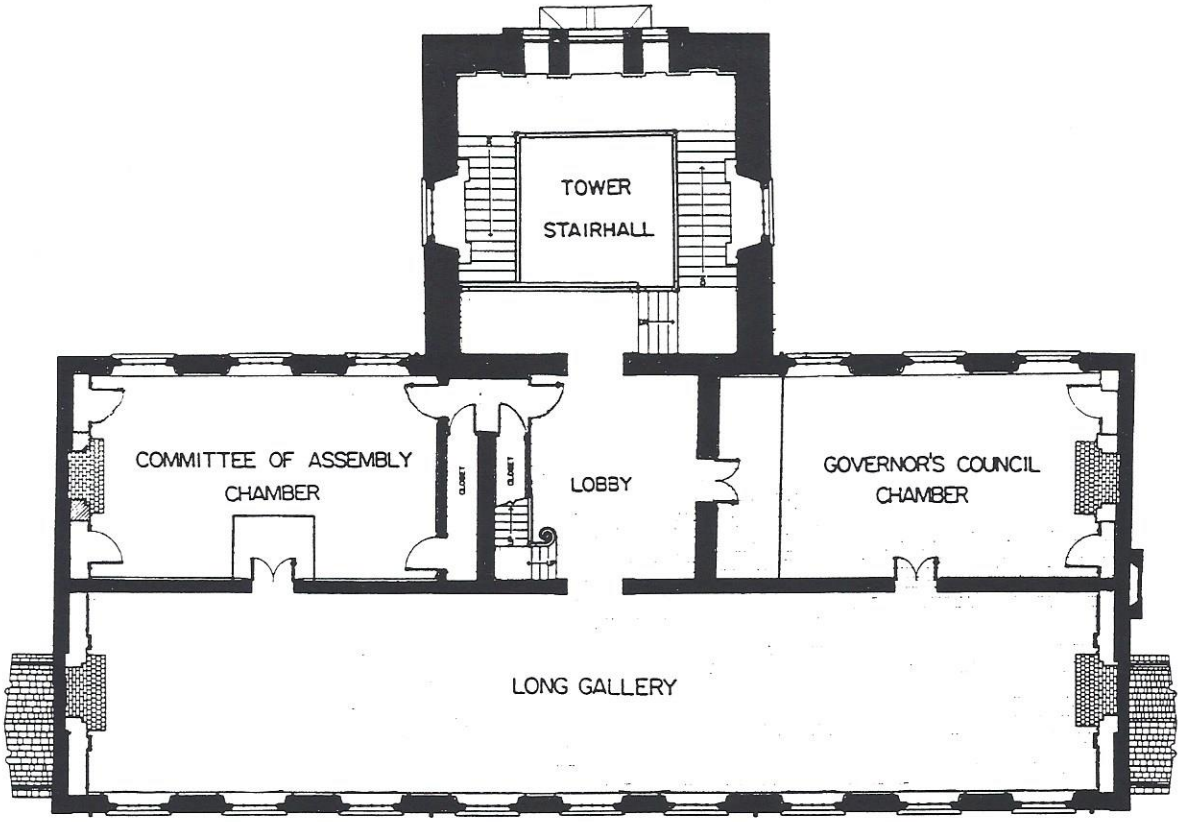
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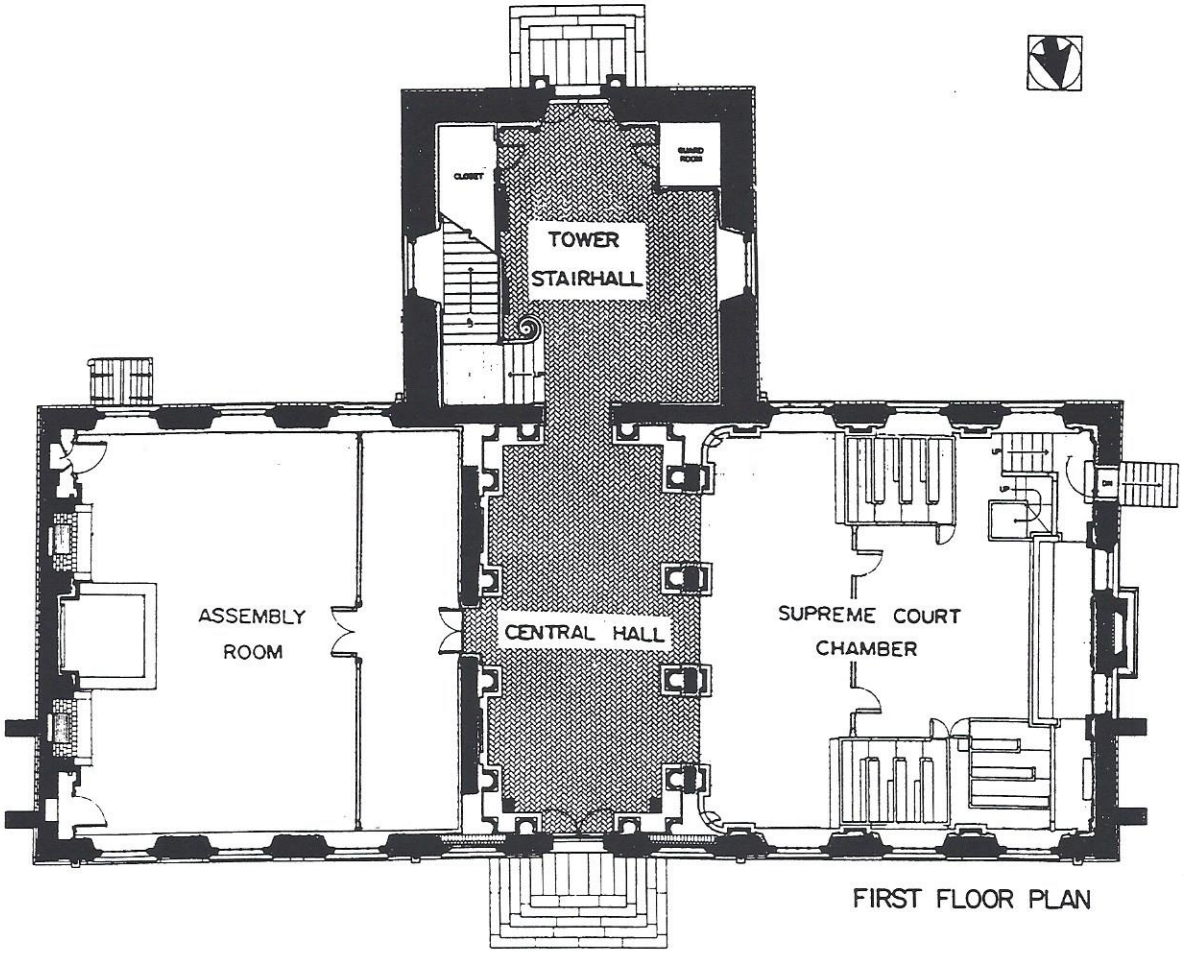
Historical Architect

Independence National Historical Park

1992



SECOND FLOOR PLAN



FIRST FLOOR PLAN

0 10 20 30 FT.

INDEPENDENCE HALL

1990

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PREFACE AND ACKNOWLEDGEMENTS

Turning the clock back to restore an old building to a specific period of history is at best a tricky business. This is particularly so at Independence Hall. The most historically important events which took place there occurred between the years 1776-1800, and the National Park Service assignment was to return the building to its appearance during that period. Because different portions of the building have been built or altered at different times, the result has been that the restoration represents different periods. The main building and masonry tower are much as they were built in 1733 and 1755 respectively. The steeple is much as it was when reconstructed in 1828. The first floor rooms are restored as they were from 1755-1788, and the second floor because it remained unchanged for an even shorter time is restored to its appearance from 1755-1778.

By the time the National Park Service architects approached the research and restoration of the second floor of Independence Hall we had accumulated considerable knowledge about the building's physical history and had a good idea of what types of evidence to seek for the eighteenth century appearance of these rooms. Already accomplished was the research for the Assembly Room, Central Hall, Tower Stairhall and Supreme Court Room, not to speak of the better understanding of the building gained from working with its structural rehabilitation.

Underlying all of this work has been the extensive documentary research by the INHP historians and their writing of the Historical Data Section of Independence Hall's Historic Structures Report completed in 1962. This report gives a very good overview of the sequence of events and the building's evolution. We advise reading it before tackling the Architectural Data Sections for the State House. An overall understanding would be helpful because the architect's reports are extremely detailed, each addressing only part of the building, as in this case, the report covers just the second floor. The architects have benefitted greatly from the historians' research. We have combined their documentary evidence with graphic material and the physical evidence we found in the building, and thus have enlarged on what is known about the changes imposed on the building.

Between the years 1964 and 1970, a team of at least twenty historical architects, contract draftsmen, and students put together a set of seventy-four evidence and restoration/reconstruction drawings of the second floor and a great many large format photographs were made of the evidence found (see Appendices P, Q and R).

The second floor of Independence Hall underwent over the years the most extreme renovations, matched only by those imposed on the Assembly Room. In 1871 a concerned citizen summarized the state of those spaces: "The upper rooms being changed past all redemption."[1] Each change of use on the second floor meant a change in room layout which in turn required changes in the building's structural

system. The effects of these second floor changes, as other Historic Structures Reports explain, even extended to architectural modifications at the first floor.[2]

To study the second floor, just as in the Assembly Room, it was necessary to strip the walls to bare brick and to expose the floor and ceiling framing. The public was not allowed on the second floor while the research and restorations were going on.

The evidence found for restoring the second floor was vestigial in each instance but added up to a great amount of information relating to architectural elements which had been torn out more than one hundred years earlier.

The second floor restoration was completed in 1972. It was almost the last of the NPS restorations of Independence Hall; only the west gable tall case clock was left to be done. The 1976 Bicentennial celebrations were coming on soon, and there was such pressure to have the building finished that the historical architects were directed to proceed with the restoration without first writing the Historic Structures Reports as normally required. Fortunately, the restoration process demanded written rationales which tested our conclusions, and were filed in anticipation of this report.

The writer has been very fortunate to be given the opportunity to present these rationales and to attempt to put together a chronology of the architectural and structural changes which have occurred at the second floor. In the chronological descriptions of the changes will be references to the Appendices of this report

where the restoration rationales discuss in depth the evidence found. For a quick understanding of the extreme changes in the evolution of the second floor, a set of floor plans, one for each era of change, is included at the end of the Report, and a perusal of the Illustrations will underscore this message. Sources for the physical and documentary evidence and the illustrations are provided. A graphic glossary is included, but copies of the set of evidence, research and restoration drawings have not been included. Not only are there so many, but if reproduced half size their notes are not very legible. Future students must therefore seek prints of the originals which are filed in care of the N.P.S. Denver Service Center. For economical reasons the Illustrations are also just "xerox" copies, and for clarity the student should refer to the original negatives and prints on file at INHP.

The NPS restoration of the second floor has been the third clean sweep attempt, each successive restoration coming closer to the original appearance, largely due to time, money and training.[3] As in the rest of the building, the NPS architects feel that their second floor restoration is quite accurate, but there is never enough information, particularly because so much original building fabric was removed, both in early changes, and in previous restoration attempts, and some conjecture is always needed. Without doubt another generation will have the privilege of re-examining the puzzle. It is therefore hoped that this report will be a "road map" for those who follow, whether scholars, interpreters or future architects assigned to make a reassessment.

For the preparation of this report I am grateful for the continued insights of Architect Lee H. Nelson who directed the National Park Service restorations of Independence Hall. Structural Engineer Nicholas Gianopulos, who designed and directed the 1962 structural rehabilitation of Independence Hall also kindly returned to the site, bringing with him Structural Engineer Suzanne Pentz to contribute their opinions. And to add a fresh perspective the present Independence National Historical Park Chief Historical Architect, William D. Brookover, and Historical Architect Thomas McGimsey gave of their busy schedules as well. Chief Historian David C. G. Dutcher, Historian Anna Coxe Toogood and retired Historian David A. Kimball all helped in placing historic governing bodies in the right place at the right time for interpreting critical documentation. Chief Curator Doris Fanelli and Associate Curators Karie Diethorn and Robert Giannini advised where furnishings were involved in the interpretation of evidence.

I am grateful to my husband, Architect George D. Batcheler, Jr. for editing for the sake of clarity, and special thanks go to Theresa Hyett for word processing the many drafts.

Penelope Hartshorne Batcheler
Historical Architect
December, 1992

PREFACE

1. E. L. Henry to F. M. Etting, July 8, 1871, in Restoration of Independence Hall, vol. 1 (correspondence), 80, Etting Collection, Historical Society of Pennsylvania.

2. See Historic Structures Reports: Part II (portion) Architectural Data Section on Independence Hall Assembly Room, by Lee H. Nelson, July 1964; and Independence Hall Supreme Court Room Ceiling, Entablature and Wall Paneling for the North, South and East Walls, by Lee H. Nelson, August 1966.

3. Previous generations have had different approaches to restoration. See "Beaux-Arts, Ideals and Colonial Reality: The Reconstruction of Williamsburg's Capitol, 1928-1934," Carl R. Lounsburg, Journal of the Society of Architectural Historians, vol. XLIX, No. 4, Dec. 1990.

1733-1750, The State House Initial Construction

Original Layout of the Second Floor

The design of the new Pennsylvania state House (Independence Hall) began with the presentation sometime in 1732 of two preliminary plans to the Pennsylvania Assembly's Building Committee (see Illustrations 1 and 2). Neither plan completely reflects what we believe was built. The chosen plan, which did not survive because it was undoubtedly used, and abused, at the construction site, must have been adopted fairly soon as workmen were hired and construction was underway by the summer of 1733.[1]

The surviving second floor preliminary plan in Illustration 1 shows four rooms and a stairhall along the south side, and a long room at the north. No evidence survives to support this room division. Instead, there were apparently only two rooms and a stairway along the south side of the building as shown in Illustration 2. The governor's office and council occupied the southwest room, a committee room was in the southeast corner, and the Long Gallery across the north front served for receptions.[2] Even though Illustration 2 comes close to the building as eventually built, it reveals its preliminary status by not having certain details which we know were incorporated, such as a garret (attic) stair in the southeast room about which more will be said later.

The main stairway in the preliminary plans, shown between the two south rooms, did indeed rise from the south end of the Central

Hall below.[3] The addition which we today call the Tower Stairhall was not to be constructed for another twenty years.[4]

Structural Systems

The original second floor room layout was not only dictated by the proposed uses, but we think the structural system designed for the building played an important role in shaping the rooms. The need at the first floor to create forty foot square rooms for the use of the Pennsylvania Assembly and Supreme Court challenged the builders. Oak had long been the favored framing material of these early builders, but oak did not grow in sufficient straight lengths to span such forty foot square spaces. Thus another framing system was introduced. A pin-wheel or "hand-in-hand" patterned girder system was installed above each room, supporting north-south joists which allowed the flooring of the second floor to run with the east-west length of the rooms.[5] This "hand-in-hand" girder layout apparently could support itself, but to support the anticipated additional live loads two supplemental wall "trusses" at the second floor level were also employed.[6] Curiously they were not true trusses as their bottom chords were "incomplete" i.e., not one continuous member. These naive trusses were enclosed in the second floor partitions which separated the Long Gallery from the southeast and southwest rooms. They transferred their loads to the four north-south masonry walls of the first floor level.

As the history of this building unfolds the reader will see that changes made to this original second floor plan, which compromised

these wall trusses, had a ripple effect on the architecture of the rooms on both the first and second floors.

Interior Finishes - Wood Trim Installation

The masonry walls, wood framing and roofing must have been completed in the 1730s because we know the interior trim was completed by August 19, 1740. On that date the Pennsylvania Assembly was petitioned by the carpenter John Harrison who had been "employed to do the Inside Work of the Statehouse, which he had accordingly performed ..." Harrison asked that his work be evaluated so that he could receive "reasonable" payment.[7] Although the woodwork was in place, the rooms remained unfinished as a plasterer had not been found who was deemed capable to do the work. One could imagine therefore, in June of 1741, bare brick walls with red iron-oxide prime paint on the wood trim.[8]

The eighteenth century construction sequence of installing interior wood trim prior to plastering provided the most valuable architectural evidence in determining the location and appearance of the original wood trim of the second floor. In plastering today, wood ground strips are first mounted on walls and the plasterer then works his material to the level of these grounds. When the plaster has dried, the new trim is applied on top of the grounds. The eighteenth century carpenters applied their wood trim first, directly to the walls. In the case of the State House they fastened the trim with iron anchors driven into brick mortar joints. The anchors in turn were nailed to the edges of the trim

(see Appendix L). The painters were then called in to give the trim a prime coat, and even a second primer, sealing the wood and keeping it from absorbing the moisture of the wet plaster to be applied adjacent to the trim.

The architectural evidence referred to above, which located the original trim, was the residue of prime paint on the brick walls, which followed the outlines of the wood trim. The painters in applying these undercoats knew that they need not take their usual care in applying the paint. Thus, if a little red iron-oxide or light gray second primer slopped onto the adjacent bare brickwork, no matter, it would soon be covered by the application of plaster. Appendices A-D and I, show how critical this paint evidence was in determining the extent, placement and even the architectural detail of the trim. This type of evidence was first found in the Assembly Room and thus purposely looked for at the second floor.

Architectural Treatment

(see Illustrated Glossary)

Generally one can say these second floor rooms were originally treated in a similar way to substantial Delaware Valley domestic structures. In the first half of the eighteenth century focal fireplace walls were usually paneled.[9] At the ceiling the crown and corona of the cornice were carried around the plastered side and back walls of the room; the doors and windows were trimmed; chair rails ran at the windowsill level, sometimes capping dado or wainscot paneling; and bases, or washboards, covered the joints be-

tween walls and floor. In all cases the second floors were less elaborate than the first.

At the state House the first floor public rooms reflected the stature of their use with wood paneling on all four walls embellished with engaged columns, or pilasters, tabernacle frames and archways. In the case of the "en camera" Assembly Room, although not paneled on all four walls its scale and its fully paneled and pilastered east wall was further enhanced by paneled wainscot below the chair rails of the side and rear walls, and an oversized pedimented doorway bespoke the authority of the legislature.

At the second floor the ceilings were lower, the rooms half as wide, and following the rule of domestic structures the second floor chambers had paneling only on the focal fireplace walls, etc.

Classic orders also lent distinctions between the position and importance of the offices. In classic architecture the plainer orders, the Tuscan and then the Doric were used below in a strong, stable, supportive mode. The more elaborate and delicate Ionic and Corinthian orders were used above. The Corinthian is referred to as the highest order.

The State House demonstrates this use of orders. The Central Hall and Supreme Court Room are basically of the Doric order, and the Assembly Room is Ionic, reflecting its political hierarchy if not its physical position. In the 1750s Tower Stairhall one finds layered orders. At the first floor level the stairway is "supported" on Doric columnettes, the Venetian or Palladian window

incorporated the Ionic order, and the main cornice at the ceiling is of the Corinthian order.[10] Thus, the NPS architects rationalized that the 1730s second floor rooms would originally have had such hierarchical treatment.

The iron-oxide prime coat evidence found on the brick walls confirmed the hierarchy. In both the Council Chamber and Long Gallery the iron-oxide prime paint evidence established outlines for full entablatures where they abutted the outer brick side walls. Appendix D of this report explains in detail this evidence for determining the allocations of orders in the second floor rooms.

Of the three rooms, the Governor's Council Chamber appropriately is of the highest Corinthian order, confirmed by the survival of a Corinthian cornice modillion from this room (see Illustration 60 and Appendix C). The Long Gallery is Ionic, while the Committee Room did not even have a full entablature with which to make an order statement. We believe at the 1733 construction period the stairway coming up from the first floor, was left unplastered with bare brick walls like the Central Hall below.[11]

The Governor's Council Chamber, in keeping with its stature, was reconstructed with its focal fireplace wall having a full Corinthian entablature; a projecting center bay with an open pedimented tabernacle frame above the fireplace; and scrolled brackets supporting this frame. The fireplace was trimmed with a molded marble keystoned surround. Flanking the center bay are raised panel closet doors, trimmed with architraves and denticulat-

ed pediments above swelled friezes (see Appendices A-D). The closets are in the recesses flanking the projecting masonry chimney breast (see Appendix B). The side and back walls of the room were plastered, with wood cornices, surbase (or chair rail) and washboards. Appendix E presents the rationale for placing a large denticulated pediment above a swelled frieze at the doorway leading from the Governor's Council Chamber to the Long Gallery, and the same at the 1750s doorway leading out to the 1750s Lobby, about which we will write later. Such pediments over closet and entrance doors have good precedent in the State House, having been used in the Central Hall in 1733-1750, in the eighteenth century Assembly Room, and in the 1750s Tower Stairhall.

The Long Gallery end walls, Appendices B&D explain, were reconstructed with the Ionic order, with a full entablature supported on fluted pilasters with carved Ionic capitals. The two fireplaces were treated with keystoned marble surrounds, and the space above the fireplaces and between the pilasters, divided into raised panels; this is a step down in hierarchy from the tabernacle frame of the Governor's Council Chamber. It was found that the Long Gallery paneled end walls had no closets. (see Appendix B). The paneled areas flanking the fireplaces were reconstructed with a large panel above a small one and a bolection chair rail between, based on the curved panels in the northeast and southeast corners of the Supreme Court Room.

The Committee Room prime paint evidence showed that its focal wall had only a cornice crown molding and corona board surmounting

its raised panel fireplace wall (Appendix D). The Committee Room had closets flanking its fireplace. The closet door enframements were reconstructed with plain pediments and flat friezes following the plainness of the cornice.

Like the Governor's Council Chamber, the Long Gallery and Committee Room were also plastered on their side and back walls and trimmed with cornices, surbase (or chair rails) and washboards at the floor (see Appendix I).

Windows and Paint Colors

The windows in all the rooms, incredibly, have not only their original 1730s frames, but their 1730s-40s sash, splayed jambs, architraves and interior sills (see Appendix H). As the complex history of the second floor is told the survival of these elements seems all the more miraculous.

It is thanks to the survival of the windows that we have been able to determine the woodwork paint colors for the second floor (see Appendix A). The pores of the wood of the sash still contained blue pigment at the Long Gallery, and on a miter of one window architrave in this room there was found a large enough deposit of the Prussian blue to establish its hue, value and chroma. In all three rooms the splayed window jambs also had color evidence for the trim (Long Gallery: Prussian blue; Governor's Council Chamber and Committee Room: the same light orange yellow color used in the Supreme Court Room below). Another paint detail was found on the splayed window jambs as well. Apparently just as

the original baseboards, or washboards, were found to be painted dark colors in the Central Hall, Supreme Court Room, and Tower Stairhall, the same principle was followed at the second floor window-sills. These sills were painted dark grayish reddish brown. And to prevent the rags which cleaned the sills from dirtying the adjacent window trim, the dark sill color was carried up the vertical surfaces of the trim about one inch; an unexpected yet sensible detail. One wonders if the dark sill color might have turned up onto the plaster walls between the windows (and one wonders if this detail was not also used in the lower rooms). The plaster walls of all the second floor rooms were apparently whitewashed originally (Appendix A).

Coved Ceilings and Cornices

All the rooms had plaster coves as transitions from the wood cornices to the flat ceilings.

A cove is formed by curved wood ribs which are attached at one end to the ceiling joists out from the wall as far as the curve projects, and at the lower end against the wall behind the wood cornice moldings. On the curve of these ribs they nailed horizontal hand split lath and then applied the plaster. Thus, the joists directly above the ribs remained clean, while plaster stains can be seen on the ceiling joists beyond where the coves joined the flat ceiling.

The fortunate survival of the garret floor framing provided the plaster and lath evidence for the flat portions of the ceilings

throughout (see Appendix B). All the rooms had approximately the same cove projections (i.e., widths) except the Committee Room where the cove was narrower. This perhaps reflects the simpler architectural treatment of that room.[12]

Flooring

The survival of the original second floor framing provided the full pattern of the original floor board widths and lengths. Appendix J explains more fully that on the top edges of the second floor joists pairs of nail holes, some with handwrought L-head flooring nails still in them, as well as dirt deposits, and surface decay from washing the floors, defined the widths of the boards (see Illustration 50). The butt ends of the boards were located by finding two sets of nail holes in one joist.

The original State House flooring was not the best to be had. Some of it survived and is now laid in the Governor's Council Chamber. The original boards were yellow pine, 1 1/4" thick, and so wide that they included flat grain (see Illustration 51). This type of floor was cheaper than narrow, edge grain boards which would have better withstood the wear and tear.[13]

There is good documentation that the floors were unfinished as they were washed periodically. Indeed they remained light in color thru at least the early nineteenth century when thus recorded by Titian Peale in a water color view of his father's museum in the Long Gallery (see Illustration 5).

Hearths

Appendix B presents the evidence for the location and size of the fireplace hearths. The outer hearths were laid with square bricks made especially for this purpose and widely used in eighteenth century Philadelphia.[14]

Garret Stair

A garret stair was found to have been located behind a partition at the west end of the southeast room with a closet beneath it (see Appendix F). In looking at the preliminary State House plans this dark closeted stair is not shown. Instead, the main stair is drawn as though it were to continue to the garret. In Illustration 2 note that wherever the newel posts of the main stair are drawn solid black that the stair is meant to either ascend or descend, and from the second floor landing the main stair was drawn to ascend to the garret as well as to descend to the first floor.

We pursued this indication by examining the garret framing. Appendix F has a discussion of the evidence which shows that indeed the 1730s builders did leave a headed-off space in the garret floor framing which could have allowed the main stair to come through to the garret, but also would have been of use in hauling up materials for the roof and garret construction.

Appendix F also gives our conclusion that the garret stair was never built above the main stair. Instead, this headed-off space was filled in with crude pit-sawn joists toe-nailed to a ledger, with wrought iron nails to close the space when no longer needed

for construction. The 1730s builders apparently hid the steep, poorly lit garret stair from view, as access to the unfinished garret for maintenance. We have no indication that the 1730s-1750 octagonal cupola on the main roof was a destination for the public as was probably the intent of the early designer in showing the main stair continuing beyond the second floor.

Main Stairway, Its Walls, Doorways and Windows

As said earlier, the 1730s main stair rose to the second floor from the south end of the Central Hall below, and as the Central Hall was then an unfinished space, we believe the second floor walls of this stairway were also unfinished. However, there must have been a finished opening into the Long Gallery from the second floor landing. The preliminary plans show two treatments. Illustration 1 shows an indication of heavy door jambs with an opening somewhat wider than the normal room doorway. Illustration 2 shows an opening as large as the room width with the suggestion of pilasters at each jamb. Appendix E discusses the nail hole evidence found in the tops of the original joists indicating that this opening was only about six feet wide. Also discussed is how we concluded that this opening was an open archway without doors. This was concluded mainly because the 1730s-50 main stairway was not well lighted, and needed borrowed light from the Long Gallery.

The early main stairway probably was directly lighted by only one south window. There are known openings for four more, two at the second and two at the first floor. But these would have been

in front of the butt ends of the north-south brick partitions which flanked the Central Hall and second floor stairway. And, as was done at the two windows in a similar condition flanking the building north entrance, these windows probably were closed off by interior shutters. Thus the only direct light to this stair from 1733-1750 would have been from one center south window.

Evidence for this window is possibly still hidden beneath plaster on the north wall of the 1750s Tower Stairhall. The National Park Service did not pursue this window evidence as it was not germane to the restoration goals. By a limited removal of plaster on the Tower Stairhall north wall, below the present second floor landing, the exterior south face of the 1733 main building will be uncovered. This wall should have Flemish bond brickwork, and two vertical joints between which would be the 1750s brick infill at the 1733 center window. This would be the most logical position for this window according to the Delaware Valley building tradition of positioning a stairhall window near a stair landing or ramp to provide the best light. Indeed in the 1750s Tower Stairhall one can readily see that the east and west windows were positioned to better light those stair ramps.

NOTES

1733-1750

1. Pennsylvania Archives, Series VIII, Vol. III, p. 2154, 2185 and pp. 2213-4. See Historic Structures Report Independence Hall Central Hall and Tower Stairhall, by Penelope Hartshorne Batcheler, March 1989, pp. 8-21 for discussions about the building process and why these drawings are likely to be preliminary. This report is hereafter cited as HSR, CH&TSH.

2. Confirmation of the actual room layout and use is to be read in a description of the State House of July 4, 1771, Jacob Duche, Casepina's letters...(Bath, 1777) pp. 12-15. "The upper story consists of a Long gallery which is generally used for public entertainments, and two rooms adjoining it, one of which is appropriated for the Governor and his Council; the other, I believe, is yet unoccupied."

   Not only were long galleries on second floors well established in English great houses by 1728 when written about by Architect James Gibbs (see Illustration 63), but they were well established in the 1500s and perhaps even before, see Robert Smythson & The Elizabethan Country House by Mark Girouard, Yale Univ. Press, 1983. I am grateful to INHP Historical Architct Tom McGimsey for this reference.

   See drawing NHP-IND 2462 for evidence found of the bearing pockets for the framing of this stair as it rose from the east side of the Central Hall.

4. CH&TSH, pp. 22-30, and pp. 31-32.

5. The reader will be well rewarded by reading Lee H.Nelson's article "Independence Hall: Its Fabric Reinforced", in Building Early America, The Carpenters' Company of the City and County of Philadelphia, 1976, Charles E. Peterson, Editor, Chapter 15. This article explains the building's structural system as designed by the original builders as well as subsequent modifications made to meet the building's later adaptations.

   Lee H. Nelson in the above article cites the "hand-in-hand" framing system as "a floor by S. Serlio" published by Battey Langley in Ancient Masonry, London, 1734-5. The Girouard book of note 2 above, illustration 2, page 12, shows the use of a "hand-in-hand" framing system to support a lantern of an Elizabethan house Lyveden New Bield, Northamptonshire, designed by Robert Stickelles.

Oak has been found as the principal material used for framing in earlier and equally old buildings in the Philadelphia area: Gloria Dei (Old Swedes Church) c. 1700, and Christ Church 1735-39; not to speak of the long tradition of oak framing in England. Lee H. Nelson, in a telephone conversation on 10/9/90, says oak was a superior wood in taking stresses and made strong tenons for the oft-used mortise and tenon joint. But as oak grows with bends in its trunk it would have been almost impossible to find oak timbers which could clear-span the forty feet across the State House end rooms.

6. It is the opinion of structural engineers Nicholas Gianopulos and Susanne Pentz of Keast & Hood Co. that the hand-in-hand systems were self-supporting but needed supplemental support to carry live loads. Conversations, October 1990.

7. Pennsylvania Archives, VIII Series, III, p. 2689.

8. Ibid., p. 2682, June 5, 1741.

9. See "Wainscotting (A.K.A. Paneling) in Historic Buildings" by Lee H. Nelson, A "Training Aid" from The Interiors Handbook for Historic Buildings,Historic Preservation Education Foundation, Wash. D.C., 1988. This article explains the difficult carpentry needed to assemble a paneled wall, thus the use of it on the most important walls of a room. In The Builder's Dictionary: or Gentleman and Architect's Companion, London 1743, wainscotting is said to have been used "instead" of wall hangings and "'tis usual to have Wainscot Breast high, by Reason of the natural Humidity of Walls." Who knows how early paneling as a woodworking technique was developed. Its purpose is to produce a stable plane of woodwork. These planes can be as small as a wainscot chair back or a paneled door, or as large as a wall system. In all cases a grid of vertical stiles and horizontal rails connect with mortise and tenon joints, and the spaces between are filled with glued-up panels which are free to expand or contract, riding in grooves cut in the edges of the stiles and rails.

10. HSR, CH&TSH, p. 32. Such unfinished conditions did not deter the Governor from entertaining "150 gentlemen and ladies" in the State House, "concluded with a Ball" on October 30, 1738. PA. Gazette, Nov. 2, 1738, p. 3, col. 1.

11. Ibid., p. 23.

12. Coved ceilings may have been introduced at the Assembly Room and second floor rooms to lower the height of the end wall paneling. According to James Gibbs Rules for Drawing the Several Parts of Architecture, London, 1736, plate LIV, such

choices were based on "the just proportions of Rooms as handed down to us by the greatest Masters" or if "agreeable." I suggest that the latter was the rule in this case.

13. The Carpenters' Company of the City and County of Philadelphia 1786 Rule Book, Ed. C. E. Peterson, Phila., 1971, pp. 10-11.

14. See INHP catalogue 8298, a brick found at one of the second floor hearths in 1896-7 (included in Appendix B).

1750-1778, The State House Completed

Addition of the Tower: a New Grand Stairway and a Second Floor Lobby

In 1749 the Pennsylvania Assembly "Ordered, That the Superintendents of the State-house, proceed, as soon as conveniently they may, to carry up a Building on the South-side of the said House to contain the Staircase, with a suitable Place thereon for hanging a Bell."[1] Thus began the completion phase of building the Pennsylvania State House.

The scope of this work which related to the second floor included: building the grand stair (the one we have today) within the new masonry tower; removing the 1730s stair to the second floor from the south end of the Central Hall; and flooring over the space where the 1730s stair had been to create the room known as the Lobby.[2]

From the Lobby you could enter the Long Gallery ahead, the Governor's Council Chamber through a new doorway to the left, the southeast room through a new passage to the right, and the steeple up a new flight of stairs built along the Lobby east wall.

Edmund Woolley's Description of the Work

The 1750s addition of the Tower and related work in the second floor came under the direction of Master Carpenter Edmund Woolley who had previously directed the construction of the main building.[3] Woolley has left a very important document, an account which

summarizes his work in the tower addition.[4]

From this account the clearest Woolley reference to 1750s work at the second floor was to "hanging ye upper front Sashes anew in Long Gallery."

In June of 1741 in a report to the Pennsylvania Assembly explaining why the building was so delayed in being finished, the "Manager" of the construction said:

> "...that the Carpenters Work however is now finished; that the Sashes were made, and the Glass ready to put in; but the enclosing Wall [of the State House Square] not being yet compleated, he had thought it better to defer putting them up till that was done, lest they should suffer much Damage by breaking;...[he] would have the lower Rooms immediately glazed, if the House should think fit to direct it..."[5]

It looks as though the second floor sash, being less accessible, and therefore safer from vandalism, may have been installed before the first floor sash. In which case, their installation must have been inadequate if Woolley had to hang them "anew".

The State House windows were large for the early period of the building. The upper sash of these windows were fixed, the lower sash hung on lines which were counterbalanced with weights, the lines running through pulleys near the head of the frames. From the hardware bill of Hugh Roberts, to be described later, on August 23, 1753, thirty-eight sash pulleys were supplied. Perhaps the original pulleys were inadequate, if they were turned of fruitwood as was done for domestic structures, and were not strong enough to support these heavy sash (see INHP Architectural Study Collection Accession 1961).

Much harder to interpret is Woolley's statement to "altering the

Balcony and adding thereto with Stairs leading to State house flat." One normally thinks of a balcony as being on the exterior of a building, and there were a number of these used on early eighteenth century domestic structures in the Delaware Valley.[6] But this balcony is located by the phrase "adding thereto with stairs leading to State house flat." Woolley seems to have been applying the term "balcony" to the second floor landing at the head of the 1730s main stair. It was from the northeast corner of this landing that Woolley started the new stair leading up to the upper floors of the new tower. There they made an apartment possibly for a building caretaker (see the two fireplaces), and thus the word "flat."

Near the end of the account Woolley included "Also ye Portal at ye head of ye first stairs (i.e., the woodwork which trims the archway connecting the second floor Lobby and the Tower Stairhall) with ye ramp & twist stairs carried up there," (i.e., the finish woodwork of the "stairs leading to State house flat").

Woolley says no more, and our research has had to fill in the gaps in "reconstructing" the 1750s changes and additions to the second floor.

At present we have no evidence to indicate any further changes were made for the next quarter century.

Lobby Flooring

Almost square, the second floor Lobby was floored by Edmund Woolley and his carpenters with butt-jointed yellow pine, wide

boards, running east-west. The 1750 framing to which the floor boards were nailed still exists. The joists were installed running north-south, spanning between the 1730s landing, which Woolley called the "balcony," and the south wall of the 1730s building. One girder was included among these joists, projecting out into the new Tower Stairhall, where it cantilevered to support the second floor landing of the new grand stair. Appendix J, and drawings 391/94000, sheets 25 and 26, and NHP-IND 3512, sheet 1, record not only the surviving original framing, but also the nail and dirt evidence which indicates the 1750s floor board widths and placement (see Illustration 50).

Lobby Architectural Order

The woodwork of the "Portal," or, open archway between the Tower Stairhall and Lobby is the work of Edmund Woolley. Appendix D explains that this open archway "allows" the space of the Tower Stairhall to pass into the Lobby, and therefore these two spaces, at this level would be treated the same in the hierarchy of architectural orders, i.e. with the Ionic order. Confirming this, is the fact that the arched architrave back bands on both sides of the archway are alike in having cyma reversa moldings, whereas the archways on the first floor have cyma recta moldings throughout, relating to the use of the Doric order in their adjoining rooms. Thus the Lobby has an architectural treatment equivalent to that in the Tower Stairhall at the level of the Ionic Palladian window (see Appendix D).

The "Portal" (Archway between the Tower Stairhall and Lobby)

Not only did Woolley list this "Portal" in his scope of work as said before, but the woodwork of the archway proved to be original when examined after paint removal. The pilasters of the archway are fastened to the brick wall with original wrought iron anchors. The wood is of yellow pine as is most of the original paneling.[7]

The archway has recessed panels, or what were called "open" pilasters, supporting impost moldings and keystoned arched architraves. In the open pilasters 1750s woodcarver Samuel Harding added ribbon bows with hanging blossoms which on his account he listed as "draps of husks" for the "open plasters oposite the Venneshon Winder."[8] Nail holes and outlines of the Harding carving were found under 1898 composition poor imitations. The missing carving has been ably reconstructed in both the north and south open pilasters. [9]

As discussed in Appendix E we believe Edmund Woolley was not introducing a new element here when he made an arched opening. The Supreme Court Room woodwork with its three open archways to the Central Hall had apparently been completed before 1740.[10] And, as said in the 1733-1750 chapter, we believe there was a six foot wide archway between the Long Gallery and the 1730s second floor landing. We suggested that this opening was treated with an open archway to allow borrowed light for the early stair. Thus, Edmund Woolley would have been repeating an established architectural motif in installing his 1750s archway between the Tower Stairhall and the Lobby.

As Samuel Harding lists carving "draps of husks" for only the 1750s Lobby archway, we assume that either the 1730s Long Gallery archway already had carved "draps of husks," or that Woolley chose not to further embellish the older archway. The National Park Service chose the latter interpretation.

Doorway between Lobby and Governor's Council Chamber

With the main stair now moved to the Tower Stairhall and the Lobby created, it was possible to open a doorway in the brick partition between the Lobby and the Governor's Council Chamber to the west. The size of this doorway was established when researching the floor board evidence for the second floor. Edmund Woolley, after cutting the doorway, laid the new Lobby flooring such that the boards ran through the new opening to the first joist west of the partition where they abutted the 1730s southwest room flooring.[11]

The doorway opening is wide and would have had double doors. Appendix E presents in detail the National Park Service rationale for the reconstruction of this important doorway with four panel double doors, and double architrave trim surmounted by a plain frieze and denticulated triangular pediment.

Passage to Southeast Room and 1730s Garret Stair

Just as it was necessary to cut through a brick partition to open a doorway to the Governor's Council Chamber, the brick partition on the east side of the Lobby was also breached in the

1750s to make a passage leading to the southeast room. A passage it had to be, for it was necessary to pass beneath the new Lobby stair and to pass by the foot of the 1730s garret stair. Appendix F discusses the evidence which established this garret stair, and Appendix G shows that the 1730s stair was still in use in the 1750s, and defines the 1750s passage, principally by floor board evidence.

Lobby/Steeple Stair

We've already referred to Woolley's description of the Lobby stair leading to the "State house flat." We will now discuss the rest of his description: "ye ramp & twist stairs carried up there..."

The public position of this stair, opposite the entrance to the Governor's Council Chamber, called for some elaboration. The hand rails were ramped, i.e., the hand rail and wainscot half rails made sweeping transitions from the normal hand rail levels up to the top of the newels and the matching wainscot pilasters (see Illustration 56). The rail at the bottom newel was given a "twist", i.e., scrolled in plan, a detail later described as a "curtail step" (see Appendix N, 1844 survey). In addition, surviving stair elements show us that the railing balusters were turned, and at the ends of the treads there were hand carved scroll brackets (see Illustrations 58 & 59). The latter were accounted for in 1753 by Woolley's woodcarver Samuel Harding, "to 21 brackits for the uper Stairs at 5 s pr peice."[12] Samuel Harding charged this same amount

for the larger brackets of the "grand stair" in the Tower Stairhall probably because both sizes had the same amount of carved detail.

Overall, the Lobby stair was less elaborate than that of the Tower Stairhall. It was steeper, narrower, and its turned balusters were quite simple. They were more slender in keeping with the smaller scale of the stair, had only bases and caps, and were not carved as were those of the Tower Stairhall.

Drawing 391/94000, sheet 18, and Appendix G show how important the survival of the brackets and balusters were in determining the dimensions and layout of the stair. The riser heights and tread dimensions were established by these details, and the number of treads and risers determined by the evidence of the slope of the stair found at the head of the stairs against the south wall (see Drawing 391/94000, sheet 6).

The known slope indicated extra risers at the foot of the stair. The necessary extra steps projected westward into the Lobby from the lower landing. This westward projection of the stair further confirms that the opening from the Lobby into the Long Gallery could be no more than about six feet wide.[13]

As was usually done in the eighteenth century, paneling was introduced to partition off the space beneath the Lobby stair. The plane, or line, of this paneling was found where it had intersected the south wall plaster (see Drawing 391/94000, sheet 17A).

The small passage to the southeast room, discussed before, needed a door to close it off from the Lobby. Similarly at the first floor the Tower Stairhall paneling contains an original

doorway to a closet beneath that stair. As that door has a pediment, the National Park Service treated this second floor Lobby passage door the same way, as well as the rest of the second floor closet doors. They are six panel doors trimmed with architraves, and are surmounted by a triangular pediment with a plane frieze (see Appendix E).

Lobby Wainscot Paneling

Just as wainscot (or dado) paneling was found to follow the wall up the Lobby stair, wainscot paneling was also found to have been on the walls surrounding the Lobby. Drawing 391/94000, sheet 6, recording evidence found on the Lobby south wall, includes the note: "No traces of original plaster appear below line --indicates top of 1750s wainscot in 'Lobby'."[14] In contrast, original plaster was found above this line and was recorded on the same drawing, (see Illustration 38).

The appearance of the wainscot of the Lobby was similar to that lining the walls of the Tower Stairhall stairway. We can say this because there is evidence that the paneled areas were capped not with a chair rail, but with a half rail as at the Tower Stairhall (see Drawing 391/94000, sheet 19). Paint evidence on the returns of the original 1750s archway pilasters gives us not only paint color evidence but the molding profile of this half rail and the plane of the wainscot paneling.

Lobby Paint Colors

The Tower Stairhall blue color and the dark brown half rail color were found on the Lobby side of the open archway to the Tower Stairhall. Appendix A describes the evidence for this in more detail. We were also very lucky to find evidence for the blue color on the surviving balusters and carved tread-end brackets. One of the two surviving brackets has been remounted on the stair at eye level (see Illustration 59), the other remains in the Museum Collection (Accession 2383.3) for reexamination of the paint evidence by another generation.

Lobby Cove Cornice

Just as in the other second floor rooms which had been finished in the 1740s, in the 1750s Edmund Woolley continued the use of a plaster cove above the Lobby cornice. In all cases the cove dimensions were determined by evidence on the underside of the original ceiling joists (see Appendix B).

An area of conjecture with the Lobby cove is at the east wall above the stair. We designed the cove to return on itself where the stair rises to go through the ceiling opening. Otherwise, the cove would run into the stairway. At the south wall the cove dies into the stair soffit.

1750s Hardware

It is not until the 1750s major additions to the State House that we have documentation for hardware. This is a most extensive and graphically beautiful account of hardware, supplied by a man named Hugh Roberts.[15] Of his account only one item, unfortunately, is earmarked for a specific part of the building. On October 20, 1753 a "very large brass Nob Lock," costing 18 shillings, was supplied for the "Committee Room," i.e., the room Woolley added east of the Assembly Room.

Early in the account of October 16, 1751, there is listed "a large brass Nob Lock compleat 12 [shillings]." Later, on April 7, 1755 an "8 Inch brass Lock Compt" cost 1 pound 4 shillings, more than the "very large brass Nob Lock" of two years before. This was probably due to inflation, as "5 hundred Sprigs" cost 2 shillings in November of 1753, and in May of 1755 "500 Sprigs" cost 2 shillings 6 pence. Thus what may have been considered a large brass lock may have indeed been equivalent in size to the "8 Inch brass Lock Compt." There were numerous other locks supplied that were iron rim locks costing 4, 5 or 6 shillings. Brass knobs were supplied separately.

The National Park Service assumed that the 12 shilling "Large brass Nob Lock" of 1751 was supplied by Hugh Roberts for use at the new entrance to the Governor's Council Chamber from the Lobby. As soon as the Tower Stairhall had a passable new stair, Woolley would have been able to remove the old stair and lay the new Lobby floor. Thus, early on, such as October 1751, Woolley could have

1778-1800. The Pennsylvania Assembly Moves Upstairs

In July of 1778, after the British occupation of Philadelphia, the State House was made ready for the return of the Pennsylvania Assembly and the Continental Congress. The British had occupied Philadelphia the previous year, and had used the State House first floor to quarter their own troops and kept American prisoners, including some wounded, on the second floor, in the "Long Room."[1] On July 13, 1778 the State House was described as "left by the enemy in a most filthy and sordid situation...the inside torn much to pieces and is now cleansing and repairing..."[2] Anything loose seems to have been taken. A good deal of hardware had been lost or removed, iron rim locks, spring bolts, spring latches, two stock lock keys and numerous other keys.[3] By July 21, 1778, the Council Room at the SW corner of the second floor was

> "cleansed in order for the reception of Council, ...except only that there are no chairs therein, [it was] ordered, that the Secretary procure eighteen Windsor Chairs for the Council Room."[4]

Francis Trumble thereupon made nineteen Windsor chairs which were listed in an account of August 22, 1778.[5]

The Assembly meets on the Second Floor

The Pennsylvania Assembly, on return to the State House, met on the second floor, allowing the Continental Congress to use its proper room on the first floor. We believe the Assembly used the

1782 by the capital of one of the columns which support the ceiling of the room. [The column's right to speak was challenged, but it replied] That he was properly a standing member of that House, having been duly fixed in his station by those who had the power and right to place him there...That he was not only a member of the House, but one of its principal supporters, in as much as they could never make a House without him ...[and that those now opposing him had frequently appealed to him before in every contest respecting the rules of the House, because, as the letter writer notes,] The Rules of the House are hung up against one of the columns.

[The Columnar Orator, in defending the city trees, points out that trees have a life after death more useful than that of man.] It is now some years [says the column] since an end was put to my vegetal life by the fatal axe...yet you see my body is still of use; I stand here firm sound and hearty; and barring an accident from all consuming fire, I shall attend the future debates in this House, when all those, whom I have now the honor to address, shall be no more...

[In speaking of the British occupation, the column refers to the many who fled the city and says of himself and the other columns;] It must be confessed we remained when others fled. We stood our ground, and we suffered in our country's cause."

November 27, 1782, the Freeman's Journal, p. 2, vol. 1. In a burlesque piece entitled "The Dreams of Momus", the writer parodies the proceedings of the Pennsylvania General Assembly: "Mr. Bluster had no sooner sat down in his usual seat near the Pillar, than Mr. Gallypost arose and...addressed the chair."

Size of the Enlarged Assembly Room

The 1778-9 Assembly Room was not exactly the same size as the first floor Assembly (now Congress) Room. Appendix G contains a detailed discussion of the fate of the 1730s closeted stair to the garret which was located at the west end of the southeast room. We know from a 1774 description of the building that this old stair was no longer in use at that time.[15] But we are fairly sure that its enclosing partition remained in place at least until 1827 (see chapter dealing with the period 1802-1827). Thus the stairway and closet subtracted about four feet from the east-west dimension of

the second floor Assembly Room.

The reconstructed floor plan for this period (1779-1802) shows that in creating the Assembly's large room this west partition, when continued northward, intersected the north wall of the building neatly between two windows. Perhaps that is why we found a section of the original plaster at this location on the north wall, protected by the partition abutment. At any rate, until other evidence surfaces, we are assuming that this is the alignment of the second floor 1779-1802 Assembly Room's west wall.

Placement of the Second Floor Assembly Room Doorways

In 1780 there was supplied "sash line, etc. for the Assembly room door," (apparently to rig a door closer with line, weight and pulley).[16] One closet door and the passage door leading to the Lobby were at the southern half of the west partition, but the single leaf passage door would not have merited the label "the Assembly room door."

Thus we believe the main doorway of the enlarged Assembly Room accessed the north end of the room in the new position which crossed the Long Gallery. There were other references to the door of the Assembly room. In a letter of Messr. Barbe'-Marbois to Messr. Vergennes of November 4, 1784, describing a lively session of the Assembly: "the Speaker cried to the Doorkeeper to hold the Door shut..." "...a member of the Assembly, a large and husky man, forced the door open with a blow of his shoulder."[17]

Orientation of the Second Floor Assembly Room Furniture

We are not sure that the furnishings layout of the new Assembly Room paralleled that of the room below, with the Speaker of the Assembly centered on and backing up to the east wall. The Marquis de Chastellux described his early 1780s visit: "We seated ourselves on a bench facing the chair of the Speaker: on his right was the President of the state; the clerks were placed along a table which is in front of the Speaker."[18]

The assumption that the speaker was centered on the east wall has a strong point against it. The two columns in the room, discussed above, stood along the east-west center axis at third points, limiting space in front of the speaker if centered on the east wall. Except that the Assembly members and officers would have faced the light of the three great windows in either the north or south directions, one could also propose that the Speaker's chair may have been centered along the north or south wall, thereby better freeing the space in front for the furniture as described by Chastellux. Indeed, there is some confirmation that this was the orientation in at least 1793-1794. The Pennsylvania Senate Speaker, Anthony Morris, sat on "an elevated chair facing North."[19] Having the Speaker face north works well with the main door being at the north half of the room, providing the Assembly members direct access to their seats, facing south.

Other Occupants of the Assembly Room

By November 23, 1785 the Pennsylvania Assembly had apparently moved back downstairs to their original room, as the Surveyor General was allowed to use the Assembly's second floor room: "that the room assigned to him ... is that lately occupied by the General Assembly." [20]

In 1787 when the Constitutional Convention was held in the State House, they too were invited to occupy the first floor Assembly Room. At least once for some unknown reason, the two bodies switched places.[21]

Other governing bodies met only occasionally in the building, such as the Pennsylvania "Council of Censors." The members of this council were elected every seventh year and met only once a year. They served as a check and balance to the state legislature.[22] With two members elected from each county and city there were about thirty-two members meeting in the State-house over the summer of 1784 "in the Chamber of the Honl. Council of Censors." An account for providing their needs with ink, candles, paper and quills included also: "To [cash] for Moving the Rails in the Said Chamber" and "To ditto for carring Benches to ditto."[23] The question is, which room in the building did this Council of Censors use. If at this time the Pennsylvania Assembly was meeting downstairs in its old east room, then can we say the Council of Censors used the second floor east room? Were more benches brought up to this room? And what were the "Rails" that were moved? Could that reference be to a bar which the Assembly had put in

their room at the second floor in 1779?

To accommodate the State Constitution Convention in 1789 the Trustees of the Loan Office "who occupy the chamber over the Assembly room" were asked to "remove their records, papers, etc., without delay from the said chamber...[and] to make use of the committee room of the council" instead.[24]

In the 1790s, the new state government House of Representatives met in the first floor east room and the Senate met in the second floor east room.[25]

Committee Room and Library

As for the space west of the Lobby, in 1778 several men had been appointed to "prepare a suitable apartment for a committee room and library, and that they collect the books, etc. belonging to the assembly of the state, and deposit them therein." [26] This room was ready by February 23, 1779 when a committee of the Council requested an interview "as soon as convenient in the Library Room adjoining the Council Chamber..."[27]

The placement of a stove confirms the location of the Committee Room/Library adjacent to the Governor's Council Chamber. In 1788 Lewis Brahl was paid "For moving the stove in the Council Chamber from the place where it was first fixed --altering the same, and setting it up again in the door leading into the Committee Room."[28]

Although the library books had been placed on shelving constructed in 1779 (see note 26), in 1783 carpenter Thomas Neville was paid some sixty-one pounds for "inclosing [with doors] the

books in the library up Stairs" [29] This may have been like locking the barn after the horse had escaped, for two years earlier a resolution had been passed that all persons still having any books marked "Assembly of Pennsylvania" were to return them to the new library as they were "particularly useful to the Council, General Assembly and other public bodies." [30]

Other Rooms and Changes Contemplated

Other partitions were removed and/or added as needed, but we do not know their location. In 1789 Joseph Rakestraw was paid for: "... taking down a partition, Repairing it and putting it up in the Second Story of the Statehouse." And in 1798 William Roberts was paid by the Legislature of Pennsylvania for "making a partition 0-8-9" for "Senate Chamber." [31]

There were other rooms revealed to us by the supply of keys. A 1790 hardware bill refers to several spaces: "one [key] for the sinnit room [the east room] over the middle Dore [?] one for the Committee room [northwest room] one for the small room where the papers is kept [?] " [32] Perhaps the middle door referred to here is the door between the Governor's Council Chamber and the Committee room, and the small room where the papers were kept meant a room between the Assembly Room and Committee room (see the plan for 1779-1802).

In 1789 a suggestion was made "to take out the floor between the first floor Assembly Chamber and the room above so as to give the lower room an airy appearance and to admit of a Gallery on

pillars..." Needless to say, more practical heads must have seen this as the drastic and difficult change it would have been.[33]

Appearance of the Rooms

The paneled, or wainscoted, end walls of the second floor rooms remained as built through the eighteenth century. In 1784 a committee appointed "to examine the condition of the State-house" recommended: "To repair the ruinous battlements [at the ends of the roof] and prevent the water damage occasioned by water running down between the walls and wainscot of the chimnies to the lower story..."[34]

The flooring remained unfinished throughout the eighteenth century. The "doorkeeper to Council", Frederick Sneider, was paid eight shillings and nine pence "for scraping and washing the Council Chamber floor."[35]

The plaster walls of the building continued to be whitewashed, and the trim scrubbed: "Making Scaffold for Whitewashers" and Mary Hillinger was paid for "Soap Hand Brushes & cleaning the paint."[36]

The second floor rooms retained their original finish colors (to which they are now restored) until well after the Revolution and British occupation of the building. It was not until 1789 that there is documentation for painting the interior of the building (see Appendix A). In keeping with post-Revolution Federal styles, the rooms c. 1789 were apparently painted alike with off-white trim and white whitewash walls. The practical detail of painting the tops of the chair rails dark brown was apparently eliminated at

this time. The "Federal" color scheme remained this way throughout the rest of the eighteenth century.

Stoves & Fireplaces

It was mentioned earlier that two free-standing stoves on frames were installed to heat the newly created large second floor east room in the winter of 1779.[37] The following year one of these was replaced with a new stove costing two hundred and seventy-five pounds.[38]

In 1788 a "large ten plate stove for the Council Chamber" was the one eventually moved into the doorway between the Council Chamber and library, as mentioned before.[39] One must picture its pipe coming up out of the stove angling south and then west before it entered the chimney breast near the ceiling to join the second floor fireplace flue [see 391/94000 sheets 10, 11, 11A].[40] This location apparently proved inconvenient, for in 1792 a ledger entry reads "for moving the stove in the Council room."[41]

When these stoves were in use the fireplace openings were closed off. In 1791 there were supplied "two fire covers, one for the Committee room chimney and one for the sinnit room chimney..."[42]

Periodically the chimneys were swept for safety.[43] To protect the flooring, lead sheets were laid under the stoves. Robert Haydock supplied "Lead for hearth."[44] And he also supplied "Lead furnished the Senate Chamber." [45]

Occasionally, the fireplaces must have been used when the stoves were out of season. Fires in the fireplaces would cause the

plaster lining to drop off, and the brick backing could deteriorate. In 1798 George Potts was paid for "building up a chimney back in the Senate room of Pennsylvania." [46]

In 1797 Jacob Mayer was paid for "Sweeping Chimneys, putting up Stove - backing fireplace plastering, chimney pieces, etc..."[47] And finally, an item includes "Chimney pieces painted." [48] One assumes they meant touch-up painting at the paneling surrounding the fireplaces.

Hardware for Doors, Windows, Hanging Coats and Venetian Blinds

As said earlier, the hardware of the State House suffered under the British occupation from 1777-1778. Many keys were lost. Some new locks were supplied, one for the "Congress Room", i.e., the first floor Assembly Room. And to accommodate the Assembly in their 1778 move to the second floor southeast room: "To 1 iron Rim Lock and Brass Capes [applied brass trim] and screws for the Assembly Room ...to 2 closet keyes for Do...To 1 key for the door going into the Long Room ..."[49]

When in 1779 the second floor Assembly Room was enlarged by removing the trussed partition, they surely removed the working lock from the door in the trussed partition and moved it to the Assembly's new formal entrance (see plan 1779-1800).

The second floor was a busy place and obviously the Assembly wanted privacy. Charles Willson Peale, as said earlier, supplied automatic door closers "sash-line, etc. for the Assembly room door."[50]

Repairs for the second floor Assembly Room lock were needed on Jan. 24, 1783 as "proper workmen [were to be found] to secure the assembly room, and the room in which congress sits."[51]

As noted earlier, the Library book shelves were enclosed with doors in 1783, these were locked in 1789: "four keys for the State Library" were supplied.[52]

Wherever in the second floor the aforementioned Council of Censors met, they paid for "a double Bolt Lock & putting the same to a public closet."[53]

The Council Chamber is also listed as receiving "1 Stock Lock 3/- [and] 1 ditto."[54] This is hard to conceive, as a stock lock is a wood case lock meant for cellar doors or outbuilding doors rather than an important executive office. Much more understandable was the listing on the same account for the Council Chamber of "Brass hinges & Screws."

In 1785 the same account continues for the Council Chamber "To 1 Pully" probably to replace either a door closer pulley or a sash pulley. And a new eight inch rim lock with brass knobs and a dead bolt was supplied for forty-seven shillings and six pence.

In 1788 there is the following bill "to mending the lock of the assembly room Dore & the lock of the Committee room Dore."[55] And the following year the same man was paid for "repairing two Locks in the Council Room."[56] And again in September "for making a new key for the Council door and repairing the lock."[57] Carpenter Joseph Rakestraw gave up on these Council Chamber Locks in 1789 and supplied "in Council Chamber ...two New Locks."[58] And as quoted

once before, on Dec. 16, 1790 "Eight new keys" were provided "one for the sinnit room [second floor east room] one for the middle Dore one for the Committee room one for the small room ware the papers is kept and 4 for the Library Dores."[59]

It appears the second Floor Assembly Room received four dozen turned wood hat pins that were paid for by the Assembly on August 21, 1785.[60]

In 1784 the Council Chamber was given "6 Cloak Pinns" probably "steel" pins as opposed to turned wood ones, as they were listed among "Sundry Ironmongery."[61]

Somewhat related to hardware by function were the venetian blinds added in 1785 to the two windows of the Council Chamber.[62]

Early venetian blinds and their wood pulleys, because of their constant use, do not last very long without repair. In 1789 a payment was made "for repairing the Venetian Blind in Council Chamber."[63]

NOTES

1. Elizabeth Drinker's Diary October 8-10, 1777 MSS, HSP, INHP typescript.

2. Correspondence Josiah Bartlett to Col. Langdon, July 13, 1778, PA. Magazine Hist. & Biog. XXII, p. 114-5. The following furthers one's understanding of the conditions allowed to develop in the building.

"Notwithstanding the Great care and attention that has been paid to Render the state house Barracks particularly Clean and Comfortable, some of the men have been so beastly as to ease themselves on the Stairs and Lower area of the House between doors, the Centry is therefore in future to be very attentive (particularly during the Night) to put a stop to such scandalous behaviour and immediately to Confine any man who shall presume to meke use of any other place whatever than the Privy for his Necessary Occasions. The Tubs placed within doors for the conveniency of making water during the Night are to be Emptied down the Privy every Morning immediately after gunfiring, and set in some proper place to air during the day."
Brigade Orders Royal Artillery, 28 Sept. 1777, 21 Feb. 1778, MS 57 f.166-67, Royal Artillery Library, Woolwich. Extract from John W. Jackson, With the British Army in Philadelphia 1777-1778, Presidio Press, 1979, p. 174.

The scene is further described in a letter from Richard Peters to Colonel Pickering, June 26, 1778.

"Dear Sir
I have been ill these two or three Days & I believe principally owing to my Change of a pure Air for the foul & abominable atmosphere of this Place... I am So pestered with Flies which are here in the greatest possible Numbers that one Hand is employed in brushing them away while the other is writing. You may judge from this what a Situation the Town is in. The principal Streets appear clean but the alleys & small Streets are full of every Species of Filth... The State House is ...putting in order but this...will take Time to purify. Our Prisoners have been confined in the State House & Dickinson's has been an Hospital..."

Vol. 17, pp. 153-319, Pickering Pps., MSS (Massachusetts Historical Society), p. 173c.

3. State House Maintenance Vouchers, 1778 Sept.-Dec., State Archives Harrisburg, B-Ind. Sq. July 2, 1778 John Donnely was paid 18 pounds.

4. Minutes of the Provincial Council of Pa. XI, 535. Council met in the "upper west room," Konkle, George Bryan...1731-1791, p. 185. On Sept. 10, 1778 Peter Anderson was paid "for white washing the [interior] State House" Jr. Hse. of Rep 1776-1781, Cat. 1226-27, p. 296.

5. Comptroller General Financial Records, Journal A-1 (1775-1786), p. 45, State Archives, Harrisburg. Jr. Hse. of Rep. 1776-1781, p. 296, INHP catalogue 1226-27.

6. Ibid., State House Maintenance Vouchers July 2, 1778, John Donnely Hardware bill. An iron rim lock was supplied the "Congress Room" on the first floor, and one was also supplied the "Assembly Room" at the second floor which also was given "2 closet keyes for Do," followed immediately by "1 key for the door into the Long Room," one assumes coming from the second floor southeast Assembly Room.

7. Accts. of D. Rittenhouse, Box 1, Accts. Current No. 1, Jan. 1, 1777-Oct. 10, 1778, Vol. 1, p. 57, Public Records, Harrisburg. See also J. W. Jackson With the British Army in Philadelphia 1777-1778, chapter XVI.

8. Journal of House of Rep. of Pa. 1776-81, p. 231. To make this change they apparently had to displace a "Magazine of small Arms" which had been set up at that time in the Long Room. Col. Rec. XI (Min. of Sup. Exec. Council), p. 590, Oct. 5, 1778.

9. Public Acct.,MSS, Comptroller General, Division of Public Records, Harrisburg. By Feb. 11, 1779, cash was paid "To Britton and Allibon for boards used in the Assembly" Journal of H. of R., 1776-81, p. 478.

10. Charles Stultz Account, Maintenance Vouchers, 1778, Sept.-Dec., Nov. 3, 1778, State Archives, Harrisburg. Note that the "Bricklayer" John Parker certified that Stultz's account was "Just and trew," showing that the work had already been done by Nov. 3, '78. Parker's charge "for putting up two stoves, and altering chimneys" for 15. 14. 6 is listed in the Journal of Hse. of Rep. of Pa.,1776-1781, INHP Cat. 1226-27, Feb. 15, 1779. In the same account Jacob Eckfield is listed on March 6, 1779, "for stove pipes and iron work for the assembly room." In all cases the work had probably been done before November 1778.

11. PA. Archives, Sec I, vol. VII, p. 140-41, as an election was being held on the first floor, the Assembly offered Congress their second flooor room for that day Jan. 4, 1779.

12. Jr. of Hse. of Rep. 1776-1781, p. 408; and by Dec. 21, 1779 carpenter Wm. McDowell was paid 2,450 pounds for "fitting up

the Assembly Room, "clearly a large amount of work --possibly for arranging platforms for the benches?" Sellers Family Papers, vol. 6., p. 6, American Philosophical Society.

13. Journal of House of Representatives of Pennsylvania, 1781-1784, pp. 791-92. The Sept. 5, 1787 entry of the Hiltzheimer Diary called the Assembly's old room "the lower room" and their new room above "the upper room."

14. PA. Gazette March 18, 1789 and PA Packet, March 19, 1789, p. 3, col. 1.

15. PA Magazine of History and Biography, Vol. XXIII, 1899, pp 417-419.

16. Journal of House of Representatives of Pennsylvania 1776-81, p. 408, Sellers Family Papers, vol. 6, p. 7, American Philosophical Society.

17. Correspondence Pol. Etats-Univ., Vol. 28, Min. Aff. Etrang., Paris....

18. Howard C. Rice, ed. and trans., Travels in North America in the Years 1780, 1781 and 1782, by the Marquis de Chastellux, Chapel Hill, 1963, 1, p. 144.

19. Letter Wilfred Jordon, Curator of Independence Hall to H. W. Sellers, Oct. 14, 1920. Jordon found this reference: "Watson's Annuals - first edition - on ...page 346." Attorney Morris was Speaker of the Pa. Senate from 1793-94. Dictionary of American Biography, Vol. VII, p.201.

20. H-Independence Square, State House, Maintenance Vouchers,1785, Jan.-Dec., Nos. 26-75, Pa. State Archives. Colonial Records, XIV (Min. of Sup. Exec. Coun.), 583, Nov. 23, 1785.

21. Extracts from Jacob Hiltzheimer's Diary, 1765-1798, p.131, Sept. 5, 1787.

22. Pa. Mag. of Hist. & Biog., Vol. 22, 1898," The Council of Censors" by L. H. Meadow.

23. State House Maint. Vouchers & List 1784, Oct. 10-Dec. 21, No. 1-25, Pa. State Archives.

24. Min. of Supreme Exec. Council of Pa., XVI, 214, Nov. 23, 1789.

25. The Phila. Monthly Magazine, I, June 1798, 333-335.

26. Journal of the House of Representatives of Pennsylvania, 1776-81, p. 243, November 25, 1778. On March 4, 1779 Levi Budd was paid for 500 feet of pine boards for the Committee

Room, p. 478-80, and State Hse. Maintenance Vouchers 1778 Sept.-Dec., Nov. 28, 1778. The boards were surely for library shelving.

27. To Honble. Wm. Paca Esqr., Committee of Congress on General Arnold's Affair, Jos. Reed pps., Microfilm Reel 2, MSS, N.Y. Hist. Soc.

28. M-Independence Square, State House, Maintenance Vouchers, 1788, Jan.-Oct. Pa. State Archives.

29. Compt. General's Waste Book 1782-88, p. 280. Pa. State Archives.

30. Freeman's Journal, May 2, 1781, p. 1, col. 3.

31. M-Independence Square, State House, Maintenance Vouchers, 1789 Jan.-Oct., Pa. State Archives. General Assembly, 1787-1887, Departmental Accounts, Box 1, RG4, Rec. Off. of Comptroller General, Div. of Public Records, Harrisburg.

32. December 16, 1790 McAllister MSS, Library Company, Box 9, Folder 23.

33. Letter, Tench Coxe to B. Rush, Feb. 2, 1789, vol. 27, (Yi 2 7343F) 45, Rush, MSS Library Co. of Phila.

34. Public Improvements File, Folder A-3F, Pa.State Archives, INHP microfilm roll 385 (2t), Sept. 22, 1784.

35. Rec. of Comp. General 1782-1809, Folder 1790, Div. of Pub. Records Harrisburg, July 1-31, 1790.

36. Day Book July 2, 1792-Nov. 30, 1793, Box 2, Office Register General, R.G. 24, Nov. 1793, p. 608, Pa. State Archives.

37. Journal of Hse. of Rep. 1776-1781, p. 478-80, INHP cat. 1226-7; Maint. Vouchers, 1778, Sept.-Dec., Nov. 3, 1778, Pa. State Archives.

38. C. E. French Collection, Vol. 1778-81, Jan.25, 1780, bill of Adam Zantzinger to the Committee of Assembly.

39. Colonial Records, vol XV, p. 375, 1788.

40. See drawing 391/94000, sheets 10, 11, 11A.

41. Ledger: July 2, 1792-Nov. 28, 1793, Papers of Register General, R.G. 24, p. 99, Sept. 21, 1792, Div. of Public Records, Harrisburg.

42. Feb. 19, 1791, Folder 23, Box 9, McAllister MSS, Library Co., Philadelphia.

43. Maint. Vouchers, Jan.-Oct. 1788, Feb. 12, 1788, Pa. State Archives.

44. April 10, 1792, Disbursements, Reg. General 1791-1792, MSS. Div. of Public Records, Harrisburg.

45. April 26, 1792, Receipts & Disbursements, 1792-93, General Acc'ts 1763-1926, Receipts & Disbursements, Nov. 24, 1789-July 30, 1795, Records of the Office of State Treasurer, Records of the Treasury Dept. RG-28.

46. Misc. Maintenance 1795-1799, March 19, 1798, Pub. Records Office, Harrisburg.

47. Public Improvements File Aug. 21, 1797, Folder A-3F, Pa. State Archives, INHP microfilm roll 385.

48. Ibid., Nov. 22, 1798.

49. Maint. Vouchers 1778 Sept.-Dec., July 2, 1778, John Donnely, Pa. State Archives.

50. Sellers Family Papers, Feb. 2, 1780, vol. 6, p. 7, MSS, Am. Phil. Soc.

51. Journal of House of Rep. of Pa., 1781-1784, p. 791-92.

52. Minutes Supreme Exec.Council of Pa., XVI, p. 72.

53. Comp. General Papers, Jan. 22, 1784, Public Rec. Office, Pa. State Archives.

54. Edward Pole's Acc't. Oct. 5, 1784-Nov. 23, 1785, Div. of Pub. Rec., Harrisburg, INHP photostat 1070.

55. Maint. Vouchers 1788, Jan.-Oct, Feb. 4, 1788, Pa. State Archives.

56. Supreme Exec. Council 1788-9, Departmental Acc'ts, Box 13, RG4, Mar. 11, 1788, Rec. of Compt. General, Div. Pub. Records, Harrisburg.

57. State Treas. Acc'ts 1777, 1788, Sept. 19, 1788, MSS, Folder 2, Pa. State Archives.

58. Maint. Vouchers Jan.-Oct. 1789, Pa. State Archives.

59. Voucher, Feb. 19, 1791, Folder 23, Box 9, McAllister MSS, Library Co. of Phila.

60. Colonial Records, Min.of Sup. Ex. Council, XIV, p.583.

61. See note 50.

62. Journal of Assembly of Pa., 1783, Minutes 2nd Session, 9th Assembly, p. 123.

63. Maint. Vouchers 1789, Jan.-Oct., Nov. 10, 1789, Pa. State Archives.

1948-1972, The National Park Service Restorations

We should briefly set the stage for the National Park Service responsibility at Independence Hall. On June 28, 1948 Independence National Historical Park was formally created when President Truman signed Public Law 795. The cooperative agreement of 1951, between the National Park Service and the City of Philadelphia, states that the city retains ownership of Independence Square and its buildings (except Philosophical Hall), while the Park Service "is responsible for restoring and maintaining the city's property and exhibiting it to the public...for ninety-nine years."[1]

To fulfill this agreement and to develop the rest of the National Park, the Park Service charged its team of historians, architects, archeologists, and museum curators to investigate all possible data about each building. Independence Hall as the focal point has received the most attention.

The second floor of Independence Hall, as restored in the 1920s under the direction of the American Institute of Architects Philadelphia Chapter, remained unchanged well into the National Park Service era, long enough to even be recorded by Historic American Buildings Survey photographs in 1959 (HABS T-15).

A Cautious Start by the NPS

The earliest NPS explorations at the second floor were understandably tentative, as they were in the rest of this prominent building. In 1950 summer students lifted two short floor

boards at the doorway between the Long Gallery and southeast room to record the floor structure in that location.[2] In 1957, out of the public eye, the backs of the west wall closets had their obvious 1920s board lining removed to reveal several uneven layers of plaster.[3]

In 1958 a leak in a downspout at the juncture of the tower and the southwest room caused the plaster on this exterior wall to deteriorate. Less cautious was the reaction of the then INHP Resident Architect Charles S. Grossman. All the plaster was removed and the wall was covered with a tar-like damp proofing. However, this treatment was mitigated by first recording the evidence on the wall: the bricked-up 1733-1750 window, and evidence of the original chair rail and baseboard locations.[4]

In 1959 a major intrusion into the second floor's 1920s pristine look was made by the structural engineering firm George M. Ewing Co., contracted to assess the conditions of all the buildings on Independence Square.[5] A row of floor boards was lifted the full length of all rooms. Taking advantage of this opportunity, it was confirmed by the Independence Park historic architects that the original joists survived and had plaster stains at their top edges, left by the 18th century tradition of plastering directly to the undersides of flooring for fireproofing, noise dampening, and dirt containment.[6]

Architectural research had started at the first floor of Independence Hall. Between the fall of 1955 and 1959 the writer of this report had produced a study of the original appearance of the

Supreme Court Room,[7] and was deeply involved in the Central Hall and Tower Stairhall woodwork authentication and paint color research.[8]

With the practical input of the Park's master carpenter, Joseph Silberholz, the writer at this time also began to study the structural history of the building as it related to two hundred years of changes in the use of the second floor rooms. A draft report was written in 1958 giving theories on the second floor construction as it has affected the Assembly Room and Supreme Court Room below.[9]

Tentative as these theories were, we believe we were correct. The subsequent NPS research throughout the building has focused on the changes in use of spaces and how that has resulted in changes in floor plan, in building structure and in appearance.

Given the assignment to restore the building to the historic period of 1776-1800, the Park service concentrated its efforts in this direction, noting data related to later building history in only a peripheral way. In hindsight one regrets lost opportunities to gather more data from the 19th century. For instance, in 1960 it was called to the Park's attention that "some elements of the woodwork" from the 1897 second floor restoration were stored in the garret of Varnum's Headquarters at Valley Forge. The Daughters of the American Revolution squirrelled away some of the T. Mellon Rogers designed woodwork when it was being ripped out by the Philadelphia Chapter of the American Institute of Architects for their rerestoration in the early 1920s. The writer was sent to Valley

Forge to verify the report. The elements were listed and sketches were made, but it would have been prudent to retrieve at least one piece to provide paint evidence of the 1897 second floor restoration.[10]

In 1959-60 a Park Service management change removed the responsibility for architectural research from Independence Park and transferred it to the Eastern Office of Design and Construction. Architect Lee H. Nelson became the Project Supervisor under Chief Historic Architect Charles E. Peterson. The writer was asked to join this team. Appendix R lists other NPS staff and private contractors who, over the years, participated in the research and restoration of the second floor.

The 1959 Structural Analysis and Recommendations

The March, 1959 George M. Ewing Co. structural analysis of Independence Hall contained radical structural recommendations:

> "The survey of the main building of Independence Hall has shown serious weaknesses in the roof, the attic, the second floor and the exterior walls. The first floor, although reinforced as late as 1940 does not meet code requirements, as far as fire safety is concerned, and could not be classified as structurally sound everywhere.
>
> We therefore propose the following alterations:
>
> Removal of roof, attic floor, second floor, and structural part of first floor. The exterior and interior bearing walls and basement piers would be left standing and be reused after strengthening by means similar to those mentioned for the tower. All finishing materials in condition fit for reuse would be removed and stored. Items of historic value that cannot be salvaged should be copied and restored by means of sketches, photographs or plaster casts.
>
> The following replacements for removed portions are suggested:

Clay tile roofing on light-weight concrete plank, supported on:

Steel trusses and purlins, fireproofed with sprayed on asbestos, and supported on the strengthened walls.

Attic floor consisting of light-weight concrete plank carried on steel beams between trusses, beams to be fireproofed with sprayed on asbestos; beams to support plaster ceiling of second story.

Second floor consisting of cast-in-place reinforced concrete joist construction, supported on exterior walls only. Joists to support partitions, flooring laid in mastic and plaster of first story.

First floor, consisting of concrete slabs band or flat plate construction, supported on existing piers and walls, strengthened where necessary. No ceiling in basement.

Existing walls and piers to be underpinned where necessary.

As mentioned in the recommendations for the other buildings, the condition of the woodwork and trim materials prompts us to recommend that provisions be made for humidifying or air conditioning.[11]

The NPS historical architects found these recommendations to be extreme. They would have resulted in complete loss of the original structural members, drastic treatment of the original finish woodwork, and inappropriate use of modern engineering design and construction techniques. However a review of the report by the City Architect, George I. Lovatt, Jr., prevented these actions being carried out. Instead, by June 1959, he and restoration architect G. Edwin Brumbaugh recommended a more sympathetic structural engineer, Sheldon A. Keast, who had been the City's building inspector and had worked on many old buildings and knew how to deal with their problems.[12]

The second floor had been closed to the public from the fall of 1956 thru January of 1958 when the Tower Stairhall underwent paint removal and woodwork repairs. The scaffolding for this work and the repainting, over the spring and fall of 1960, prevented use of the stair. Retired historian David A. Kimball recalls the second floors being "springy," and he believes the area remained closed to the public as a precautionary measure.

In 1961, while recording the roof trusses, apparently the student measuring team accidentally knocked loose the 1920s second floor plaster ceiling, and on July 13 of that year portions of the Long Gallery ceiling plaster (on expanded metal lath and furring strips) crashed to the floor. The infrequent wire nails, driven straight up into the joists to hold the furring strips, lost their holding power. This event was dramatic and of real concern. The rest of the second floor ceiling was carefully taken down, and that of the Assembly Room as well (the furring strips there had also pulled away from the joists). The structural engineers and the student architects now had full access to the ceiling framing. Measured drawings of the framing were started and 8" x 10" record photographs were made of the framing details.[13]

Once the flooring was removed as well, the obvious deflection of the original second floor joists and the deficiencies of the rest of the structure could now be easily examined (see Illustration 45).[14]

A More Sympathetic Approach to the Structural Problems

On August 14, 1961 Structural Engineer Sheldon A. Keast of the Keast & Hood Co., submitted to the NPS his preliminary report for the structural rehabilitation of the main building. He found that the roof support system had been repaired so often in various ways that it was basically "indeterminate", and much of it "unsafe to carry the roof loads." To make "little change in the existing roof and ceiling construction," i.e., to preserve the original structural members in place, Keast suggested installing a supplemental steel grid which was to bear on the brick walls and in turn "properly support...each member" of the old system. For the second floor framing Keast recommended: "The existing floor framing is to remain, being supported on ...new steel cross beams ... carried...by... steel hangers from the plate girder in the partition" separating the Long Gallery from the rear rooms (see Illustration 46).[15]

The NPS followed Keast's suggestions. As the building was not square in plan, no two conditions were alike. The new supplemental steel framing in the garret had to meet the individual conditions with on-site fitted supports such as screw-jacks, wood props and shims.[16] Keast had recommended "that work should be started immediately...The restoration features could follow anytime after the building is made safe."

Nicholas Gianopulos was the project engineer for the structural rehabilitation, and the Keast & Hood Co. drawings were ready for bidding on May 28, 1962.

The successful bidder, general contractor A. Raymond Raff Co., began work on June 13, 1962, with Walter Riley as project manager, and Roy Buckner as job superintendent. Within the next six months the supplemental steel for the main building was installed, including in December, 1962, the two plate girders now enclosed within the east-west partitions between the Long Gallery and south rooms, from which the second floor system now hangs.[17]

To control the impact on the original fabric of the building the Park Service employed what it called its "Day Labor Force." These first-rate craftsmen made any cuts into original fabric required and approved by the Historic Architects. For instance, when the supplemental steel was introduced into the second floor framing, sections of original floor girders were carefully cut out, catalogued and are now stored securely at the tower second level (see Appendix O).

During this project the public was allowed access to some portion of the first floor. A protective barrier in the form of a tunnel lined the Central Hall during the installation of the steel above.[18] Periodically the Assembly Room and Supreme Court Room contained shoring to support the second floor.[19]

To enable the structural members to be installed behind the scene, so to speak, the second floor 1920s woodwork and plaster had been removed by Sept. 12, 1962.[20] At first the woodwork was put in storage in the cellar and later was moved back up to the second floor in case it was to be reinstalled.[21]

Architectural research during this time was mainly concentrated on the first floor rooms. But in November 1962 it was determined that the second floor window architraves were original, the window sash having been recorded as original in 1956.[22]

Of particular concern at one point during the structural rehabilitation was the discovery that the west chimney breasts at the second floor, which dated from the 1897 restoration, were not tied into the exterior wall. Aggravating this instability, behind the chimneys were 19th century furnace flues chased into the exterior wall which needed to be filled in. The chimneys had to be hastily removed, which was something of a "nightmare" demanding a volunteer effort over a weekend (see Illustrations 47-49).[23]

The NPS Historic Architects Record the Evidence for Restoration

Between 1963-1969 the historic architects, with the help of summer student architects, recorded the second floor physical evidence. Building on their experience in the first floor rooms, they knew what to look for. The bare brick walls again revealed the outlines of the architectural woodwork through the extent of plaster stains, and the residue of the original painters' prime coats (applied before plastering).

The specific discussions of the evidence found for the original second floor appearance have been outlined in the chapters of this report covering the periods 1733-1778, with the Appendices as back-up (see also Illustrations 47-60).

For the second floor restoration the historic architects

produced sixty-seven evidence and restoration/reconstruction drawings, and many 8" x 10" record photographs.[24] The latest date on the reconstruction drawings is 1970 (see Appendices P and Q).

To replace missing elements the Park Service architects worked with a hierarchy of design sources. The best source was that which was any surviving original element of the second floor. Next best was an original detail from elsewhere in the building. And in the last resort, design precedent came from comparable buildings of the Delaware Valley.

The Restoration Process

Contracts were let for the architectural millwork and plastering. The Day Labor Force installed the flooring, the rough carpentry, and the millwork. They also painted the millwork and plaster to match the original colors identified by the historical architects.

To the visitor, all surfaces appear to be of the 18th century, but what is not visible are the 20th century construction techniques (see Illustration 62). Thus, the plaster is applied to expanded metal lath nailed to 20th century studwork. The flooring is face nailed as done originally, but with modern cut nails, the heads of which have been reworked to appear to be similar to 18th century flooring nails. The woodwork paint coatings, although tinted to match the 18th century colors, are state of the art alkyd paints. The plaster paint, however, had silica powder added to create the appropriate ropiness of whitewash.

The workmen were encouraged to write their names and dates on the back-up framing. Anyone in the future opening up the east-west truss partition for instance will find the name "Morris Wheeler & Co. Inc." as the structural steel fabricator (see Illustration 46).[25] The historic architects, to protect critical evidence still in situ, left notes to warn all future architects and contractors. Thus, at the head of the 1733 garret stair where an original girder had been chamfered to receive the stair ceiling boards, a note written by Architect Lee Nelson advises against removing the fragment of that ceiling board still in place.

Flooring

One of the most difficult restoration problems was in procuring yellow pine flooring to match the evidence of the original floor. Many of the original boards were over twelve inches wide and around twenty feet long. They included very dense old growth lumber with long-wearing edge grain at either side of the flat grain.

The search for new flooring started in May 1963. Boards for the second floor restoration were not delivered until March 1965. Despite compromises made in the specifications the material was still very difficult to find.[26]

The 1733 builders installed wood flooring for traffic which was confined to provincial officials and the relatively few citizens who had business in the State House. The public were admitted only to the first floor Court Room; attendance at

receptions in the second floor Long Gallery was by invitation.

At portions of the second floor we are now subjecting this vulnerable material to crowds of about 3/4 million per year, round trip. The sacrificial matting laid in 1976 at the top Stairhall landing and later extended into the second floor, should be continued east and west in the Long Gallery to further protect the flooring (see Appendix J).

We can't overemphasize the necessity of protecting this new flooring. Not only is the difficulty of procurement a concern, but also the enormous interruption for its replacement. At the present rate of wear some of the 1960s flooring will need to be replaced about every fifty to seventy-five years. That is frequent when one considers that Independence Hall is to be preserved in perpetuity.

Windows

The survival of the original windowsills, splayed jambs, surrounding architraves and the sash is extraordinary. the lower ends of the architraves needed to be pieced out because they had been cut short for the higher level windowsills of 1854. These same higher sills protected and preserved the original sills. To continue to protect the original sills, and perpetuate as closely as possible the original sill level, Lee Nelson and the Day Labor carpenters designed a thin cover (see Illustrations 52-55) as described below:

"Sequence of Preservation and Restoration of Windowsills and Related Trim [by Lee H. Nelson]

Step 1. Dress front edge of mutilated original sill (mid-19th c. changes), and add "dutchmen" where required to restore sill to its original width, and to receive new chair rail mouldings.

2. Install chair rail skirt board (width is based on iron anchors and plaster traces).

3. Cover sill with very thin transparent plastic film (sandwich wrapping) to preserve the sill *in situ*, with its paint layerings, etc.

4. Fill in the dents and voids with a filler paste, applied with a trowel.

5. Apply a piece of galvanized sheet metal to cover the sill and support the finish "show" sill. Metal is nailed at front edges and held down at rear by the window frame cover.

6. Apply 1/16" plastic laminate (Formica), bottom side up, with contact cement, as a "show" sill.

7. Nail the chair rail mouldings to the repaired front edge of the sill and to the skirt board."[27]

HVAC Ducts

To provide atmospheric control to the second floor west end two supply ducts were installed within the soapstone case of the newly reconstructed west gable tall case clock. This route was also used in 1898 rather than using the 19th century ducts in the brick wall.[28]

These new ducts, which would be inaccessible for replacement within the stone clockcase, were made of fiberglass to obviate corrosion. Upon arrival at the second floor the two ducts entered the building behind the west wall paneling between the chimney

breasts, then turned to the north and south above the level of the reconstructed fireplace openings. They then turned downward to run behind the first floor cornices to the supply outlets located in the optimum position beneath each second floor window.

At the east end the supply ducts were easily concealed as they rose in the north and southeast corners, and from thence behind the Assembly Room cove cornices to the supply outlets below the second floor windows.[29]

Electric Wiring and Lighting Restoration

The electric wiring system of Independence Hall using mineral insulated wiring, was done in the 1960s prior to the start of the second floor restoration. Junction boxes were installed at the garret floor joists in anticipation of the one antique and four reproduction chandeliers to be installed in the Long Gallery. Under the floor boards, centered in the southeast and southwest rooms, and at the third points of the Long Gallery, junction boxes reached by access doors in the new floorboards were installed to serve electrified period candlesticks which might be placed on furniture. Junction boxes were also supplied in the southwest room chimney breast closets, for candle sconces known to have been supplied for the Governor's Council Chamber. To light the way for visitors to the second floor on dark winter afternoons, portable auxiliary standing lamps of modern understated design were introduced.

The only physical evidence possibly indicating early second floor lighting was found in the Long Gallery. A 2 1/2" round hole, drilled through the girder on axis with the Long Gallery center window, may have received a chandelier rod hanger in the 18th or 19th century, or, perhaps the large diameter hole indicates an electric conduit hook-up for the 1920s reproduction chandeliers.[30]

There is such a dearth of documentation for lighting the Pennsylvania State House in the eighteenth century, this writer believes that the present restoration should constantly be re-evaluated. We know that there were "elegant entertainments," dinners and balls held at the State House. Between 1736 and 1783 there were some sixteen such occasions. Of these, at least seven were held after dark and therefore needed lighting. The documentation for the balance did not specify the time of day of the event.[31]

Other events would have needed lighting as well. In November of 1762 at six in the evening some lectures were held.[32] In 1766 elections were held late enough that there is a bill for "lighting lamps &c for Election time."[33] In April of 1768 several meetings of the American Philosophical Society were called for 6:00 or 7:00 p.m.[34] In August of 1772 a lecture on "Hydraulico" was held at 7:00 p.m.[35] In November of 1774 the election polls were held open until 8:30 p.m., etc, etc...[36] There were some occasions when it was recorded that candles were "brought in."[37] If, over fifty years, there were as few as sixteen documented occasions needing lighting for dinners and balls, it would seem possible that such lighting

could also have been "brought in" for the event - candelabra set on tables or windowsills, for instance.

It is difficult for our generation to put ourselves back in time when today, by the flick of a switch, we can light five chandeliers in the Long Gallery (see Illustration 63). The question is whether the eighteenth century State House indeed had such elaborate fixtures as those five chandeliers installed in the 1970s Long Gallery restoration.

Certainly the eighteenth century citizenry were used to much less light at night than we have today. That is why in the early years of the nineteenth century it was so important for Charles Willson Peale to illuminate his museum, not just to extend the hours of visitation, but to have the experience of seeing objects and portraits by artificial light, to "display...the Museum by lamp light."[38]

At this time we have no more evidence on lighting than we had in 1966 but we can not be sure of our interpretation of 18th century lighting and further study is called for. For instance, a comparative study could be made with other American colonial buildings: state houses, town halls, churches, etc. What lighting fixtures do their documents indicate? Why is it that our records for the Pennsylvania State House do not include payments for elaborate and expensive fixtures such as chandeliers?

Restoration of Heating Devices

A comparative study would also benefit our knowledge of the

use of stoves in eighteenth century public buildings. In the 1960s, summer architectural intern Samuel Edgerton worked on a study of stove types and their usage in Congress Hall.[39]

At this writing the INHP Museum branch is accumulating and evaluating the State House stove references in the Park History card file.[40] These show clearly that stoves were used over the last quarter of the eighteenth century. But the references are sparse enough to lead to questions regarding how often the stoves and their pipes were taken apart to be cleaned; were they stored off-site; or, were they left standing between seasons as rural house stoves often were in this writer's memory.

Miscellaneous

A frequent question of the public, when at the second floor, addresses the protruding bolts and nuts at the plaster ceiling. To restore the ceilings as close as possible to their original levels the NPS architects made the decision to allow the nineteenth century garret truss reinforcement bolts and nuts to be exposed to view even though they were somewhat intrusive.

NOTES

1948-1972

1. Greiff, Constance M. Independence The Creation of a National Park, Univ. of Pa. Press, Philadelphia, 1987, p. 68 and p. 22.

2. See Drawing NHP-IND 2364, July 26, 1950.

3. See negative INHP 4699 of Sept. 1957 by P. Hartshorne. The caption of this photograph refers to drawing NHP-IND 2496 for a description of what was found. Alas, this drawing has somehow been lost. See also 391/94000, sheets 8-11A.

4. See drawing NHP-IND 2577 and photographs INHP 5522-A -C recording the bricked up window, chair rail and baseboard locations. See negative INHP 5533 showing this wall area covered with the "R.I.W." damp proofing, 1958, by P. Hartshorne.

5. See INHP negative 5931 of 3/2/59, by P. Hartshorne. Copies of the 1959 George M. Ewing Co. Surveys are in the INHP Archives, Box 7A, Aisle 1. The original drawings are filed with the National Park Service NHP-IND 3537, sheets 11-19, March 1959.

6. See INHP negatives 4442 and 6253 of 1957-59, by P. Hartshorne and notes added to Drawing NHP-IND 2364; it was also noted that plaster stains were on the undersides of the second floor framing members where the Assembly Room plaster ceiling had been, but that the surfaces were clean above the 4'projection of the original cornice of the Assembly Room.

7. "Architectural Analysis of the Supreme Court Room of Independence Hall," April 1959, Penelope Hartshorne, Maintenance Division, INHP, C. S. Grossman, Park Architect.

8. "Historic Structures Report Part III on Independence Hall, INHP, Architectural Data Section Repainting of Interior: Entrance Hall and Tower Stairhall," Nov. 1960, Penelope Hartshorne.

9. Hartshorne, Penelope, draft report "History of Structural Changes in Independence Hall," 1958, INHP Archives. Included is "Brief Outline of the Physical History of the State House", a chronological listing of physical changes, illustrated with sketch plans reflecting these changes, and a second article "Architectural Report on the 2nd Floor Construction As It Has Affected the Assembly Room and Supreme Court Rooms, Below" - See also a similar draft "Physical Changes in the State House" a more finished set of sketch plans reflecting changes in use,

plan and structure, INHP Archives.

10. Note to the Ind. Hall card file (1896), by David H. Wallace, 11/18/60, INHP Library. See sketch in Historical Architects file on Second Floor Ind. Hall research data.

11. See note 5.

12. See Greiff, Independence the creation of a National Park, pp. 105-107.

13. Log kept by Lee H. Nelson July 18, 1961-Jan. 8, 1963, Vol. 1, INHP Archive. A microfilm may also be seen at The American Philosophical Society Library. For photographs of the fallen plaster and chandelier of July 13, 1961 see negatives 157.851-3, and 157.865-873.

14. Negative 157.877 looks the length of the Long Gallery with architect Gary Dysert holding a surveyor's measuring stick recording the 8" deflection above the Assembly Room center.

15. "Repairs to Independence Hall (Exclusive of Tower)" addressed to Superintendent INHP, August 14, 1961, from Sheldon A. Keast, including two drawings illustrating the suggested structural repairs. INHP Archives.

16. See the S.S.A. Keast drawings NHP-IND 3215, sheets A1-A2 and S1-S12 of March 26, 1962.

17. See Lee H. Nelson Log, Vols. I-II, 1961-1963, May 24, 1962 particularly. To support the plate girders 8 inch WF columns were chased into the east and west exterior walls. Unfortunately this was done before those particular wall surfaces could be photographed or surveyed for an evidence drawing.

18. Ibid., August 8, 1962, and see photo 157.507.

19. Ibid., August 22, 1962, and photo 157.1571.

20. Ibid., Sept. 12, 1962.

21. Ibid., March 11, 1963.

22. Ibid., Nov. 16, 1962 and see D'wg. 391/94000, sheets 14 & 15 which were drawn by Edwin G. Close in 1956, and updated in 1968.

23. Ibid., Jan. 5, 1963.

24. See NPS drawings 391/94000, sheets 1-67. Two techniques used in architectural research were developed during the

Independence Hall project. The use of nails and paint as dating tools was published in 1968 by the American Association for State and Local History. See Technical Leaflet 48 "Nail Chronology as an Aid to Dating Old Buildings" by Lee H. Nelson, and Technical Leaflet 15 "Paint Color Research and Restoration" by Penelope Hartshorne Batcheler.

25. See photo 157.888.

26. Lee H. Nelson Log Vol. II, Jan. 63-Aug. 63, Log "Independence Hall Restoration Aug. 1963," and "Project Diary: Restoration of Roofs on Independence Hall, Wing Buildings and Arcades," INHP Archives.

27. See drawing 391/94000, sheet 52, and photographs 157.2408-.2413.

28. Lee H. Nelson Log, Vol. I, October 4, 1962.

29. See drawings NHP-IND 3313B sheets, 5A and 6.

30. See "Historic Structures Report Part II, Supplement I on Independence Hall Lighting," INHP September 1966, and see drawings NHP-IND 3401-B, sheet 7 (1964) which shows the intended location of electrical receptacles and microphone jacks for the east end of the second floor, and drawing NHP-IND 3533, sheet 18 (1967) which shows the layout for all the second floor electrical needs.

31. To come up with these numbers of banquets the writer extracted every major event from the documentation note card file in the INHP Library.

32. Pa. Gazette, Nov. 11, 1762, p. 2, col. 3, Nov. 11, 1762.

33. Misc. Papers, City Lots, etc. Phila. County, vol. 3, 1762-1802, Oct. 11-Nov. 8, 1766, Am. 3841, Hist. Soc. of Pennsylvania.

34. Pa. Gazette, April 14, 1768, June 21, 1768.

35. Pa. Packet, Aug. 3, 1772.

36. Pa. Gazette, Nov. 9, 1774.

37. Pa. Archives, 8th Series, vol. IV, p. 2908.

38. American Daily Advertiser, Dec. 24, 1807.

39. Samuel Y. Edgerton published an article about stove types in the "Bulletin of the Association for Preservation Technology," Vol III, Nos. 2-3, 1971. See also "Historic

Structures Report, Part II on Congress Hall ...Restoration of Original Heating Apparatus," Samuel Y. Edgerton, October 1961.

40. Curator Robert L. Giannini is working on the State House stove history.

RECOMMENDATIONS

"Maintenance is Preservation"

* The historic buildings are the reason there is an Independence National Historical Park. In the case of Independence Hall not only is the National Park Service responsible to the nation for its preservation in perpetuity, but it should be remembered that the NPS should report to the City of Philadelphia, which owns the building, on restoration, maintenance and preservation measures to be undertaken. Reports should be sent to the Philadelphia Historical Commission, at least annually.

* As explained in the text and Appendix J, the yellow pine flooring, although a reconstruction, should be treated as though it were original. A sacrificial layer of matting will go a long way to protect this difficult to replace material from the heavy traffic we are imposing on it.

* In regulating the relative humidity of the building, the optimum conditions for the purchased antiques are detrimental to the second floor original window sash. Storm sash should not be considered as the window trim also is original and the windows play such an important part in the restored scene. The humidity levels should be regulated to prevent condensation on the glass.

* It has always been the writer's hope that the restoration of Independence Hall should, as much as possible, "tell it as it was." But just as we must not allow difficult to replace floor to wear out, perhaps we should not be exposing antique materials such as

the framed maps in the Long Gallery to the enormous light levels which the large windows impose. However, and again, because the second floor window sash and trim are original and are so important a part of the restored scene, light filters should not be installed on the window glass or as sheets mounted on the window frames. I suggest instead that two objectives may be met, preservation and authenticity, by removing the framed antique maps to protective storage, and in their stead install photographic reproductions mounted and hung on map rollers as they probably would have been originally.

* The one instance of potential fire occurred in a closet where old oily rags were allowed to accumulate. Closets and cellars are spaces used by several NPS divisions and tend therefore to accumulate debris. One division should be held responsible for keeping such areas clean and neat, and the Safety Officer should frequently inspect such behind the scenes spaces.

* There are flue-like spaces behind the end wall paneling which should be cut off with firestops at each floor level.

Fine-Tuning the Restoration

* The potential for new documentation to turn up is high, despite the enormous NPS investment in primary research for the restoration. Not only should some papers already studied be re-examined with today's increased perspective on the types of evidence still needed, but historical societies have advanced the cataloguing of their papers and there will undoubtedly be new

collections which should be studied.

* If new data indicate additions or changes these should be approached with great care. Thorough study and Historic Structure Report Supplements with well-documented arguments must be presented for thorough review and debate by the NPS, and perhaps outside professionals should be consulted before the proposed action is submitted for administrative approval.

Suggested Restoration Details to be Studied

* The records of comparable colonial buildings should be studied for the use of lighting fixtures and stoves. This will help us better understand the scant documentation we have for these highly visible features.

* The dark brown paint on the chair rail top surfaces should probably be carried up about one inch onto the adjacent plaster walls to follow the evidence for this detail at the window jambs and trim.

* The paint color of the doorway leading into the tower at the head of the Lobby stair should be given a pigment analysis. At present the writer believes this doorway was painted a gray and not the light blue of the Lobby and Tower Stairhall as we had assumed for the NPS restoration. Along with this study the paint color of the 1750s stair within the tower should also be examined. Perhaps the doorway and that stair relate to each other and were the same color.

Historic Structures Reports Yet to be Written

* Most of the historic structures reports written about Independence Hall were in anticipation of specific restorations of parts of the building. The reports for the Assembly Room and Supreme Court Room addressed the appearance of these rooms in the eighteenth century, and did not attempt to deal with their appearance during later architectural changes.

Of all buildings under the care of the National Park Service this one deserves studies of its full history. Yet to be written therefore are the chronological histories of: the Assembly Room; Supreme Court Room; the Exterior (main building, wings and arcades, the great clock, the tower and steeples, the Mills office additions, and the 1898 wing and arcade restorations); and the cellars and garret.

Appendix A

The Second Floor Paint Color Evidence

P. H. Batcheler 1989-92

For the 1972 restoration the original paint colors found at the second floor of Independence Hall were matched by the writer to the Munsell Color System, and from these color readings the restoration paints were mixed.

In 1986 Architectural Coatings Consultant Frank S. Welsh did a pigment analysis of the Long Gallery blue color about which more will be said later.

In 1991 the writer reexamined the evidence collected and catalogued into the INHP Museum Collection. This analysis attempted to study the full paint layering history on each sample, including paint removal observations and possible dates for various layers. These analysis studies are included here.

In 1992 a grant enabled another study by Consultant Frank S. Welsh to determine the pigment contents of all the second floor original paints as well as those of other original finish paints from the building. Frank Welsh also gave his opinion of color matches, which vary somewhat from the colors used in the 1972 restoration and those matched by the writer in 1991.

An experiment in bleaching the paint samples was also run at this time, and the resulting colors were matched under different light sources to see what variations this would make.

The Welsh report, the samples he worked with, the results of the bleaching experiment, and a review of the Welsh report by the writer, are all accessioned in the Museum collection, Accession 3755.

Paint evidence turned out to be crucial in developing the second floor restoration. It identified surviving original woodwork and just as in the Assembly Room, its presence on the bare brick walls, positioned the woodwork and helped to indicate the architectural orders of each room. Independence Hall's restoration establishes the value of studying the distribution of paint colors as a restoration research tool.

Long Gallery

As original woodwork survives in this room, ample evidence of the original Prussian blue finish color was there. The blue was found in the pores of the wood of the original window sash (the sash has been reinstalled, but see catalogue #4257,8&9).

The blue showed up also on the window splayed jambs (see catalogue 8428-A). And where the jamb met the sill one or two islands of blue paint can be detected (cat. 8428-B). These latter islands are vestigial as indeed the sills were not painted this blue color.

The sills were originally finished with a dark brown (Munsell 1970s reading 10R 2/2). It was interesting to find the dark brown color taken up onto the adjacent vertical members for almost one inch. This skirting was undoubtedly done to allow the window sills to be washed without dirtying the adjacent trim color (see cat. 8428-A).

Not having any original baseboards at the second floor, we assumed that the baseboards were painted black as at the Tower Stairhall.

The best evidence for the Prussian blue color was found on the window architraves, which are all original. As there has been past paint removal the blue was at first only seen in the pores of the wood. All the architraves were removed from the wall for repair. It was therefore possible to examine their return edges and mitre joints. One of the cyma back-band mitres (cat. 8427) had about 1/2" x 1/8" of bright clean Prussian blue protected on this hidden surface. Small as this area is, it enabled a match of color and a confirming test of the Prussian blue tinting pigment (see Frank S. Welsh, July 8, 1986, "Light Microscopy's Resolving Power at Independence Hall ...A summary of Research and Analysis on Independence Hall Paint Pigments").

In 1992 we submitted this good sample to ultra violet bleaching. Before bleaching in 1970 the color read Munsell 7.5 B 5/4. After bleaching the color read Munsell 1 PB 5/5.5.

Southeast and Southwest Rooms

Catalogue 8429-A, a section of window splayed jamb from the southwest room, and the equivalent (Catalogue 8430-A) from the southeast room, each have clear evidence that the trim of these two rooms was painted an orange buff color similar to that in the Supreme Court Room (Munsell, 1960's reading, 8.1 YR 6.08/5.1). They also show, like the Long Gallery, that the window sills and the adjacent skirting were painted dark brown.

In 1992 we submitted the Supreme Court Room Sample, Catalogue 6577-1, to ultra violet bleaching and the paint was then read by a Macbeth Spectrophotometer 3000. The color then read 8.55 YR 6.33/5.45, only a slight bit lighter in value.

The Lobby

Some original architectural details of the 1750s Lobby stairway were preserved despite two moves of the stairs. In 1854 the stair was moved to the Tower Stairhall. In 1920 it was returned to its original position in the second floor Lobby by the American

Institute of Architects' restoration. Fifteen original balusters and three tread-end scroll brackets have survived. These not only helped to design the NPS corrected stair restoration, but they also confirmed that the Lobby was finish painted the same color as the Tower Stairhall, the light blue. One of the three surviving brackets has been remounted at eye level in the restored stair as have all the original balusters. Accession 2383-3 has the other two tread-end brackets. On the larger bracket, with magnification, you can see vestiges of the original light blue paint.

The paint analysis sheets included here show that a nineteenth century paint removal eradicated much of the evidence of the original blue finish paint from the carved brackets, and the Lobby/Tower Stairhall archway keystone (Accession 140 - 29).

In the 1970's restoration the doorway at the head of the Lobby Stair, opening into the tower, was painted the light blue color along with the Lobby. The 1991 analysis however, and subsequent checking, leads the writer to say this doorway was painted a medium gray (Munsell 10 Y 5/1). Frank Welsh in his 1992 study did not do a pigment analysis of this layer, and he believes the gray is a discolored version of the Lobby blue. This difference in opinion should be resolved by doing a pigment analysis, and, particularly if the color is indeed gray, a comparative analysis should be made of the layers on the 1750s stair within the tower room inside this doorway.

Drawing 391/94000 sheet 19 has another Lobby detail related to paint evidence entitled: "Original Dado Rail Evidence, West Pilaster Return;" on the archway woodwork between the Lobby and Tower Stairhall. Around 3'-6" above the floor original paint layers were found. The drawing note says "The original paint layering had a buff prime coat followed by gray and then the blue gray used in the Tower Stairhall." The evidence showed the plane of the dado paneling, and capping this there was a definite profile of a half hand rail. Another note on the drawing reads "Mixed with the original paint are one or two islands of iron-oxide red brown which could indicate that the abutting rail was painted red brown." A brown half rail at the top of the dado is consistent with the paint treatment of the Tower Stairhall dado (Munsell 10 R 2/2). This evidence was also found in 1923 by the architects of the Philadelphia Chapter of A.I.A.: "wainscoting proposed in the Lobby which will follow in section the profile on the jamb casings of opening to stairs." (H.W. Sellers, INHP cat. 4301, folder 14). Although Sellers did not look for color, only form.

Note the Tower Stairhall light blue paint on Catalogue 1271 in the years 1959-70 read Munsell 2.5 B 6/2 - 5 B 6/2. After a 1992 bleaching this paint evidence read 7.5 B 6/1.75 - 2.

Second Floor Plaster Walls

In the Long Gallery a section of finish plaster was found between the chair-rail and baseboard locations on the north wall beneath the fifth (center) window from the west (see drawing 391/94000 sheets 3 and 12 and Accession 2491). See also a similar section of plaster beneath the third window from the east (drawing 391/94000 sheet 4). An examination of Accession 2491 shows a white surface coating beneath a fragment of what looks to be rag paper, itself coated with a very light gray layer. The conclusion made for the second floor restoration was to paint the plaster walls white. Indeed there is documentation for applying whitewash. Charles Willson Peale's Museum Current Expenses 1808-1819 (MSS Peale Papers, Historical Society of Pennsylvania) on July 3, 1811 lists $3 for "Whitewashing Long Room."

Paint Evidence which Determined Architectural Features

Appendix C presents another important paint and architectural artifact of the second floor original woodwork. In 1917, someone found under the garret floor a Corinthian order cornice modillion block with acanthus leaf carvings (Catalogue 24.022). Its paint color layering included the same orange buff color found in the southeast and southwest rooms. Although this color was also found in the Supreme Court Room, the Doric order of that room precludes the use of the Corinthian modillion there. This piece coupled with paint evidence found on the brick walls determined that the southwest room, the Governor's Council Chamber, was embellished with the Corinthian order.

Having had the experience of finding paint evidence on the brick walls of the Assembly Room of Independence Hall, the research architects were alert to look for the equivalent on the second floor north and south brick walls. The eighteenth century building method of installing woodwork before plastering provided this evidence. Apparently the woodwork was prime painted, and even a second coat applied before the rooms were plastered. This made sense as the paint protected the woodwork from absorbing the moisture of the new wet plaster. When the painters applied this paint they were not constrained to keep paint off adjacent surfaces. The bare brick walls were eventually to be covered with plaster. The painters' brushes indiscriminately slopped paint onto the bricks and mortar joints. Thus, we found enough paint evidence to establish the profiles of the end wall paneling and their entablatures, the side wall cornice levels, and the sizes of the chair rails and baseboard (see Accession 2819-31).

NPS drawings 391/94000 sheets 34, 35, 36, and 37 made in 1969 record traces of the red iron-oxide prime paint found on the mortar joints and a light gray second coat as found on the bricks.

As said before, these traces played an extremely important part in determining the architectural orders of the rooms as explained in Appendix D.

Vestigial as the traces were it was difficult to see them. The following memo to the file by Lee H. Nelson shows the architects' attempts to heighten the visibility of the evidence.

Eventually bright lights and long close observation enabled the architects to trace this paint evidence onto clear acetate sheets from which it was transferred to the NPS standard format sheets listed above.

Conversation with Robert Organ Chief Conservation - Analytical Laboratory, U.S. National Museum, Smithsonian Institution.

Lee H. Nelson 14 May '69

Re: detection of red-iron oxide traces on Ind. Hall brickwork.

1. Suggests using a surgeon's optical probe used to detect minute particles of metal in the human eye. It is an instrumented box with a pencil-shaped probe. The probe is passed over the area and the loudspeaker in the box responds with a growl if ferrous particles are detected, and with a shriek for non-ferrous particles. Mr. Organ's last experience with such equipment was about 10 years ago, and at that time such a probe was obtainable from Keeler Optical Products, 5536 Baltimore Ave., Phila.,PA 43. He was not overly hopeful that this would work in our case.

2. When I told him of the experiment with acetic acid and potassium ferrocyanide (suggested by Anne Clapp), he said it probably didn't work because the linseed oil medium prevented the red-iron oxide from turning into a soluble form, and that once the iron oxide is soluble, the 1% pot. ferro, is more than adequate to change the color of the iron oxide. He felt that the experiment might be more successful on the old brick walls where the linseed oil medium has practically vanished. He suggested soaking filter papers with a strong acid (try hydrochloric) and applying it to the brick like a compress, and letting it dry on the brick. Then apply the pot. ferro. to the filter paper and reapply to the brick. There should be a distinct change of color to the filter paper because the red-iron oxide will transfer to the paper like a ghost reverse image of its shape, which can be recorded (but the evidence will be lost).

3. He asked if we had tried water to increase the visibility of the red-iron oxide. When I said that this method was effective only on the mortar, he suggested using almost any liquid which has the properties of 1) good penetration, and 2) a high refractive index (to increase the visual awareness). He consulted his lists of chemicals and solvents to find something reasonably safe and which would not evaporate too quickly, and said to try 1) toluene, or 2) nitro benzene, or 3) oil of cloves, or 4) turpentine.

He had no other suggestions.

Documentary Evidence for Painting the Second Floor

To be able to apply dates to the paint layers listed on the accompanying paint evidence analyses, we have reexamined the documentary evidence for painting the State House. The woodwork on the exterior, and very likely that which had so far been put up on the interior, had been prime painted by c. 1742 -3, by Gustavus Hesselius (see Pa Archives, 8th Series, V. IV. p. 2857). We say this as we found the 1730s exterior trim had only been primed with red iron-oxide where it was in the 1750s covered to view by the tower addition (see Historical Architects Log, Ind. Hall Exterior, Oct. 2, 1957 and INHP neg. 5220).

The next large bill for painting which included interior work was that done by William Leech over the years 1754-59; no doubt including at least the primer and finish coats for the new Lobby at the second floor as well as the new Tower Stairhall and Central Hall woodwork (Pa. Archives, 8th Series, V. VII, p. 6267).

We jump then to 1789 when an estimate was presented "For Painting the inside and out side of the House and Steeple, and out side of the wings, 2 Coats" for 272 pounds (Pa. Archives, 1st Series, XI, p. 559). Robert Haydock that year received 465 pounds "for Painting, Glazing and Copper Work" State of Pa. to Joseph Rakestraw...Repairs for the State House - (Independence Square Papers, Ind Hall, 1789, Public Records Office, Harrisburg).

Then in 1815 Rubens Peale apparently painted his father's museum at the second floor. "The greater part of the inside I have painted, except the Hall below, and intended doing much more but it was objected to, on account of making the other parts look very bad... (Rubens Peale to Nicholas Biddle, Jan. 12, 1815, misc. MSS, 1815-22, Wm. L. Clements Library).

In 1850 when the second floor housed the United States Court, The Public Ledger, Aug. 24, 1850, described the newly decorated court:

> "The walls have been papered with a neat granite paper, and the styles of the woodwork and furniture, which are painted in imitation oak, give the chamber the solid old-fashioned appearance of a baronial hall."

In 1854 when the new City Council Chambers were complete, the public galleries were "painted in imitation of oak" and "The doors to all the rooms ...painted in imitation walnut" (Public Ledger, Nov. 29, 1854, p. 1).

For the 1898 second floor restoration, architect T. Mellon Rogers specified "The trim of old windows to have the old paint removed, and painted four coats of white china gloss finish." The plaster walls were to be finished with "three coats of very light Colonial

buff." And, very specific, "The present doorway at head of staircase [Archway between Lobby and Tower Stairhall] is to have paint removed and repainted four coats... "(Feb. 1896, Harrison Collection, Am. Philosophical Society). Rogers in an undated letter (same Harrison Collection) wrote: "The original decoration of these rooms must have been very simple, the woodwork white, walls light Continental buff, as shown upon scraping off the various coats of paint and paper which have been put on at various times over the original painted walls." (How he missed seeing the Prussian blue in the Long Gallery is hard to perceive.)

In 1924 the restoration committee of the American Institute of Architects just chose the colors to be used: white on the wood trim, and "It was the opinion of the committee that the present wall painting is too dark." (H.W. Sellers Collection, INHP cat. 4301, folder 14.)

A brief outline of the above interior painting sequence for the second floor is possibly as follows:

c. 1742-3	At least red iron-oxide primer and second primer applied to all interior woodwork before plastering. Walls eventually probably left with bare plaster.
1754-9	Primer on Lobby, Tower Stairhall and Central Hall; finish coats on all woodwork, and whitewashed walls.
1789	New finish coats on all woodwork, and whitewashed walls.
1815	Peale Museum rooms received new finish coats.
1850	Layering and documentation unclear, but Lobby at some point painted (walls and woodwork).
1854	Lobby stair moved to Tower Stairhall, its paint removed and refinished in oak graining. New higher windowsills installed at second floor, protecting old layering on original sills.
1896	Wood trim and sash flat surfaces had paint removed, and original sills continued to be protected by higher new sills.
1898	Woodwork painted "white china gloss," walls "Colonial buff" and windowsills protected by added new sills.

1924	Woodwork painted white, plaster cream and original windowsills continued to be protected by added higher level sills.
1950s	NPS continues application of white trim paint and cream walls. Sash repaired and its paint removed. Portions of sash accessioned to study collection.
1967	NPS removed higher windowsills, discovered original sills beneath, and paint evidence on adjacent splayed window jambs. Portions of sills and jambs cut away and accessioned to study collection for paint evidence. Paint removed from all other original trim after samples accessioned to study collection.
1971	NPS applied red iron-oxide primer, light grey second and finish coats to second floor trim, and simulated white whitewash on plaster.

Conclusion re. Restoration Colors

If 1776-1800 is the historical period, it was determined that 1776 and 1787 were the most important dates to commemorate. Therefore, assuming that the wood trim was only primed in 1742-3, we should use the colors in place from 1759-1789, the first finish colors found. There should be consideration in the future to extending the windowsill dark brown skirting above all chair rails onto the plaster surfaces. Evidence of this in period structures must be found first (it is done on stairways when the wall skirting is painted at each tread and riser - see Thomas Massey House, Delaware County, Pa.).

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 2383-3	Location of Sample: SECOND FLOOR
Date Taken: 1968	Lobby stair, larger of two original carved brackets of this accession.
By: P.H. Batcheler	
Date Examined: 3/13/91	Substrate: wood
By: P.H. Batcheler	Top Color: white paint

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1754-9	light olive grey	7.5 Y 6/1	primer
	light greenish grey	10 G 6/1 -	5 BG 6/1 - 10 BG 8/1 *
	brownish pink	5 YR 7/2	- 2.5 YR 6/4 light reddish brown
1854	Paint removal took place		
1854 Δ	light yellowish brown	10 YR 7/4	
	varnish graining		
1898	yellowish white	5 Y 9/2	
	yellowish white	10 YR 9/2	
	pale yellow	2.5 Y 8.5/3	
1924+	white	5 Y 9/1	± 4 layers

Further Observation, Documentation, Comment or Sketches:

* This layer is similar to the Tower Stairhall finish color. There is not much left (mostly small islands on back edges) due to paint removal in the 19th c.

Δ Stair moved to top landing Tower Stairhall - remained varnish graining until 1898 restoration. See photo negs. 1642, 7355 & 157.5312A.

See drawing 391/94000, sheet 18. This analysis does not parallel that noted on this drawing.

Note: Color descriptions are from ISCC-NBS --- Dictionary of Color Names National Bureau of Standards Circular 553.

PAINT ANALYSIS

Region: MARO
Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL
Structure #: 0101
Sample #: Accession 2383-53
Location of Sample: SECOND FL. Lobby
Date Taken: 1968
Lobby - 1920's stair to garret & tower, tread and carved bracket (1920's)
By: P.H. Batcheler
Date Examined: 3/13/91
Substrate: wood
By: P.H. Batcheler
Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1924+	white	5 Y 9/1	
	"	5 Y 9/1	
	yellowish white	between	2.5 Y 9/2 & 10YR 9/2
	white	5 Y 9/1	
1950's	"	5 Y 9/1	

Further Observation, Documentation, Comment or Sketches:

This bracket was fastened to 1920s stair structure with only wire nails (no other nail holes) ie 1920's product

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 140-29	Location of Sample: SECOND FLOOR
Date Taken: May 20, 1970	Lobby - Archway to Tower Stair hall - Remnant of Keystone bottom return
By: Lee H. Nelson	
Date Examined: 3/19/1991	Substrate: wood
By: P. H. Batcheler	Top Color: yellowish white

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
	islands of yellowish grey	2.5 Y 7/2	
	light olive grey	5 Y 6/2	- 7.5 Y 6/2
	islands of yellowish grey	2.5 Y 7/2	
1896	brown pock marked layer		paint removal *
	white	5 Y 9/1	yellow oily surface
	yellowish white	2.5 Y 8.5/2	discolored
	" "	"	"
1922	dirt		
	* In a pocket indentation there are varnish layers which survived the paint removal, showing that the keystone archway must have had a grained finish coat before paint removal.		

Further Observation, Documentation, Comment or Sketches:

1991 Observation: There has definitely been paint removal which explains why no evidence remains of the original finish which matched that of the Tower Stair hall (light greenish bluish grey).
Note that Lee H. Nelson thought in 1970 that the light olive grey second coat was equivalent to the bluish layer - See Acc 140-29 description May 20, 1970.

1992 Frank S. Welsh believes the above "light olive grey" is the original finish blue color as its pigment analysis contains prussian blue. It is possible that it was discolored by the paint removal process. See INHP Accession 3755 for Frank Welsh's report.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: glass slide with paint evidence	Location of Sample: SECOND FLOOR
Date Taken: Nov. 29, 1965	Lobby - archway to Tower Stairhall intrados + archway pilaster on Lobby side.
By: P. Hartshorne	
Date Examined: 3/26/1991	Substrate: wood mounted in wax on glass
By: P. Hartshorne Batchelor	Top Color: yellowish grey

Historic Date	Layer Description (color, varnish dirt, etc.)	~~Approximate~~ Munsell #	Characteristics
1754-9	light blue grey	7.5 Y 6/2	
	light bluish green	2.5 BG 7/2	*
	yellowish grey	2.5 Y 7/2	

Further Observation, Documentation, Comment or Sketches:

These glass slides with paint evidence are kept in slide boxes in the paint evidence cabinet in the Historic Architect's office.

* This is clearly the original blue grey color of the Lobby and Tower Stairhall.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Acc 2819-32	Location of Sample: SECOND FL. Lobby
Date Taken: 1971, June 1	Lobby staircase - head of stair, north wall 1750's lath + plaster.
By: Batcheler/Nelson	
Date Examined: 3/26/1991	Substrate: plaster
By: P.H. Batcheler	Top Color: light greyish reddish brown

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1750's	plaster		
	white whitewash		White wash (unaffected by sodium sulfide)
	off-white "		" " "
	" "		"
	" "		"
	" "		"
pre-1854	light greyish reddish brown dirt	2.5 YR 6/2	white lead paint
			" (turned black with sodium sulfide test)

Further Observation, Documentation, Comment or Sketches:

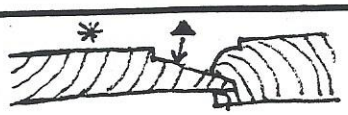
See paint analysis for Accession 2383-3, Lobby stair carved bracket. Note that the light greyish reddish brown may well be the same layer as the Acc 2383-3 3rd layer (light reddish brown 5 YR 7/2 - 2.5 YR 6/4). Both the woodwork and plaster were apparently painted alike at that time. Thus, the whitewash layers below this layer are undoubtedly the original plaster finish.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #:	Location of Sample: SECOND FLOOR
Date Taken: 4/15/1991	Head of Lobby stair - paneled jambs of door leading to steeple *
By: P.H. Batcheler	
Date Examined: 4/15/1991	Substrate: wood
By: P.H. Batcheler	Top Color: greenish grey NPS restoration

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1750's	wood		
	medium grey	10 Y 5/1	
	greyish yellowish brown	10 YR 5/3	somewhat glazed oily surface
	greyish yellow	2.5 Y 7/4	Thin coats without much surface development
	light yellowish brown	10 YR 7/4	
	pale orange yellow	10 YR 8/4	
	varnish		
	yellowish white	5 Y 9/2	with yellowed surface
	light brownish grey	10 YR 6/1	
	varnish ?		
	yellowish white	5 Y 9/2	
	varnish		
	light olive grey	10 Y 5/1	
1970's	greenish grey	7.5 G 6/1	NPS restoration

Further Observation, Documentation, Comment or Sketches:



▲ at this tongue of panel the greyish yellowish brown layer (10 YR 5/3) was missing. It must have fractured off in the past.

Note: The blue grey color found on the other original pieces was not to be seen on this panel. Paint removal has not taken place here to discolor the blue; perhaps this "hidden" doorway was not given the finish blue grey as at the other architectural features in the Lobby.

Note: These samples have been added to INHP Accession 3755 as they were included in the 1992 analysis by Frank S. Welsh. He believes the original blue layer of the Lobby is present - see his report page 14. I do not agree, PHB, 12/29/92

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: 8428-A	Location of Sample: SECOND FLOOR
Date Taken: Sept. 26, 1969	Long Gallery, 2nd window from west end, east jamb, section of orig. splayed wdw jamb
By: P. Hartshorne Batcheler	
Date Examined: 2/4/70 & 3/6/91	Substrate: wood
By: P. Hartshorne Batcheler	Top Color: white with yellowed surface

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
± 1744	Red Iron Oxide primer		thin coat in wood pores
- 1747	Prussian Blue (mod. greenish blue)	7.5 B 5/4	⊛ hand ground, discolored
- 1747	Dark greyish brown	5 YR 2/1	7/8" height above sill level only
1789	Yellowish grey	2.5 Y 7/2	
1815	"	5 Y 8/1	
	"	2.5 Y 8/2	
	"	10 YR 8/2	
	"	2.5 Y 8/2	
	"	"	
1850 ⊕	oak graining, varnish +	pigment:	10 YR 5/4 - 10 YR 3/2
c. 1854	*		
1896	* Paint removal took places above the raised window sill level		
1898+	about 8 coats of yellowish white	- similar	to layering on cat. 8429-A
1924	*		
1950's	*		

1967 original sills left in place - lamination cover protects them now (there was paint removal elsewhere)

Further Observation, Documentation, Comment or Sketches:

⊛ for this top color reading see Catalogue 8427 - a back band molding from Long Gallery which had on its mitred end an area of undisturbed prussian blue.

* at these dates the window sills were covered (i.e. level, raised ± 1¼") thus protecting the above early layering.

⊕ see Catalogue 8429-A

PAINT ANALYSIS

Region: MARO | Park: IND. NAT'L HIST. PARK

Structure: INDEPENDENCE HALL | Structure #: 0101

Sample #: 8428 - B | Location of Sample: SECOND FLOOR

Date Taken: Sept 26, 1969 | Long Gallery, 2± window from west end, east jamb, portion of orig. window sill.

By: P. Hawthorne Batcheler

Date Examined: 2/4/70 & 3/6/91 | Substrate: wood

By: P. Hawthorne Batcheler | Top Color: oak graining + dirt

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1744±	Very thin coat red iron oxide primer		- in pores of wood
-1747	thin coat of light grey, or	Prussian	Blue - hard to find
-1747	dark greyish brown	5 YR 2/2	
	dark greyish reddish brown	2.5 YR 2/2	
	dark greyish brown	5 YR 2/1	
1789	yellowish grey	2.5 Y 8.5/2	
1815	"	2.5 Y 8/2	
	"	2.5 Y 9/2	
	"	10 YR 9/2	
	"	2.5 Y 8/2	
1850⊕	oak graining - varnish +	pigment	: 10 YR 5/4 - 10 YR 3/2
c.1854	*		
1896	*		
1924	*		
1950's	*		

1967 original sills left in place - laminalum cover protects them now

Further Observation, Documentation, Comment or Sketches:

* at these dates this original sill was covered by another sill (raised level 1¼") and was protected.

⊕ See Catalogue 8429-A

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 2468, Catalogue 8427	Location of Sample: SECOND FLOOR
Date Taken: 9/26/1969	long gallery, west window, lintel, architrave cyma recta back band, mitre face.
By: Lucille Nelson, Penelope Hartshorn Batcheller	
Date Examined: 1969 + 3/1991	Substrate: wood
By: Penelope H Batcheller	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
-1747	blue (moderate greenish blue)	7.5 B 5/4	prussian blue finish coat *
1896	paint removal residue which	discolored	blue on surface to 10 G 6/1.5
	white	2.5 Y 9/2	with yellowed oily surface
	off-white	2.5 Y 8.5/3	
	"	"	
	"	"	
	"	"	
1950's	white	2.5 Y 9/2	
	Note: Apparently there was a	red iron oxide and grey (second) primer	
	beneath the blue - see glass	slide sample of May 1971, in glass	
	slide box - paint cabinet in Historic Architect's Office.		

Further Observation, Documentation, Comment or Sketches:

This piece was cut away from the original architrave. It has on its mitre edge a good clean deposit of finish blue paint (7.5 B 5/4).

The cataloguer further says: "All paint has previously been removed from the exposed surface. The original paint on the mitre surface probably flowed [into the mitre] because the joint was not tight. The blue pigmented paint was found in the pores of all other original [long gallery] wood trim - We therefore believe it to be the original finish color - ie dates 1733-1740's, possibly as late as 1750's."

* See Frank S. Welsh, July 8, 1986 "Light Microscopy's Resolving Power at Independence Hall... A Summary of Research and Analysis on Independence Hall Paint Pigments"

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 90, Catalogue 4259	Location of Sample: SECOND FLOOR
Date Taken: 1956	Long Gallery - portion of original upper sash bottom rail.
By: P. Hartshorne	
Date Examined: 3/21/91	Substrate: wood
By: P. Hartshorne Batchelder	Top Color: white paint pre-1956

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
- Note	- layering found on interior	Long Gallery face -	
1733	light greyish red	10 R 6/2	} Prime coats on sash only - not
1733	yellowish white	2.5 Y 9/2	} found on window jamb trim: cat 8428-A
-1747	moderate greenish blue	7.5 B 5/4	(Prussian blue finish coat)
	yellowish grey	2.5 Y 7/2	
	grey varnish, or heavy dirt		
	off-white		
	brown varnish, or paint remover		
	off-white grey (light)		
	2 off-white		
	varnish ?		
	off-white		
	white off-white	←	not white lead per sodium sulfide test
	light blue	2.5 BG 8/4	(see also cat. 4257.)
1896	*		

1898+ 10 layers of white/off-white of which #3,7,8,9,10 are not of white lead / sodium sulfide test

Further Observation, Documentation, Comment or Sketches:

* There was paint removal at this time on flat surfaces. This removed this light blue layer + all lower layers except on molded surfaces where the full layering above remains.

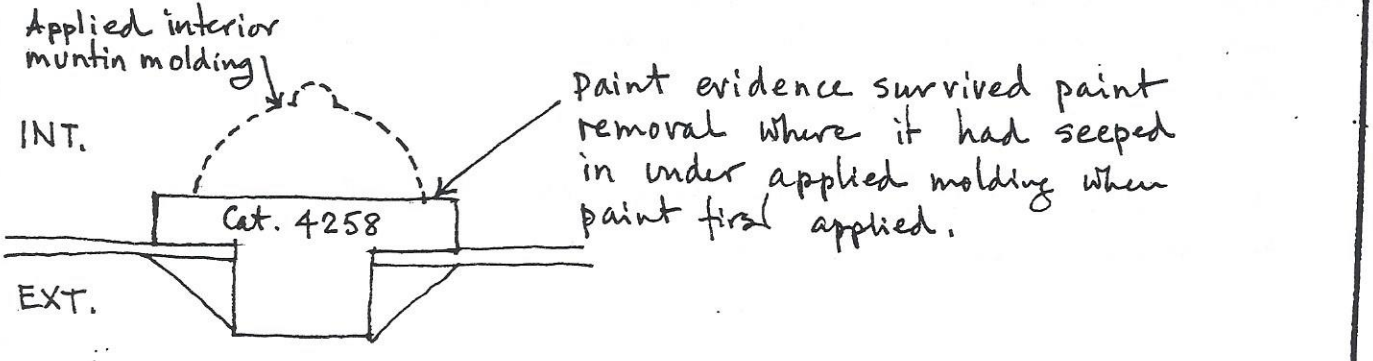
This sash piece may have the most complete layering for the second floor paint history.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 2, Catalogue 4258	Location of Sample: SECOND FLOOR
Date Taken: Aug 1956	Long Gallery - Portion of original sash vertical muntin bar
By: Penelope Hartshorne	
Date Examined: 3/20/1991	Substrate: wood
By: P. Hartshorne Batchelder	Top Color: paint removed

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
-1747	Blue	7.5 B 5/4	residue of paint where it
	dirt and turbulent		seeped in under applied
	small amounts of		molding - see sketch.
	upper off-white layers		
	which also seeped in.		

Further Observation, Documentation, Comment or Sketches:



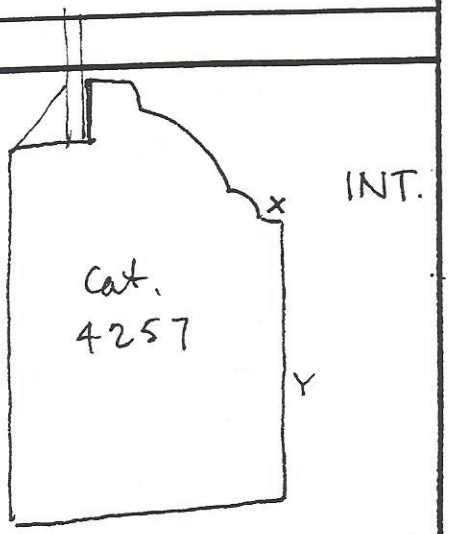
PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 2, Catalogue 4257	Location of Sample: SECOND FLOOR
Date Taken: Aug. 1956	Long Gallery Original bottom window sash, bottom rail, portion.
By: Penelope Hartshorne	
Date Examined: 3/ /1991	Substrate: wood
By: P. Hartshorne Batchelor	Top Color: Paint removed

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics

Further Observation, Documentation, Comment or Sketches:

The paint has been almost completely removed, leaving no definitive evidence of the early paint. Curiously, at x, a fragment of the (7.5 B 5/4) prussian blue original color lies on top of off-white layers. At Y, in a groove one sees the off-white layers with a lighter blue layer* near top - Was the sash ever painted light blue in the 19th C.? See Cat. 4259.



* 2.5 BG 8/3

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 2491-4	Location of Sample: SECOND FLOOR
Date Taken: May 1970	Long Gallery-North Wall under east jamb of center window. *
By: L.H. Nelson / P.H. Batcheler	
Date Examined: 2/21/91	Substrate: Plaster (original)
By: P.H. Batcheler	Top Color:

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1733-40	Ground coat plaster		multi colored aggregate + hair
1733-40	Finish coat plaster		max 1/16th inch thick
	White wash	White	
	"	"	
	"	"	
	Wallpaper ⊞	White	fragment next to baseboard edge
△	White wash	N 8.75/	Sand mixed into layer

Further Observation, Documentation, Comment or Sketches:

* "This was part of a larger section. The upper portion (survives in situ) marked the bottom edge of the chair rail. This fragment marked the top of the baseboard. See Drg No. 391/94000, sheet 3, Lee Nelson May 1970"

⊞ Wallpaper looks to be rag - no pattern - ± 1/2" x 1 1/2" with even edge following top edge of baseboard.

△ For certain pre-1854, possibly pre 1827.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 2383-51	Location of Sample: SECOND FLOOR
Date Taken: ? 9/11/68	long Gallery (not original) "2 pieces of wood removed... when chasing walls (1923?)..."
By: P.H. Batchuler	
Date Examined: 3/13/91	Substrate: wood -
By: P.H. Batchuler	Top Color: blue

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
	yellowish gray	2.5 Y 8/2	
1850 ?	varnish graining		10 YR 5/4 - 7.5 YR 4/4
	yellowish white	2.5 Y 9/2	
1854 ?	oak graining with varnish		
	white		
pre-1896	blue	7.5 G 7/2 + 2.5 BG 7/2	yellowed surface
			(see catalogue 4259)

Further Observation, Documentation, Comment or Sketches:

This looks to be finish trim, white pine, now in pieces max ½" thick - 3"×4" + 3"×4½" apparently used as wedges or blocking during 1920's restoration.

We are unsure just how the pieces were used & where, as they were salvaged by an N.P.S. carpenter with initials H.T. who did not specify origin.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Catalogue # 24.022	Location of Sample: SECOND FLOOR
Date Taken: 1917 ⊛	Southwest room entablature, Corinthian Cornice modillion ▲
By: City of Philadelphia	
Date Examined: April 1969	Substrate: wood
By: P.H. Batcheler	Top Color: grey cream 2.5 Y 7/4

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1740-43	woodwork installed		
±1744	"orange buff"	7.5 YR 5/6	- 8.1 YR 6.08/5.1
1789	grey cream	2.5 Y 7/4	⊕

Further Observation, Documentation, Comment or Sketches:

⊛ "found under the original flooring of the loft of Independence Hall"

▲ See drawing NPS 391/94000 sheet 16, and photographs 157.2366-2371.

⊕ This layer may have stayed in use until 1827 when west end changed to one room. Or, cornice may have been in CW Peale's way - ie removed c. 1802.

Note: Both layers have hand ground pigments; and discolored surfaces due to long exposure. The grey cream does not adhere well at areas where dirt apparently accumulated during long use of the orange buff layer.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: 8429-A (INHP catalogue No.)	Location of Sample: SECOND FLOOR
Date Taken: Sept. 26, 1969	S.W. Room, East Window, West Jamb, Section of orig. splayed window jamb board
By: P. Hartshorne Batcheler	
Date Examined: 2/4/70 & 3/6/91	Substrate: wood
By: P. Hartshorne Batcheler	Top Color: white ± 5Y 9/1

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1744±	Red iron oxide primer		thin coat in wood pores
-1747	Orange buff	8.1 YR 6.08/5.1	Hand ground pigments
-1747	For 7/8" height above sill level		Hand ground pigments
	the sill dark grayish brown layer	5 YR 2/1	Hand ground pigments
1789	yellowish grey	5 Y 8/2	Hand ground pigments
1815	" "	"	
	" "	5 Y 8.5/2	
	" "	2.5 Y 8/2	
1850⊕	oak graining, varnish +	pigment	: 10YR 5/4 - 10 YR 3/2
c.1854	*		
1896-8	▲ yellowish white *	2.5 Y 9/2	glossy surface
	yellowish white	10 YR 9/1.5	yellowed glossy surface
1924	yellowish white *	5 Y 9/1	approx 5 layers
1950's	*		discolored & dirty surfaces
1967	original sills left in place - lamination cover protects them now		there was paint removal elsewhere.

Further Observation, Documentation, Comment or Sketches:

* at these dates the window sills were covered (i.e. level raised ± 1¼") thus protecting the above early layering from subsequent paint removal

▲ Layers found above the 1¼" lower area - apparently there was paint removal, & these layers came subsequently.

⊕ Public Ledger Aug. 24, 1850, U.S. Court Room: "... The walls have been papered with a neat granite paper, and the styles of the woodwork and furniture, which are painted in imitation oak, give the chamber the solid old-fashioned appearance of a baronial hall."

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: 8429 - B	Location of Sample: SECOND FLOOR
Date Taken: Sept. 26, 1969	S.W. Room, East window, next to west jamb, portion of original window sill
By: P. Hartshorne Batcheler	
Date Examined: 2/4/70 & 3/6/91	Substrate: wood
By: P. Hartshorne Batcheler	Top Color: oak graining + dirt

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
1744±	Red iron oxide primer		
-1747	orange buff	8.1 YR 6	.08/5.1
-1747	dark greyish brown	5 YR 2/1	hand ground pigments
	" (redder)	5 YR 2/2	some areas of sill had
	" "	5 YR 2/2	lost these layers due to wear.
1789	yellowish grey	5 Y 8/2	
1815	"	"	
	"	5Y 7.5/2	
	"	2.5 Y 8/2	
1850⊕	oak graining - varnish + pigment	: 10 YR 5/4 - 10 YR 3/2	
c. 1854	*		
1896	*		
1924	*		
1950's	*		
1967	original sills left in place - laminated cover protects them now		

Further Observation, Documentation, Comment or Sketches:

* at these dates this original sill was covered by another sill and protected.

⊕ see 8429-A

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: 8430 - A	Location of Sample: SECOND FLOOR
Date Taken: Sept. 26, 1969	SE Room, middle window, west jamb portion of original jamb board
By: P. Hartshorne Batcheler	
Date Examined: 2/4/70 & 3/6/91	Substrate: wood
By: P. Hartshorne Batcheler	Top Color: White 5 Y 9/1

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
±1744	Red iron-oxide primer		
-1747	Orange buff	8.1 YR 6	.08/5.1
-1747	for 7/8" height above sill level		
	the sill dark greyish brown is used	5 YR 3/1	
1789	yellowish green (light olive gray)	5 Y 6/2	
1815	"	5 Y 7/2	
	"	2.5 Y 8/2	
	"	2.5 Y 8/2	
1850	White	5 Y 9/1	
c. 1854+	*		
1896?	▲ yellowish white *	5 Y 9/1	with yellowish glaze surface
	"	2.5 Y 9/2	2 layers
1924	" *	5 Y 9/1	2 layers
	"	10 YR 9/1	2 layers
1950's	" *	5 Y 9/1	2 layers

1967 original sills left in place - lamination cover protects them now (there was paint removal elsewhere)

Further Observation, Documentation, Comment or Sketches:

* at these dates the window sills were covered (ie, leveled raised ± 1¼"), thus protecting the above early layering from subsequent paint removal.

▲ layers on jamb higher than the 1¼" protective sill level - apparently there was a paint removal before these layers were added.

PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: 8430-B	Location of Sample: SECOND FLOOR
Date Taken: Sept. 26, 1969	S.E. Room, middle window, west jamb, portion of original window sill
By: P. Hartshorne Batcheler	
Date Examined: 2/4/70 3/11/91	Substrate: wood
By: P. Hartshorne Batcheler	Top Color: white with divided surface

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
	Red iron-oxide primer		
-1747	Orange buff	8.1 YR 6.08/5.1	
-1747	Dark greyish brown	5 YR 2/1	
	" (redder)	5 YR 2/2	
1789	light olive grey	5 Y 6/2	
1815	yellowish grey	5 Y 7/2	
	"	2.5 Y 8/2	
	"	"	
1850	white	5 Y 9/1	
c. 1854	*		
1896	*		
1924	*		
1950's	*		
1967	original sills left in place - lamination cover		protects sills now

Further Observation, Documentation, Comment or Sketches:

* at these dates the window sills were covered (ie, leveled raised ± 1¼"), thus protecting the above early layering from subsequent paint removal.

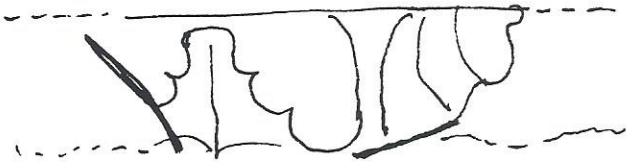
PAINT ANALYSIS

Region: MARO	Park: IND. NAT'L HIST. PARK
Structure: INDEPENDENCE HALL	Structure #: 0101
Sample #: Accession 168-3	Location of Sample: SECOND FLOOR
Date Taken: 16 Oct. 1962	Ornamental Plaster fragment found loose on Bearing Partition between A. Rm + Central Hall - from 2nd fl. ceiling?
By: G. Dysert	
Date Examined: 3/13/91	Substrate: Plaster
By: P. H. Batchelor	Top Color: yellowish grey 5Y 7/2

Historic Date	Layer Description (color, varnish dirt, etc.)	Approximate Munsell #	Characteristics
c.1854 ?	Yellowish grey (greenish) dirt	5Y 7/2	

Further Observation, Documentation, Comment or Sketches:

This is a fragment of an acanthus leaf motif originally ± 2" wide -



apparently a portion of a "water leaf" molding

(photos of pre 1896 rooms)

Possibly top molding of cove cornice in place in 1896 - (ie. post 1854).

See negatives 184/60 - C (or G)

APPENDIX B

Second Floor Fireplace Wall Treatments Including Discussions about the Chimney Breasts, Fireplaces, Hearths, Paneling, Closets, Entablatures and Cove Cornices

Research by Lee H. Nelson & Penelope H. Batcheler,
Author, Lee H. Nelson
March 5, 1970

Background:

Since there are no early views or descriptions of the second floor fireplace wall treatments, we are largely dependent on remnants of physical evidence which have survived a succession of alterations and "restorations." Although the bulk of this evidence has been recorded on photographs and measured drawings, the interrelationships between various aspects of the evidence can only be verbalized and are included in the following sections.

Unfortunately, no original masonry chimney breasts have survived. There is documentary evidence to suggest that they have been altered at least three times, as follows: 1) extensive renovations were carried out at the west end of the second floor in 1830, although the exact nature of the changes is not known (see newspaper account in "Documents Relating to the Physical History of Independence Hall, Period 1828 to 1837," Poulson's Advertiser, 25 February 1830); 2) further extensive changes were made throughout the second floor ca. 1854 for the common and select city councils (see 1896 photographs, taken during removal of that work CN-18460 and 18460-B); and 3) chimney breasts were rebuilt at the east and west end walls during the "restorative" work of 1896-1897. The 1890s rebuilt masonry chimney breasts have survived (as of this writing) at the east end of the second floor, although they were slightly modified during the 1920s. The 1890s masonry chimney breasts at the west end were removed by the National Park Service in 1963, they being neither bonded to the old wall or supported from below.

Despite these changes, the surviving physical evidence establishes many important facts about the fireplace walls including the widths and projections of the chimney breasts, the inside width of the fireplace, the hearth dimensions, the plane of the woodwork, etc. In addition there are surviving artifacts such as a carved Corinthian bracket (INHP Cat. No. 24.022, Drawing 391/94000, sheet 16 and Appendix C) and a square hearth brick (INHP Cat. No. 8298) which add important bits of knowledge about the rooms and which

affect the design of particular rooms. They are discussed in the appropriate sections.

Aside from this limited knowledge about the fireplace walls, there are other known facts about the second floor rooms in general, but which affect the fireplace walls as follows:

1. The widths of all second floor rooms are known from evidence of the longitudinal east-west partition wall. These widths must be reduced because the 1962 steel girders cause the partition to be 11 1/2" thick (including plaster on each side) instead of the original ca. 6 3/4" thickness (see drawing 391/94000, sheet 24). Thus each room will be decreased in width about 2 3/8".

2. The original ceiling heights are known because the floor and ceiling framing has survived throughout most of the second floor. Again, because of remedial structural repairs, the floor has been furred up approximately 1 1/2", and the ceiling must be furred down approximately 1 3/4", thus reducing the original room heights by about 3 1/4."

3. The total horizontal cove projections (including moldings) is known in each of the second floor rooms (c. 2'-8" except at SE Room c. 2'-2"). For each room, these "known" projections are an average of the dimensions from the masonry walls to the original lath and plaster evidence on the bottom surfaces of the ceiling joists and girders (see drawings 391/94000 sheets 30-32).

4. The upper limits of the plastered wall surfaces are known from surviving traces of red iron-oxide paint (on the masonry side walls, indicating the existence of a wooden cornice (or partial cornice) on the side walls. There is similar evidence of an entablature architrave abutting the side walls in the SW Room and Long Room (see drawings 391/94000, sheets 34-37). Coupled with the cornice evidence, there is no doubt that each fireplace wall (except the SE Room) had a full entablature, and it appears that the side walls were more simply treated with only a crown and corona.

5. We know that each fireplace wall was treated with a system of wood paneling. The existence and plane of the paneling in each room is established from surviving vertical lines of red iron-oxide paint traces where the paneling abutted the side walls (see drawings 391/94000, sheets 34-47).

6. Other known factors that add to the authenticity are: the surviving original window sash, window architraves, and window sills; evidence of the chair rail height and size, baseboard height, the closet locations and their shelf and soffit positions; the existence of a separate stairway to the garret from the SE Room; paint colors; the floor board widths, etc. Some of these details are discussed at greater length elsewhere. Others are

details that have been incorporated into the reconstruction drawings without the benefit of discussion because they are obvious in nature.
The reason for outlining the general state of knowledge about the second floor is to provide a background for the following evaluations of the more subtle architectural evidence relating to the fireplace walls, and to suggest the context for the many judgments that must be made about architectural features for which there is no evidence. While the physical evidence and other "known" factors go a long way toward fixing the limits of certain features, there are still a number of conjectural design decisions to be made. Where possible, we have used surviving original details or concepts from other rooms in the building as prototypes for the missing parts in the second floor. We feel that it is better to use this existing architectural vocabulary than to borrow from contemporary buildings, except when internal prototypes are not available or applicable.

The following is a room-by-room rationale for the design of the second floor fireplace walls. Another section discusses our approach to determining the architectural orders of the second floor rooms.

The Southwest Room Fireplace Wall

Fireplace: The original inside width of the fireplace "back" is established from broken brick headers in the west wall (see Evidence Drawing No. 391/9400, sheet 11a). Since these broken headers seem to enter the wall at 90 degrees to the wall, it appears that the masonry jambs were at right angles to the wall. In this respect, the jambs were like the Assembly Room fireplaces, rather than being splayed as was sometimes done in the 18th century Delaware Valley buildings.

The undated plan of the second floor (from the Penn Papers, now in the Historical Society of Pennsylvania) shows all the second floor fireplaces with right angle jambs with "offsets", that is, the jambs had an offset which created a wider opening at the front of the fireplaces. Since none of the original second floor chimney breasts have survived, the existence of these offsets (shown on the plan) cannot be directly established, but there is good collateral evidence that they were used.

The original Assembly Room fireplaces were built with "offset" jambs which have survived in situ, but it is clear that they were filled in (with brick) before the original finish woodwork was installed (see Evidence Drawing No. - 3404, sheets 4 and 6, and Assembly Room Historic Structures Report, July 1964, p. 45 and Illus. No. 69-75). It is very likely that the Assembly Room "offsets" were filled in simply because there were so many architectural features to be crowded onto the end wall, that it was necessary to reduce the width of the fireplace openings.

We must answer whether the second floor fireplaces did have such "offsets" (as shown on the plan), and if so, whether any or all of them were filled in like the Assembly Room. The evidence strongly suggests that all fireplaces on the second floor had offsets and that none of them were filled in. This is important because it affects the width of the openings, as well as the fireplace enframements and related wooodwork. It is the hearth evidence that corroborates the use of "offset" jambs.

Although the second floor fireplace hearths were framed with the usual headers and trimmers as an integral part of the floor framing system, it is evident that the hearth opening as framed by the carpenters was not quite centered with respect to the fireplaces as constructed by the masons. When it came time to lay the hearths, it was necessary to notch the adjacent floor girders to receive the hearth bricks (see Architectural Evidence Drawing No. 391/94000, sheets 28 and 11a, and photographs showing hearth evidence 157.554, 556, 557, 1662, and 1797). In the SW Room and Long Room (west end), these notches clearly establish one side of the hearth with respect to the center of the fireplace. The other side of the hearth was well within the framed opening because the opening was off center with respect to the fireplace. Thus, there is no physical evidence for that side of the hearth, but we have no doubt that the finish hearth was centered on the fireplace. Using that reasonable assumption and having one known edge of the hearth, the overall hearth width can be simply established by doubling the distance from the center of the brick "back" to the hearth notch. The resulting hearth widths for the SW Room and Long Room are so great (in relation to the brick "backs") that the fireplaces in those rooms must have had "offset" jambs as shown in the previously mentioned plan.

Our rationale for the probable existence of "offsets" is based on the relationship between the hearth width and the fireplace enframement, as follows:

1. There is little doubt that the State House fireplaces had marble "surrounds," as most 18th century Delaware Valley buildings of any architectural importance had marble surrounding the fireplace openings (see Illustration 96 of fireplace in "Hope Lodge", Whitemarsh, Pa., HSR Part II Portion., Arch. Data Section Ind. Hall Assembly Room, Lee H. Nelson, July 1964). Regardless of whether the marble was plain or moulded, the marble widths averaged 8 to 9 inches in width.

2. The outer edges of the marble surround were usually trimmed with a wooden backband moulding to bridge the gap between the marble and the adjacent paneling.

3. The relation of the fireplace trim to the hearth width is fairly well established from surviving contemporary buildings, e.g., the outer edge of the moulding either aligns with the outer

edge of the hearth (as at Graeme Park Drawing Room, Mt. Pleasant Library, Powel House Music Room); or, the moulding is positioned just beyond the limits of the hearth (as at Hope Lodge North Parlor, Whitby Hall Main Parlor). In either instance, the difference between the known width of the S.W. Room fireplace "back" (4'-11 1/2") and the known hearth width (7'-1 3/4") is so great, that even after subtracting the marble surrounds (2 @ ca.8"), there is so much left over (10" to 11") that offsets must have been built in the fireplace. A similar situation exists at the Long Room with minor variations in the measurements. We assume that "offsets" were also used in the SE Room although the evidence of the hearth width was obliterated by changes in the 19th century.

4. Thus, on the basis of surviving physical evidence (and the undated early plan of the second floor), we have included "offsets" in all the fireplaces for the second floor. We have made these "offsets" 5 1/2" wide, which is an average of the left-over space, and which allows the backband moulding to be seated just beyond the limits of the hearth. This relationship seems to be the best compromise. If the moulding were placed on the hearth, the "offset" would be reduced to about 3". Considering that the Assembly Room "offset" is about 7", and that "offsets" in other buildings range from about 6" to 9", it seems unlikely that the second floor "offsets" would have been only 3". We did not use a 7" offset (like the Assembly Room) because it would have placed the backband mouldings well beyond the known limits of the fireplace hearths. This rationale for the fireplace widths is presented here because it affects the design and widths of the architectural features over the fireplace at the SW Room.

Chimney breast: None of the original second floor masonry chimney breasts have survived. However, their exact widths have been determined from broken headers in the end walls. Knowing the width of the chimney breast in the SW Room is particularly important because there is evidence that the center bay woodwork projected forward of the side bays. This evidence will be explained below as it affects the width of the center bay woodwork.

The previously mentioned notch in the floor girder not only establishes the width and forward projection of the fireplace hearth, but it also locates the front plane of the woodwork on the chimney breast (for evidence of the hearth notches in the SW Room and Long Room, west end, see Drawing No. 391/94,000, sheet 28).

In the case of the Long Room, the back edge of the west fireplace hearth notch aligns with the front face of the fireplace wall paneling system. This was determined by stretching a string line along the back edge of the hearth notch (and parallel with the known front edge of the hearth). This string aligned with the red iron oxide paint traces (on the north wall) which are evidence of the front face of the paneling. This means that the marble fireplace trim (which was on the same plane as the woodwork) was

installed before the floor girder was notched to receive the brick hearth, and that the brick hearth abutted the marble trim. If this relationship (between the hearth and the marble) existed in the Long Room, we assume that the same relationship existed at the other second floor fireplaces, where the evidence is inadequate to make such a determination.

Therefore, if we assume that the back edge of the hearth notch also aligns with the chimney breast paneling in the SW Room, it is possible to project this plane to the south brick wall, by making the plane parallel with the known front edge of the hearth; and we find that the chimney breast woodwork is about 3 1/2"+\- forward of the closet-bay woodwork, the plane of which is established by red-iron oxide paint traces on the south brick wall. Thus, we are reasonably assured that the SW Room center bay had a "break-out", i.e., projected forward, from the side bays. This did not occur in the Long Room, as mentioned earlier, nor did it occur in the SE Room.

In summary, two important dimensional limits are known about the center bay:

1. The overall width of the chimney breast (ca.8'-6") establishes a minimum width of the center bay woodwork because it must clear the masonry chimney breast in order to return to the side bay woodwork. Allowing an average thickness of 1 1/4" for the woodwork and a minimum of 1/4" clearance with the brickwork, the overall width of the center bay woodwork cannot be less than 8'-6" + 1 1/4" + 1 1/4" + 1/4" + 1/4", or about 8'-9". Of course it can be more than 8'-9", but this would reduce the space available for the pedimented closet doors. Therefore we have used the minimum dimension of 8'-9" as the width of the center bay, which in turn, affects the design of the architectural features above the fireplace.

2. The center bay is assumed to project about 3 1/2" from the side bays. This "break-out" enhances the architectural importance of the center bay, and tends to reinforce our belief that the SW Room was the only room on the second floor that had a tabernacle frame. In other respects, the "break-out" only affects the detailing of the room entablature. It seems more than coincidental that the string line method of determining the "break-out" should be almost exactly the projection of the surviving original carved wood bracket (cat. 24.022), which is 3 5/8" long. We assume that the "break-out" was equal to the bracket. Although this was not an architectural "rule," it would have simplified the original carpenter's dimensional calculations.

General Design of Center Bay: We have made several basic assumptions regarding the design of the center bay. Since the SW Room was originally intended and used as the Supreme Executive (Governor) Council Chamber, we believe that it would have had a

tabernacle frame surmounted with a coat-of-arms as a focal point and symbol of authority. The Assembly Room and Supreme Court Room were embellished with tabernacle frames and "broken" pediments to accommodate the Proprietor's arms and King's arms, respectively.

Since most Delaware Valley buildings of any importance had marble "surrounds" at the fireplaces, and since there is no evidence regarding the likely use or appearance of marble for the second floor fireplaces, we have decided to take the perhaps overly simplistic approach of basing them on the Assembly Room fireplaces which had "moulded & polished" keystones (see Richard North's repair bill, dated 30 June 1790, archives at Harrisburg, copy in INHP files). We feel that it is better to use such internal prototypes when they are available, rather than use a design from another building. It can be argued that the second floor fireplace marble surrounds might have been less elaborate than the Assembly Room, yet the Governor's Council Chamber is equally important because it represented the executive branch of the colony. Perhaps the Long Room and SE Room marble trim was simpler but we have no evidence on that subject, so we assume that all were alike (see drawing 391/94000 sheet 54).

At this point we move into the realm of reconstruction largely based on conjecture and prototypes from comparable buildings; and so it becomes necessary to make additional assumptions based on earlier assumptions. We have not used a mantle over any of the second floor fireplace marble "surrounds" because there are no known instances in the Delaware Valley where mantles are used with marble keystones. Therefore the fireplace enframement consists of a moulded marble surround (with keystone), trimmed with a backband moulding. For the 1896 second floor restoration they apparently found a "heavy timber [in the chimmey break] to hold the mantel shelves" (Feb. 20, 1897, The Times, Phila.). This construction method was not found used anywhere in the building. Instead the woodwork was uniformly fastened with iron anchors set into the masonry and nailed to the edges of the woodwork stiles or rails.

Whitby Hall is our source for using a tabernacle frame supported by brackets which rest on the fireplace backband moulding, in conjunction with a marble "surround" and moulded keystone. However we cannot have a "knee'd" backband (as at Whitby Hall) because they would visually crowd the outer limits of the center bay woodwork; and they would also require a wider tabernacle frame than could be placed on the chimney breast.

We have not used pilasters or scrolled consoles flanking the tabernacle frame, because such devices would require a supporting mantle. At least, such seems to have been the practice in the Delaware Valley.

We have used a "broken" pediment over the tabernacle frame to provide space for the coat-of-arms, as mentioned earlier. The dentil cornice of this pediment, as well as the dentil cornices of the closet door pediments, are based on the 1750s' cornice under the upper west window in the Tower Stairhall, scaled up or down to suit the size of the reconstructed features. Again, we believe it better to adapt an internal prototype than to use the carpenters' manuals, although we must confess to an inconsistency on this matter, for we have used James Gibbs, Rules... for earlier phase restoration details in the building (specifically the Assembly Room).

We have included brackets between the tabernacle frame and the pediment, in addition to those below the frame already mentioned. There are three known instances in the State House for the use of brackets above tabernacle frames: 1) the Assembly Room east wall, 2) the Supreme Court Room west wall, and 3) the Tower Stairhall south wall. The latter instance utilizes carved brackets above and below the frame.

The original degree of carved embellishment in the Governor's Council Chamber is conjectural. However, the importance of the room coupled with the surviving original carved cornice bracket suggests a high level of such enrichment, perhaps surpassing that of the Assembly Room. It is conceivable that most of the center bay woodwork was carved, but we feel that it is better to hint at the unknown by adding some touches of carving rather than attempting to introduce major carving. It seems inappropriate to dilute the authenticity of the first floor rooms, by calling attention to a highly enriched second floor room which is entirely conjectural. Therefore we have elected to limit the carving to "touches," and to distribute them to suggest the possible elegance rather than a conspicuous display. Furthermore, there is the problem of craftsmanship. It is possible to have a 20th century carver literally copy early work, but it is not possible to recapture the character of a major carved element whose design is unknown. It is not inconsistent to "borrow" mouldings or small carved details from other parts of the building, but we feel it would be wrong to copy major carved elements such as the distinctive cockle-shell frieze in the Assembly Room, or the quite different floral friezes over the Tower Stairhall tabernacle frames. The carving we have distributed around the fireplace wall includes: 1) carved brackets below and above the tabernacle frame, 2) leaf and flower motifs in the corners of the tabernacle frame, 3) carved flowers in the knees of the closet doorways, and, of course, 4) the carved brackets in the main cornice.

Carving Sources:

1) Tower Stairhall upper West Wall window support brackets;
2) Tower Stairhall tabernacle frames - corner flowers of plaster corrected by reference to 18th c. prototypes

at Whitby Hall;
3) Flowers applied to sides of brackets sited in #1;
4) The original carved bracket found in attic in 1917, (Catalogue 24.022).

This completes our rationale for the general design of the fireplace wall center bay. (See photograph 157.2406 showing the full size rendering of these details in place as a visual test.) The exact size and configuration of the details are largely a matter of judgment, but they are based on original prototypes within the building where they are available and appropriate. For example, the survival of the carved cornice brackets (in the Corinthian Order) indicates that it is more appropriate to use the panel moulding from the Assembly Room doorway (with its extra bead) as a prototype for all the panels in the Governor's Council Chamber, rather than the conventional (and simpler) panel moulding used in the Supreme Court Room.

Closets and Closet Doorways: Like the SE Room, the Governor's Council Chamber is known to have had closets flanking the masonry chimney breasts. The physical evidence consists of plaster stains and 1730s type iron anchors (see Drawing No. 391/94000, sheet 11A). The evidence establishes the following facts about the closets: 1) The masonry wall surfaces were plastered down to the flooring, and 2) there were two shelves in each closet, supported by iron anchors, 3) the shelves extended the full width and full depth of the closets, 4) the closets had furred-down ceilings, although it is not known whether the ceilings were plastered or ceiled with boards.

It is very likely that these closets had pedimented doorways, based on the precedent of the Assembly Room closet doorways, together with the two secondary pedimented doors in the Tower Stairhall. The size and details of the second floor closet doors is not known. In the case of the SW Room closets, the projecting center bay imposes dimensional limitations on the flanking pediments. This means that the doors cannot exceed about 3'-4" in width, otherwise their pediments would not fit within the recesses created by the projecting center bay. Of course, the doors can be less than maximum width. However, the scale of the fireplace wall visually requires rather large doors, so we have designed the doors to be 3'-2" by 7'-0" for the closet doors in the SW Room and the SE Room, as well as for the pedimented door under the second floor Lobby stairway. All of these doors have the same panel arrangement, but the SW Room doors have the more elaborate panel moulding mentioned earlier. All of their architraves are derived from the outer string architrave used on the Tower Stairhall grand stairway. The knees are derived from the first floor hallway doors. The denticulated doorway pediments in the SW Room have been based on the cornice under the upper west window in the Tower Stairhall, scaled to suit the door size. The pedimented friezes are pulvinated.

The Long Room Fireplace Walls

Closets: Unlike the SE and SW Rooms, there are no original plaster stains and/or iron anchor evidence to suggest the existence of closets at either end of the Long Room (see Drawing No. 391/94,000, sheets 9 and 11A). Although there is the possibility of closets lined with boards (i.e., no plaster stains), but there is no reason to believe that if there were closets in the Long Room, that they would have been treated differently from those in the other second floor rooms or from those in the Assembly Room. Lined closets were sometimes used in houses for the display of china, but they would be an inappropriate detail for a public room. Furthermore, if they had been lined, it seems likely that there would have been evidence of iron anchors for their framing.

Instead of closets, it seems clear that the fireplace wall paneling was on an unbroken plane. This is established from the fact that the back of the outer hearth aligns with the red iron-oxide paint traces on the north wall (see more detailed explanation of the evidence in the previous section relating to the SW Room).

The plane of the woodwork and the absence of closets was understood and described in a letter from W.C. Haddock to Frank M. Ritter dated 15 November 1896, although architect T. Mellon Rogers disregarded this evidence and installed plaster recesses (See typed copy "Documents Relating to the Physical History of Independence Hall, Period 1891 to 1899," compiled by Robert G. Stewart, National Park Service, 1953; original letter is in the Sellers papers, I.N.H.P. Museum Collection, Catalogue 4301.).

General Design: It seems unlikely that the Long Room would have had tabernacle frames over the fireplaces, because the public use of the room did not require a symbol of authority, i.e., a coat of arms. While it is true that the 1750s work included a pair of tabernacle frames in the Central Hall, and another pair in the Tower Stairhall - all without coats of arms, they seem to have been intended to fill voids in a larger design, rather than the central axis focal points. The only two rooms (the Assembly Room and Supreme Court Room) with center axis tabernacle frames are known to have had coats of arms. Following this rationale, we have assumed that the Governor's office was the only room on the second floor to have had a frame and arms above the centered fireplace.

If this reasoning is valid, the Long Room fireplace walls would present quite a different prospect, having neither closets or tabernacle frames. Architectural evidence, however, shows that the fireplace walls did have a full entablature (see drawing no. 391/94000, sheets 34 & 35), a feature that almost always had some visual means of support, i.e., a tabernacle frame or pilasters.

Therefore, we have used pilasters in the Ionic order (see Appendix D "Rationale for Determining the Architectural Orders of the Second Floor Rooms") to support the entablature.

The pilasters define and separate the fireplace bay from the flanking bays. As designed, the fireplace bay panel arrangement is based on the Assembly Room, while the side bays are simply divided into two panels using the chairrail level as an architectural division between the panels. The bolection chairrail is patterned after that used in the curved corners of the Supreme Court Room (which also separate tall upper panels from smaller lower panels).

Other details, such as the stile and rail sizes, panel sizes and types, pilaster width, etc., are also a matter of judgment and follow the general proportions used in other parts of the building. The molded marble mantles are like that designed for the SW Room (see earlier explanation), since they seem to be appropriate in either a Corinthian or Ionic context.

The Southeast Room Fireplace Wall

The SE Room is known to have had closets (with shelving) flanking the fireplace, thus closet doorways are a part of the composition (see Drawing No. 391/94,000, sheets 5 and 9 for closet shelving evidence). Since all the known interior dooorways in the State House appear to have been pedimented, we assume that the SE room closet doorways were also pedimented, even though this room was a step down in the hierarchy of architectural refinement. To reflect this "step-down", we have designed the pediments without dentils, as opposed to the denticulated closet dooorways in the Governor's Council Chamber.

The use of pedimented closet doors does not necessarily imply the use of a tabernacle frame above the fireplace. Because of the lesser importance of this room (i.e., no need for a coat of arms as a symbol of authority), we have assumed that a tabernacle frame would not have been used in the SE Room. As an example of a contemporary local room having pedimented side doorways without a tabernacle frame, see Hope Lodge, first floor, South Parlor.

Instead of such a frame, we have designed an over - mantle panel arrangement similar to that used in the Assembly Room - an arrangement which was almost universally used in contemporary Delaware Valley houses.

The overall design is further simplified by the lack of a full entablature on the fireplace wall (see Appendix D entitled "Rationale for Determining the Architectural Orders of the Second Floor Rooms"). Thus there is no need or justification for any carving on this wall. Despite the overall simpler treatment of the wall, we have used the same moulded marble mantle design (with Keystone) which we used in the other second floor rooms, partly

because the fireplace opening is unusually wide for a plain mantlepiece, and partly because a moulded mantlepiece is the only feature in the middle bay which is architecturally equal to pedimented closet doorways. In the 18th century, the middle bay treatment was always architecturally superior or at least equal to the side bay treatments (see Hope Lodge).

There is rather convincing evidence that the middle bay woodwork did not break forward from the side bays. This has been determined by comparing the front plane of the surviving original outer hearth framing with the known plane where the side bay woodwork abutted the masonry side walls (the latter is established from red iron-oxide prime paint traces). Even if the center bay were to break forward only one hearth brick (5 1/2"), the hearth projection would be unusually shallow by any standard - only 11", especially when compared to the 27" hearth projection in the SW Room, or to the 27" and 22" hearth projections in the Long Room. Thus we have no doubts that the SE Room woodwork was all on the same plane, which would have given the more reasonable hearth projection of 16 1/2" (Note that all the hearth projections are multiples of 5 1/2" hearth bricks: SW Room = 5 rows, Long Room = 5 & 4 rows, SE Room = 3 rows. See INHP museum Collection Accessions 176.9 and 2414 or catalogue 8298 attached here).

Having established the basic design of the fireplace wall woodwork, it is necessary to determine, where possible, the original widths of each bay. Since the center bay did not break forward, its width would not be affected by the chimney breast, as was the case in the SW Room. Instead, the center bay width would be controlled by the hearth width since it was a general 18th century practice to have the fireplace "surround" width coincide with the hearth width, i.e., the outer edges of the marble were closely aligned with the outer edges of the hearth. Unfortunately the exact width of the SE Room hearth cannot be as accurately determined as the hearths in the SW Room and the Long Room. In those rooms,the widths of the hearths are controlled by notches in the original floor girders, which were cut to receive the hearths: In the SE Room, the original hearth notch has been obliterated by 19th century mutilations on the top surface of the girder. The known hearth widths in the other rooms vary from: 7′-1" at west wall of Long Room and 7′-1 1/4" in the SW Room, to 7′-4 3/4" at east wall of Long Room.

We have elected to use the widest of the above known hearth widths (7′-4 3/4") so as to reduce the widths of the side bays for reasons that are explained below. Since the width of the original fireplace "back" is known (4′-10 3/8"), and since the fireplace offsets have been assumed to be 5 1/2", any variation in the hearth width will directly affect the widths of the marble enframements. By using the widest known hearth as a prototype, the marble enframements will be about 10" wide, rather than 9" or 8" as was used in the Long Room and SW Room, respectively. It can be

argued that a 2-inch variation in the marble widths is arbitrary and unlikely, but, in fact, all the fireplace widths varied as did the hearth widths, and it is much more likely that the marble was ordered to fit each fireplace. If all the second floor marble enframements had been identical, there would not have been any variation in the hearth widths.

Therefore, the width of the center bay is related to the hearth width, which we have derived from the adjacent fireplace in the Long Room. The side bays are simply what is left over after the center bay width is established. As mentioned earlier, the side bays contain pedimented closet doorways. Although the exact size of those doorways is not known, their dimensions are controlled within close limits by other factors, as follows: The height of the closet doors would have been at least equal to those doors on the opposite (west) wall of the room; and those door heights were limited to the known height of the original ceiling in the space leading from the SE Room to the original attic stairway(see drawing No. 391/94,000, sheet 6). Thus, the maximum height of the west wall doors is limited to about 7'-0", and it seems likely that the west wall doorways would have been identical in size and appearance to the closet doors on the fireplace wall. Therefore, all four doors would have been a maximum of 7 feet high. Of course, they could have been less high, but we are of the opinion that the passageway ceiling was made to reflect the door height.

Assuming door heights of 7'-0", the door widths must be determined, preferably from the width-height relationship of other surviving internal doorways. The surviving original Tower Stairhall Guard Room door is unusually narrow for its height (30 1/4" x ca.77 1/2"), probably so it would fit within the limitations imposed by the stair landing. Thus, the Guard Room door is not a suitable prototype for doorway proportions. The surving original Assembly Room entrance doorway (42 1/2 x 118) almost precisely matches a doorway proportion of 1: 2 1/6 shown by Gibbs, Rules..., plate XLII. Gibbs also illustrates 1:2 doorways, but since both of the surviving internal prototypes exceed this ratio and since the Assembly Room doorway matches the 1:2 1/6 ratio, we have used this ratio for the doors in the SE Room (and for the reconstructed 1750s door leading from the Lobby into the SE Room passage because the 1750s passageway ceiling conformed to the earlier ceiling in the space leading to the original attic stairway).

Since the height of the SE Room east wall closet doors is assumed to have been a maximum of 7'-0", the width of the doors would be 3'-2", based on the 1:2 1/6 ratio. The widths of the stiles which frame the closet doors are simply the remaining space between the doors and the previously established width of the center bay. This results in varying stile widths on the fireplace wall, all of which are on the same plane of woodwork design. Question: because the doorway stiles seemed unusually wide (ca. 11 to 13 inches) in relation to the 4 1/2 center bay stiles, we considered making the

doorways smaller and/or including additional panels to flank the doorways in order to reduce the stile widths. However, it is not visually conceivable to reduce the door size enough for narrow panels on <u>each</u> side of the doors, and to have narrow panels on only one side of the doorways would produce an asymmetrical design treatment of the doorway bay - a situation which never occurs anywhere else in the building. Therefore, this approach was abandoned in favor of the widely varying stile widths, a condition which is known to have occurred in the center bay of the west wall of the Supreme Court Room.

The sum total of the architectural evidence and the above described limiting factors is an architecturally awkward wall treatment compared to other such walls in the State House, i.e., a disproportionately small cove, the lack of an entablature, the shallow hearth, the very large center panel, the unusually wide door stiles, and the resulting overall plainness of the design. Among these, the most unusual aspect is the lack of an entablature, a fact made clear by the architectural evidence (see drawing 391/4000, sheet 36). The remaining problems are the combined product of limiting factors, physical evidence and reasonable assumptions that do not seem to allow any significant changes that would alleviate the awkwardness of the design. To increase the scale of the cornice, we have carried the corona across the fireplace wall. Usually, when a crown and corona were employed on plaster side walls, the fireplace wall had 1) a full entablature, or 2) a crown, corona and bed moulding, or 3) only a crown moulding. We do not know of any direct prototypes (in Delaware Valley buildings) for using an applied corona with the crown on the fireplace wall. There is an indirect prototype in the applied lower fascia in the Supreme Court Room, where it appears that the lower fascia (1/4" thick) was deliberately applied for reasons of scale and to create a shadow. We have taken the liberty of using an applied corona on the SE Room fireplace wall for the same reasons.

CLASSIFICATION

Architecture
Architectural Details
Independence Hall

U. S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Independence NHP
(AREA)
MUSEUM CATALOGUE RECORD

CATALOGUE NO. 8298
ACCESSION NO. 2414

OBJECT
Broken square brick

LOCALITY
Philadelphia, Pa.

DESCRIPTION Broken half of a square handmade hearth brick or "tile." Original measurements: 5 1/2" x 5 1/2" x 1 15/16". Present maximum measurements: 5 1/2" x 4" x 1 15/16". Pasted to the top (exposed) surface is a paper label with an ink inscription: "Brick taken from Independence Hall during the alterations there in 1897-99, given by Director [Riter?] [to?] Hampton L. [Carson?]" The brick is hard burned, has no mortar on its surfaces, but instead islands of compacted sand-dirt, showing that it was laid up in the 18th century manner, i.e. dry with tight joints. The exposed surface is charred and has vestiges of wax & paint. How this brick came into the hands of Ind. Nat'l Hist. Park is not known. In that the date of salvage "1897-99" and the donor, "Director Riter" and recipient "Hampton L. Carson," all were related to the restoration of the Independence Hall second floor rooms, we assume that this is one of the bricks found during that project:

1896, Oct. 26., Phila. MS Letter, T.M. Rogers to Mrs. Charles C. Harrison
(Harrison Coll., INHP)
"... in the exact location shown on your set of plans [drawn by T.M. Rogers] in the two fireplaces of the west wall the original hearths were found in a fairly good state of

DATE RECEIVED 2/14/1969 | RECEIVED FROM (Name and address) ? | HOW ACQUIRED Transfer (CONT'D

VALUE Architectural | PRESENT LOCATION | DETERMINED BY | DATE

CATALOGUER Penelope H. Batcheler 3/19/69 | MANNER OF DISPOSAL | DATE

FORM 10-254 (May 1957) ☆ U. S. GOVERNMENT PRINTING OFFICE : 1961 O - 609445

CLASSIFICATION

U. S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

(AREA)
MUSEUM CATALOGUE RECORD

CATALOGUE NO. 8298-2
ACCESSION NO. 2414

OBJECT

LOCALITY

DESCRIPTION preservation. They were made of 6" x 6" x 2 1/2" thick red brick tile and we have enough to lay complete one hearth of these really old tile and they are to be copied, & all the hearths made like them. ....

1897, Jan. 30, Evening Star
- "Fortunate indeed was the finding of eighty of the old, plain, thick, square tiles beneath the floor, and these are placed in front of the fireplace in the Governor's room. In the other rooms imitations have been used."

1897, Feb. 29, The Times [address by Mrs. C.C. Harrison, Regent of Phila Chapter DAR]
- "Most interesting was the finding of the original English brick in the hearths, enough of them being found in good condition to enable our architect to complete the southwest fireplace with them; ..."

Square hearth bricks were referred to as "tiles" also: Bye-laws for the Regulation of measuring [cont'd]

DATE RECEIVED | RECEIVED FROM (Name and address) | HOW ACQUIRED

VALUE | PRESENT LOCATION | DETERMINED BY | DATE

CATALOGUER | DATE | MANNER OF DISPOSAL | DATE

FORM 10-254 (May 1957) ☆ U. S. GOVERNMENT PRINTING OFFICE : 1961 O - 609445

CLASSIFICATION

U. S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

(AREA)
MUSEUM CATALOGUE RECORD

CATALOGUE NO. 8298-3

ACCESSION NO. 2414

OBJECT

LOCALITY

DESCRIPTION

and valveing Stone Mason and Bricklayers Work ... Bricklayers Company of the City of Philadelphia. ... March 1799 ..." Hearths, in parlours, chambers, &c laid with tile of stock brick ..." and Joseph Rakestraw's bill to the State of Pennsylvania "To Sundry Materials & Repairs for the State House 1789 ... June 17 ... To Cash Paid George Lybrand for Bricks & taile ..." At least the photograph shows that at this time the hearths were composed of only bricks, no marble slabs.

Director Frank M. Riter, was Director of the Department of Public Safety under whose jurisdiction the 1897-8 restoration of the second floor of Independence Hall took place.

Hampton L. Carson (1852-1929) was a member of the Philadelphia Bar, and from 1893-1900+ was Recording Secretary of the Historical Society of Pennsylvania. He was an antiquarian and a collector and author of many historical monographs. Furthermore, he was a member of a review committee for the second floor restoration - see letter Frank M. Riter to Hon. Charles F. Warwick Mayor the City of Philadelphia, July 7, 1897; Harrison Collection, INHP. "That historical [cont'd]

DATE RECEIVED	RECEIVED FROM (Name and address)		HOW ACQUIRED	
VALUE	PRESENT LOCATION		DETERMINED BY	DATE
CATALOGUER		DATE	MANNER OF DISPOSAL	DATE

FORM 10-254 (May 1957) ☆ U. S. GOVERNMENT PRINTING OFFICE : 1961 O - 609445

CLASSIFICATION

U. S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

(AREA)
MUSEUM CATALOGUE RECORD

CATALOGUE NO. 8298-4

ACCESSION NO. 2414

OBJECT

LOCALITY

DESCRIPTION

integrity might be preserved these plans were duly submitted to students of colonial history and were approved before adoption by Hampton L. Carson, Esq., R.D. Stone, Esq., Librarian of the Historical Society of Pennsylvania, and Charles S. Keyser, Esq.."

INHP city negative CN-18460, an 1896 photograph looking west in the west room of the 2nd floor shows obliquely and distinctly the brick hearths as described by the above quotation. The hearth of the south chimney is in good shape. The north hearth has sagged and the resulting shadows may indicate the pattern in which the hearth tiles were laid.

DATE RECEIVED	RECEIVED FROM (Name and address)		HOW ACQUIRED	
VALUE	PRESENT LOCATION		DETERMINED BY	DATE
CATALOGUER		DATE	MANNER OF DISPOSAL	DATE

FORM 10-254 (May 1957) ☆ U. S. GOVERNMENT PRINTING OFFICE : 1961 O - 609445

APPENDIX C

Surviving Carved Corinthian Modillion; and Evidence of its Origin in the SW Room of the Second Floor

P. H. Batcheler, March 3, 1969

Description

Hand carved wood acanthus leaf scroll modillion with applied cyma reversa moldings from a Corinthian order cornice. INHP catalogue 24,022, drawing 391/94000 sheet 16 and photographs 157.2366-2371 (Illustration 61). The modillion was "found under the original flooring of the loft of Independence Hall (1917)" and accessioned on January 16, 1918 #425, City Collection. Overall dimensions including applied cyma reversa moldings 4 1/4" x 2" x 3 5/16." Modillion block itself nominally 2" x 2" x 3 5/8."

The cyma moldings are applied with hand wrought sprigs (nails) 13/16" long, 2 nails/molding. These were applied before the modillion was installed. Three additional nails one/molding were then hammered into the soffit of the corona to fasten the modillion in place. The modillion was painted after it was installed, for no paint appears on its hidden surfaces - including the mitres of the cyma moldings.

Evidence of Origin

There are two paint colors to be seen on the modillion. Layering: wood; orange buff (Munsell color no. 7.5 YR 5/6 - 8.1 YR 6.08/5.1); gray cream (2.5 Y 7/4). Both layers are of hand ground pigments and both have discolored through age. The gray cream has alligatored or drawn up into islands. These adhere well, but leave the orange buff layer exposed between them. The orange buff layer must have been exposed for some time before the gray cream was applied, for where there would most likely have been an accumulation of dirt, this gray cream has not adhered.

That the modillion was mounted up against the soffit of a Corinthian cornice corona is indicated by the direction of paint drips.

This modillion undoubtedly relates to the original finish woodwork of the second floor of Independence Hall - specifically either the SW or SE Rooms. These two rooms have the same first finish coat of orange buff paint on their original window woodwork. (The Long Room and Lobby were originally painted blue.) The only other room painted this color in Independence Hall was the Supreme Court Chamber on the first floor. But this modillion did not come from that room as the Supreme Court Chamber is architecturally finished in the Doric order. The Corinthian modillion therefore comes from one of the two second floor rooms.

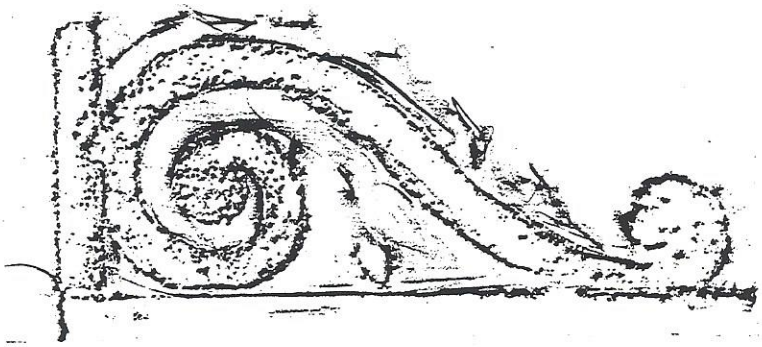
The question is, to determine if, within the 16 ft. high ceilings of the SW or SE rooms, this modillion and its cornice would have been used as either the cornice of the room itself, a pedimented door, or tabernacle frame?

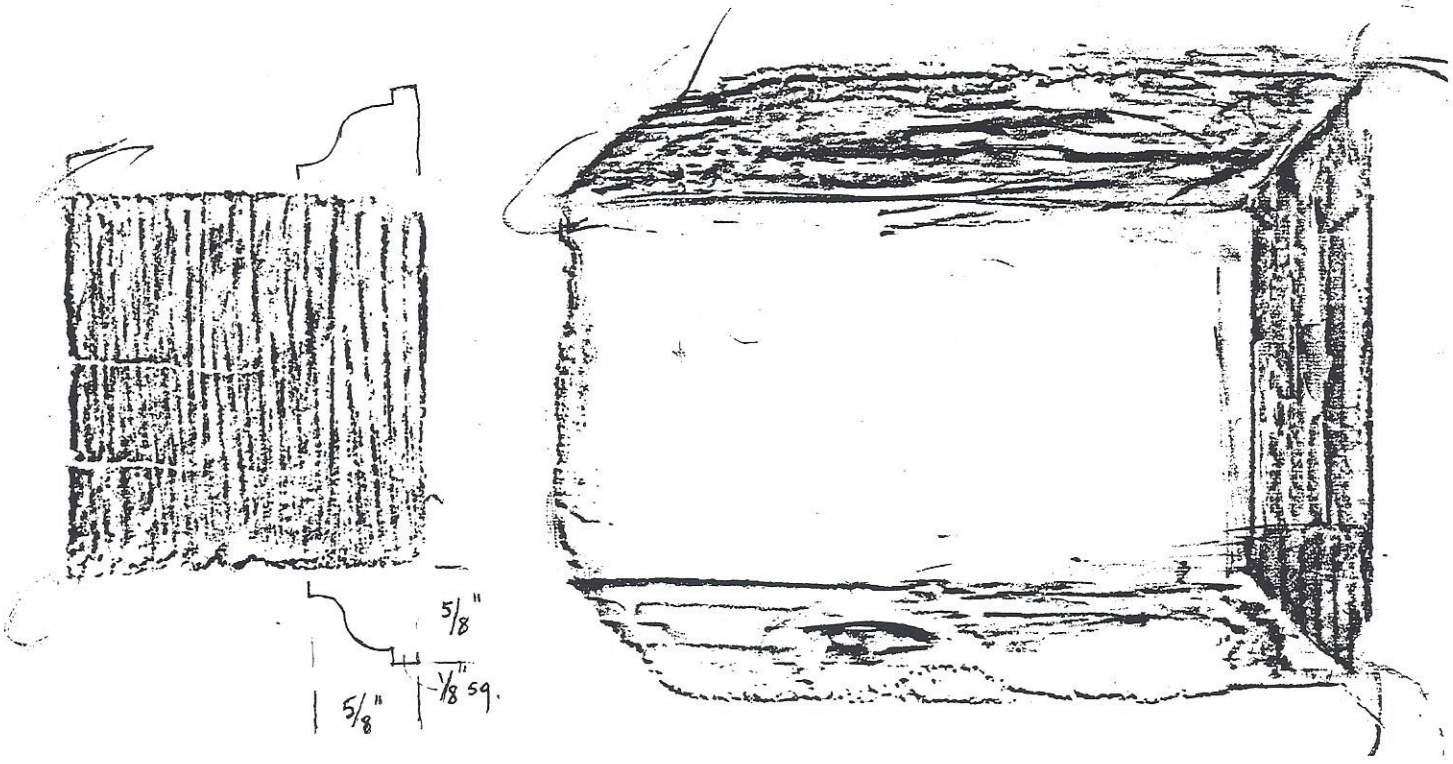
If you draw a Corinthian denticulated cornice based on the dimensions of this modillion (specimen 24.022) with the relative proportions used in the Ionic Tower Stairhall, the resulting cornice can be compared with other known room cornices for known cove-ceilinged rooms.

The overall height of this cornice equals +\-11", and its projection equals +\-11." In the Assembly Room of Independence Hall, a 20 ft. high cove ceilinged room, the room cornice height equals +\-12", and the projection is +\-12". This increased size could be a result of the larger room --40ft square with 20 ft. ceiling. The pedimented entrance to the Assembly Room has a cornice profile height = 11 1/4", projection = 11 1/4". This seems a possible use for our modillion cornice. However, the doorways of the smaller second floor rooms could not have been of the same large scale as that of the larger Assembly Room.

We therefore assume that the modillion was used on the room cornice of one of the second floor south rooms - being too large to use on any of the door or tabernacle frames of these small rooms.

The evidence drawings (391/94000 sheets 36 & 37) of iron oxide and plaster traces on the south walls of the SE & SW rooms show in the SW room a full entablature was used originally on the focal west wall, with only the cornice crown and corona moldings continuing around the room; and in the SE room the <u>entire</u> room was originally surmounted with only a crown and corona. This hierarchy variation is appropriate in that the use of the SW room, the Governor's Council Chamber, was more important than that of the SE room, the Committee of the Assembly. As the Corinthian is the most elaborate of architectural orders, we conclude that this modillion was used originally in the SW room on the focal west wall as a member of a full entablature of the Corinthian order. (See drawing 391/94000 sheet 56, the "Reconstruction of Corinthian Entablature, SW Room").




5/8"
1/8" sq.
5/8"



Appendix D

Rationale for Determining the Architectural Orders of the Second Floor Rooms

Research by L. H. Nelson and P. H. Batcheler, September 18, 1969, L. H. Nelson, Author.

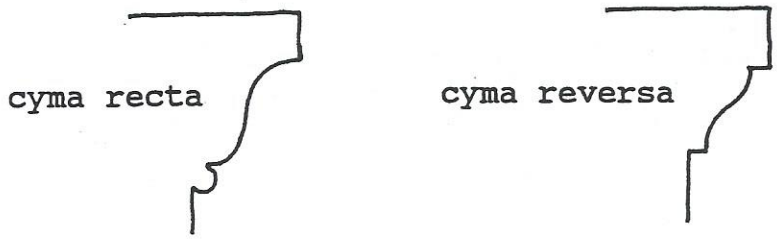
SW Room, Governor's Council Chamber

There is direct evidence for the architectural order of the second floor SW Room due to the survival of the carved Corinthian modillion, Cat. no. 24.022, Drawing 391/94000, sheet 16 and Appendix C). Such acanthus leaf carved modillians are used as part of the Corinthian cornice which is accompanied by a freize and architrave, making up the whole Corinthian entablature. Knowing this, it was possible to interpret the red iron-oxide and plaster stains found where the entablature abutted the room south wall (see 391/94000 sheet 37).

Lobby and Long Room

There is no evidence for the Orders of the Long Room or Lobby. The following rationale is based on indirect internal evidence in those two rooms as it relates to other parts of the building, and to the general mid-18th century use of stylistic elements.

For example, the 1730s Supreme Court Room archway architrave backbands use a cyma recta molding, which is also used on the 1750s archways in the Central Hall. Both rooms are in the Doric Order. The Tower Stairhall Palladian window backbands (exterior and interior) utilize a cyma reversa molding. It is in the Ionic Order. The internal evidence suggests a relationship between the cyma recta-Doric Order and the cyma reversa - Ionic Order.



As an extension of this apparent relationship, we have observed that the 1750s archway between the second floor stairhall landing and the Lobby uses a cyma reversa molding on both sides of the archway. This is consistent with the known Ionic treatment of the Stairhall Palladian window (mentioned here), and we therefore assume that the Lobby was also in the Ionic Order.

The 1750s Lobby may have been made Ionic to follow the earlier (1730s) Long Room treatment. Perhaps the Long Room and the Lobby and the Stairhall were all basically Ionic because the spaces flow together. All three spaces were painted a blue gray (although the 1730s Long Room was a stronger blue than the 1750s Lobby and Stairhall).

The Long Room was probably Ionic because it is very unlikely that the Doric Order would have been used anywhere on the second floor, as common classical practice would have limited the Doric to the first floor.

Since the SW room is known to have been Corinthian the most elaborate Order(see Appendix C), the Long Room must have been one step down in the hierarchy of Orders, i.e., Ionic, but not two steps down, i.e., Doric. Therefore we have concluded that both the 1730s Long Room and the 1750s Lobby were in the Ionic Order because of 1) the surviving original cyma reversa molding in the lobby archway, 2) the flow of space between the rooms, 3) the use of similar paint colors, and 4) the logical hierarchy in the use of the Orders.

The architectural evidence of red iron-oxide stain on the masonry walls leaves little doubt that there was a full entablature on the fireplace walls of the Long Room, but it also shows that there could not have been more than a partial cornice (crown and corona) on the side walls of the Long Room (see Drawing No. 391/94000, sheets 34-35). The evidence on the Long Room side wall is identical to the Lobby entrance wall, and it thus appears that the Lobby was simply terminated with a partial cornice like the Long Room side wall (i.e., no entablature).
Assuming the use of Ionic features in the Long Room and Lobby, the question arises whether the Long Room entablature and the Lobby cornice were a denticulated Ionic or modillion Ionic, or both, or plain Ionic. There is no doubt evidence to answer this question.

The mid-18th century pattern books and carpenters' manuals are not particularly helpful on this subject. The wording of Gibbs, Rules for Drawing the Several Parts of Architecture..., London 1736, (text for plates XII and XIII) vaguely suggests that modillions were more apt to be used with columns and dentils with pilasters, but the illustrations in various treatises (including Gibbs) do not bear out any such relationship.

In actual practice we know that there was no rule for the "correct" use of modillions vs. dentils. For example, the pilastered Assembly Room had a denticulated Ionic cornice, while the pilastered Palladian window (in the Stairhall) has a modillion Ionic cornice. The cornice of the Stairhall upper west window is denticulated Ionic, although it is in the same room as the Palladian window.

Obviously, the Palladian window is the focal point of the entire stairhall, whereas the upper west window treatment is a secondary element.

On the basis of such surviving original evidence at the State House, it appears that modillions were reserved for the more important Ionic features or for the more ornate Corinthian Order (e.g.), 1) Palladian window, 2) main exterior cornice, 3) southwest room, second floor.)

Thus it seems unlikely that the 1730s Long Room was modillioned if the more important 1730s Assembly Room was denticulated.

We have concluded that the Long Room and wall entablatures were denticulated Ionic; and that the Long Room side walls together with the Lobby walls were a continuation of this design but limited to a crown and corona. Such a simple treatment is visually corroborated by Titian Peale's c. 1822 watercolor view of the Long Room, north side wall (Detroit Institute of Arts, INHP neg. No. 7344).

For a surviving original prototype, we have taken the denticulated Ionic cornice of the Stairhall upper west window and mathematically increased its size to fit the meager physical evidence in the Long Room. From that evidence (see drawing no. 391/94000, sheet 35), we know that it is c. 14 1/2" from the bottom of the corona to the top of the architrave. This gives us an approximate dimensional basis for designing the Long Room entablature, based on the proportions of the above mentioned Stairhall west window cornice and Gibbs, Rules...(plate XLVI), resulting in a cornice of 11 1/2" to 12." We have selected a 12" cornice. By enlarging the prototype to this size, the dimension from the bottom of the corona to the bottom of the cornice is 6 inches. Subtracting this from the known 14 1/2" from bottom of corona to top of the architrave leaves a remainder of 8 1/2" for the frieze. The physical evidence for the architrave height is indistinct, but it is approximately 7 1/2." The total height for the end wall entablatures is therefore 7 1/2" + 8 1/2" +12" = 28."

The Long Room sidewalls and the Lobby walls would be simply treated with the crown and corona of the same entablature, the combined height of which is 6 inches. The attached sketch shows how the stairhall cornice was increased in size from 8 3/4" to 12" to fit the approximate physical limitations of the Long Room evidence.

Committee Room of the Assembly - SE Room

The architectural evidence indicates that several important features of the Committee Room were conspicuously different from those in the other second floor areas.

All the second floor rooms (including the Lobby) had a plaster cove with approximately the same projection, ca. 2'-8", except the SE Room which had a noticeably smaller cove with a horizontal projection of about 2'-2."

Also unlike the other rooms, the fireplace wall was not embellished with a full entablature. The evidence clearly indicates that the cornice treatments of the fireplace wall and the side walls were identical and coincided at the same level; whereas all other second floor fireplace walls had full entablatures with only the upper portion extending along the side walls (see Drawing No. 391/94000, sheet 36). In fact, there is not enough room for a full cornice in conjunction with the smaller cove and it is likely that only a crown and corona extended around all four walls.

Thus, it would appear that the SE Room was another step down in the hierarchy of architectural embellishment. It was, of course, a smaller and less important room, and we assume that this lower rank would be reflected in the design of other details on the fireplace wall.

Assuming the use of a crown and corona in lieu of a full cornice, the evidence establishes the location where the bottom edge of the corona would abut the plastered wall. However, there is no evidence which would help determine the size and configuration of the crown and corona. Lacking better evidence, we have assumed that the SE Room crown and corona were similar to those used on the side walls of the Long Room and around the Lobby, that is, Ionic rather than Corinthian. We have already concluded that Doric would not have been used on the second floor. Furthermore the Corinthian would have been inappropriate for this lesser room.

We have designed the SE Room crown and corona similar to our design for the Long Room and Lobby on the premise that they were appropriate in scale to serve in lieu of a full cornice on the fireplace wall; and that the original builders might have simply run off more of the same moldings for the SE Room. For example, the identical window architraves were used in all three of the second floor rooms; and it appears that the same chair rails were used throughout (except for the Lobby). This assumption is based on the fact that all the chair rails were the same size (ca. 5 7/8"). It is also likely that the same baseboards were used in the Long Room, SW Room and SE Room, and that they were about 7 1/2" high.

Another aspect of the SE Room design should be mentioned here. The SE Room fireplace wall is known to have had closets flanking the fireplace. Thus, closet doors were a part of the fireplace wall composition. We have little doubt that these doors were pedimented. While there is no conclusive proof, it appears that all the State House interior doorways were pedimented, even those minor doorways under the Tower stairhall landing. From the Savage

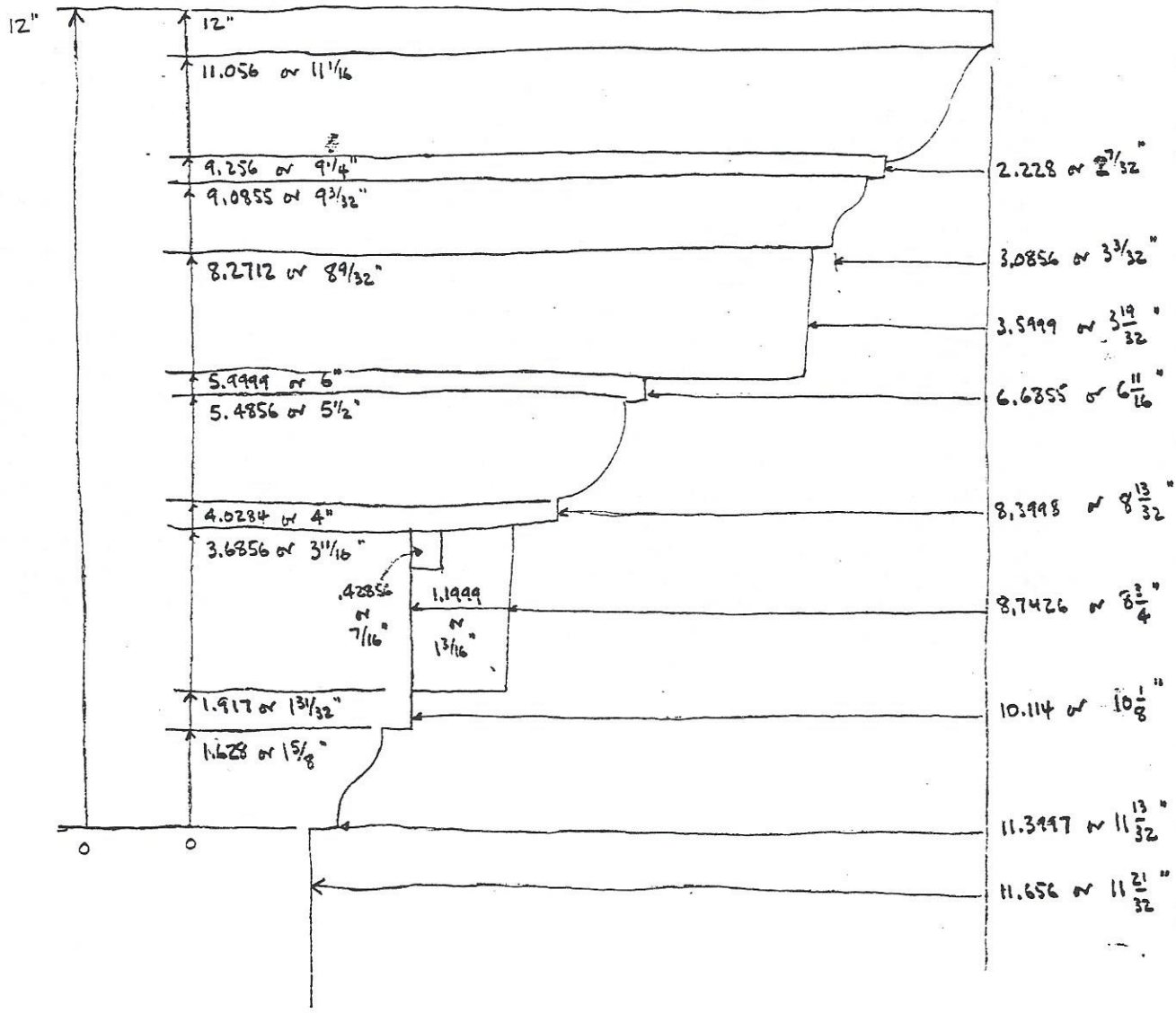
engraving, the Assembly Room closet doors are known to have been pedimented, and it seems reasonable to assume that all doorways in so important a building would have been so embellished.

Originally, there also had to be a doorway at the south end of the west wall, leading to the attic stairway; and we assume that there was another doorway at the north end of the west wall, which would have led to a closet space under the attic stairway. It is very unlikely that they would have wasted the space under the stairway.

Therefore, the west wall almost certainly had two doorways facing the pair of closet doorways on the east wall; and we assume that all four doorways were embellished with pediments, despite the fact that they are functionally secondary doorways.

Similarly, there is every reason to assume that the major doorway leading from the Long Room into the SE Room would have been pedimented on both sides of the doorway. However, the valid question arises whether the pediment on the SE Room side of that doorway would have been as elaborate (i.e., denticulated as the pediment on the Long Room side. From an observation of 18th century practice in the State House (and other Delaware Valley houses and churches), it appears that the sheer size of an architectural feature has a more important bearing on its degree of articulation than its architectural style relation to other features in the same room. Very large features were almost invariably more elaborately articulated than small features serving the same function in the same room. Thus, we believe it proper to denticulate the pediment on the SE Room side of the Long Room doorway, even though the SE Room is obviously a step-down in the hierarchy from that of the Long Room.

Ind. Hall - 2d Floor - Long Room - Ionic Denticulated Cornice 6/10
Based on Tower stairhall upper west window sill, with proportions increased by calculating machine (overall height increased from 8 3/4" to 12").
Multiply all original measurements by $\frac{12}{8.75} = 1.3714$"



Final Design: Cornice 12"
Frieze 8 1/2"
Architrave 7 1/2"
total 28"

12 Aug 1969 LBN

APPENDIX E

Second Floor Partitions and Openings

Research by L. H. Nelson and P. H. Batcheler, September 1985

Partition opening between Lobby and Long Gallery

The east and west Lobby partitions when first built in the 1730s were laid up as brick bearing walls. The north partition between the Lobby and Long Gallery was in line with the two wall truss partitions above the Assembly and Court Room. The Lobby north partition did not have a structural role.

The surviving preliminary plan for the building (the Dickinson papers plan, INHP negative 472) shows a large opening in the partition between the Long Gallery and Lobby. The Penn papers preliminary plan (INHP negative 1526) shows an opening almost as wide as the room with a suggestion of pilasters at each jamb.

The evidence found (see drawing 391/94000 sheet 26) on the original floor framing indicates that from the time of initial construction the opening between the Lobby and Long Gallery was around six feet wide.

As the Lobby-Long Gallery partition was non-structural it is understandable why it seems to have been built after the 1730s flooring was laid. Under the partition a few leverage holes occur showing that the flooring there was being laid as part of the full second floor flooring system, before the partition was built. They laid the 1730s floor starting at the north side of the building and continued south to the edge of the 1730s stairwell. The partition was planned for, however, as the flooring nail holes in the tops of the framing members in the line of the Lobby north partition varied in pattern where the partition eventually stood versus where the floor was exposed. Actually, for about six feet in width in the center of the partition line it is the nail hole evidence which indicates the opening between the Lobby and Long Gallery. These flooring nail holes were in pairs straddling what would have been the floorboard joints. Under the flanking partitions, however, the flooring nail holes were fewer and irregular in occurrence implying that the carpenters knew the partitions to be built would hold the floorboards down.

One can say that the nail hole evidence rules out any possibility of there having been a very wide opening between the Lobby and Long Gallery. In that case the usual nail hole evidence for exposed flooring would have been consistent for almost the full east-west width of the room.

We can say then that in the 1730s an approximate six-foot wide opening was provided between the Lobby and Long Gallery.

At either end of the exposed floorboard of this six-foot-wide opening there is a concentration of additional nail holes undoubtedly the result of the toe nailing of the doorway framing and trim. The two joists which have these concentrations of nail holes are 7'-5" apart. The nail hole groups vary in distance from each other from 7'-5" to 7'-9." These nail holes must date from the 1730's as all succeeding doorway treatments (1897 & 1924) were built on furred-up flooring.

We assume that these concentrations of nail holes are from the outer limits of the doorway trim because this 7'-5" to 7'-9" dimension matches that of the 1750s archway from the stairhall landing into the Lobby.

The question now must be answered, was this opening closed with doors or was it an open archway? Why wouldn't there have been double doors opening into the Long Gallery from the Lobby just as was found for the doorways to the southwest and southeast rooms? Closed doors, if needed, would have cut off light from the north. This would have been a great disadvantage in the 1730s-50s period as the stairwell then in the Lobby space would have needed all the light it could get. The four south windows abutted by the brick east and west partitions would have been closed off by shutters as were the false windows at the first floor north facade. Thus there was possibly only one center window to light this stairway. It is far more likely that an open archway similar to those downstairs brought borrowed light from the Long Gallery into this early stairway.

References to the July 2, 1778 bill for "1 key for the door going in to the Long Room" should not be confused with the Lobby-Long Gallery opening. This 1778 key was no doubt for the doorway between the southeast room where the State Assembly had started to meet while the Continental Congress was meeting in the first floor Assembly Room.

We thus conclude that there was an archway between the Lobby and Long Gallery built in the 1730s, and that the 1750s archway between the Tower Stairhall and Lobby was built to match it.

In Appendix D, Lee H. Nelson made an excellent observation. By comparing the archways in the building, we can determine not only the architectural treatment of the Lobby but also the treatment of the missing 1730s archway opening to the Long Gallery. Starting at the first floor, all the archways between the Court Room, Central Hall and Tower Stairhall have arched architraves with cyma <u>recta</u> backband moldings.

The Court Room and Central Hall are of the Doric order. The Tower Stairhall, at the first floor, has small Doric engaged columns visually supporting the stair and therefore declaring this lower level to also be Doric.

Thus, the archway connecting the Tower Stairhall with the Central Hall was given the Doric cyma recta backband moldings on both sides.

At the second floor level the Tower Stairhall 1750s Venetian window introduced the Ionic order. And the 1750s archway leading to the 1750s lobby had on both sides backband moldings with a cyma reversa curve. Logically, therefore, Lee Nelson concluded this was an indication, along with the elaborateness of the Lobby carved stair brackets, etc., that the Lobby should be treated with the Ionic order.

If you carry this one step further, we have concluded there was already a six-foot-wide archway to the Long Gallery. It would seem logical therefore in the 1750s to copy this already existent archway in connecting the Lobby to the Tower Stairhall, and as they face each other both archways should have the Ionic cyma reversa backband moldings.

The NPS reconstruction of the Lobby - Long Gallery archway followed this rationale.

In the open pilasters of the Lobby-Tower Stairhall archway there are hand carved bows and bell flowers. Outlines and nail holes were found for these carvings on the archway north & south faces (see photographs INHP 5157, 157.999 & 157.1003, and drawing 391/94000, sheet 38). The NPS carved reproductions of these missing elements to match those surviving originals next to the Palladian window of the Tower Stairwell. Indeed Samuel Harding in his 1755 bill for carved work included: "to 4 draps of husks in the open plasters opesite the Veneshon Winder at 10s pr drap..." (Norris Papers, Hist. Soc. of PA., INHP photostat 1024).

Harding makes no mention of carving anything for the open pilasters of the 1730s archway opening between the Lobby and Long Gallery. Either there were flowers there already, or more likely, Harding left this already finished woodwork alone, unembellished.

Doorways SE & SW Rooms to Long Gallery

The 1922-3 second floor restoration by the American Institute of Architects Philadelphia Chapter recorded on July 12, 1922 in their "Minutes of mtg. of Committee on Preservation of Historic Monuments":

> "Examination of original floor on each side of west doorway in S. partition of gallery indicating from the wear on the surface that the opening was about 2 ft. west of the present [1898 restoration] position. This agrees with plan of building published prior to 1827 which shows the doorways from the Long Room out of center with the rooms on South side."

For a representation of their restoration, see drawing April 16, 1923, Phila. Chap. Am. Inst. of Architect's measured drawings.

The NPS architect's found more precise physical evidence and relied upon it for placement of the doors between the Long Gallery and SE & SW rooms.

The practice of washing the floors in the 18th & 19th centuries not only provided the restoration evidence for floor board widths, but also for partition locations and some doorway opening locations. Neg. 157.1802 shows evidence of the original partition position between the southeast room and Long Gallery. The edges of the last floor boards are marked not only by their nail holes, but also in a few places water damage occurs.

Neg. 157.1788A shows the top surface of the original center floor plate of the original truss within this partition. And well marked on this surface is water damage extending ± 62" (again from washing floor), and indicating the position of the doorway between the SE Room and Long Gallery. See also drawing NHP-IND 3502. Unfortunately the whole center floor plate did not survive at the west end of the second floor framing, and thus the SW Room/Long Gallery door was assumed by the NPS architect's to be in a symmetrical position to its counterpart.

<u>Doorway from Lobby to SW Room</u>

1. Because there was an open stairwell at the south end of the Central Hall prior to the 1750s, the doorway from the second floor lobby to the SW Room could not have existed prior to the 1750s.

2. The doorway from the Lobby to the SW Room must have been installed as part of the 1750s alterations, because 7 of the then new Lobby floorboards were run into the SW Room. Total width of 7 boards = 5" - 4 1/2." See drawing 39/94000, sheet 26 and negative 157.2320.

3. This involved cutting a doorway through the 18" masonry wall which separated the Lobby from the SW Room.

4. The SW Room floorboards were cut off (with a chisel) along the center of the first joist west of the brick wall. This was done to provide bearing for the new floorboards coming through the doorway from the Lobby.

5. Based on the chisel marks, the masonry opening could not have been less than 5'-4 1/2" wide, because that is the overall width of the seven boards which extended into the SW Room from the Lobby. In actual practice, the masonry opening was probably cut slightly wider to allow some clearance for the flooring, say a minimum of 1" on each side. Thus, the minimum masonry opening was probably closer to 5'-6 1/2."

6. Because this was a masonry rather than a frame partition, the doorway architraves must have been attached to the masonry with iron anchors (similar to the Lobby/Tower Stairhall archway woodwork which was also installed in an enlarged masonry opening in the 1750s.

7. Therefore, the overall width of the doorway, including architraves, could not have been less than the masonry opening, in order to provide anchorage of the architraves. In practice, the anchors must have overlapped the masonry opening by at least an inch to provide adequate anchorage in the mortar joints.

8. It would have been impractical to rebuild the rough cut masonry jambs to a narrower opening than 5′- 4 1/2," because the masonry would have been laid on the new flooring.

9. We have concluded that the overall width of the doorway (including architraves) could not have been less than about 5′ - 8 1/2."

10. This doorway is sufficiently wide to have required double doors, which must have opened into the SW Room, following the then common practice of door swings.

11. Because of the size of this doorway (nearly comparable to the Assembly Room doorway), we have concluded that it would have had architraves similar in width to those at the first floor Court Room and Assembly Room (8 3/4") rather than the narrower window architraves in the second floor (7 1/4"-
7 3/8"). It is similarly likely that all the second floor entry doorways had wider architraves, and that the narrower architraves were reserved for the second floor end wall closet doors, and passageway door to SE Room.

12. We have also concluded that all the second floor side room doorways were trimmed with architraves, rather than being arched openings with open pilasters, because the 1818 Contributionship fire insurance survey describes the second floor doors and windows as having "double architraves." Such features as the arched opening, doorway pediments and end wall treatments are not mentioned in the survey probably because they were completely concealed by C. W. Peale's exhibits.

13. We have concluded that the doorway opening size was about 4′-3" by 8′ - 10 1/4" (ca. same proportion as Assembly Room door opening) 4′-3" + 1′-5 1/2" architraves = 5′-8 1/2" overall width incl. architraves.

The door size would be 5/8" larger at each side and at the top to allow for the door stops on the SW Room side of the opening (since by practice the doors would have opened into the room). Therefore doors are 4′- 4 1/4 by 8′-10 7/8" less tolerances for fitting.

14. We have used the minimum dimensions of the masonry opening (5 - 6 1/2") and the minimum overlap of the iron anchors (ca. 1") to arrive at the door opening size, so that the door opening would be slightly smaller than the Assembly Room opening, because of the difference in the room sizes. As explained earlier, the door opening size could not have been smaller than about 4'-3" by 8'- 10 1/4", but it could have been bigger; although we have assumed that it was not bigger because it would then have equaled or exceeded the Assembly Room doorway which was 4'-5 1/4" by ca. 9'-6."

Design of Doorway: Lobby to SW Room

Lee H. Nelson, March 25, 1969

1. Minimum overall width established by known masonry opening (see earlier discussion).

2. Overall proportions based on 1730s Assembly Room doorway, including disposition of panels, widths of stiles and rails, evidence of 1730s triangular pediment (on Central hallway side), use of plinths, knee'd architrave, architrave width and configuration.

3. Since the Lobby doorway is slightly smaller than the Assembly Room doorway, the tall door panels are proportionately smaller, but the small door panels have been retained. This produces a door lock rail which is below the known Lobby chair rail level. There is a precedent for this situation at the Tower entrance doorway (related to adjacent chair rail). The lock rail coincides, however, with the chair rail within the SW room.

4. For the denticulated Ionic pediment with pillow frieze, see pedimented doorways in first floor parlor, "Belmont" (Fairmount Park, Phila.), for a comparable situation with paneled dado and plaster wall. Also note use of denticulation and pillow frieze in Assembly Room. Similar doorways are also used throughout "Mt. Pleasant" with Doric and Ionic orders. See further discussion of pediments below.

Doorway Treatments

Lee H. Nelson, March 25, 1969

The degree of elegance in the Lobby (i.e., carved step ends, ramp & twist stairs, arched opening with imposts & keystone), plus the important functions of the side rooms (one with carved modillions) strongly suggests that the 1730s doors into the side rooms from the Long Gallery must have been equally elaborate, i.e., doorways with pediments. Note that the 1730s Assembly Room closets are known to have been pedimented, as were the small 1750s closet doorways under the Tower stairs. We might assume therefore that the second floor side room doors and closet doors were all pedimented, and that this

degree of elegance was maintained in the 1750s for the doors into the side rooms from the Lobby. If the 1750s stairhall closet doors were pedimented, so must have been the door under the second floor Lobby stairs. Confirmation for the 18th c. trim design and that pediments were used with the second floor doorways can be seen in the 1844 Franklin Fire Insurance Survey 5044 (Appendix N). Here the second floor is described as having: "Surbace & washboard double Gnead [sic] architraves, plain Casings [at windows] small coved ceilings, plank folding & passage doors, 18 feet Story... pediments over the doors..."

Southeast Room Closets and Passage/Lobby Doors as of 1730s-1750s

P. H. Batcheler, December 16, 1969

At the west wall of the southeast room there was constructed in the 1730s a partitioned off space which contained a steep flight of stairs leading to the State House garret. The stairway was entered by a door in the southwest corner of the room, and the steps rose to the north, arriving in the garret at the center E-W truss partition(see Appendix F). Beneath the space of this stair we believe the original carpenters constructed a closet, access to which was probably by a door placed in the northwest corner of the room, symmetrically opposite the stairway door.

As all the known original interior doors of the State House had pediments surmounting them regardless of their importance, we have designed these west wall doors with pediments to match the closet doors they face at the east wall of the room. See NHP-IND 391/94000, sheet 46 for dimensions and details of these doorways.

When in the 1750s a passage was created leading from the 1750s Lobby to the Southeast room, we surmise that a door led from this passage to a closet beneath the 1750s Lobby flight of stairs. There is, however, known evidence which disputes this logical and customary use of space. A line of plaster was found on the original floor boards at this location implying that the space beneath the stairs was walled off (see sketch in Horace Wells Sellers Collection, INHP Catalogue 4301, Illustration 40).

Despite the evidence questioning a closet beneath the Lobby stair, we are of necessity putting one there to contain the electric service box.

An additional door within the passage led to the 1730s garret stairway.

The plane of this passage closet door partition we have determined was about 5'-9" north of the south masonry wall of the building. This was indicated as the extent of worn original flooring when discovered by Architect H. W. Sellers during the 1920s restoration research (Horace Wells Sellers Collection, INHP). Mr. Sellers in

his sketch recording evidence, noted that the masonry partition between the Lobby and SE room was cut back by the passage also to this dimension 5'-9". If, as we suppose, the 1730s garret stair remained after the 1750s changes, then it pre-supposes that the first riser of the stair was further north than the 5'-9" passage width, say about 6'-0." If then a door was added to close off this garret stair, it could have been added in front of the first step, allowing space above it for a transom of lights. See NHP-IND 391/94000, sheets 26 & 46.

The design of these two passage closet doors has precedent in the original 4 panel door of the Guard Room in the SW corner of the Tower Stairhall. The exception to a literal copy would be that the lock rails of these closet doors could be narrow as they did not need to reflect the design of any adjacent paneling.

The frames of the doors have no direct precedent in the State House. However, on the Tower side of the door at the head of the Lobby stair the original trim is a single architrave of 4" width, with an ogee back band. This would be an appropriate degree of design to surround such subordinate doors.

APPENDIX F

Confirmation that the Garret Floor Framing in the Center South Bay was Preliminarily Headed-off for a Garret Stair and Construction Access, and Evidence for the Actual 1730s Garret Stair at the West End of the Southeast Room.

Penelope Hartshorne Batcheler, Lee H. Nelson, William D. Brookover, 6/21/90.

The 1732 preliminary drawing (from the Penn Papers) of the State House first and second floors shows the main stairway as though it were to continue to the garret right above the runs from the first to second floors (see Illust.2). Having in the late 1960s found considerable evidence indicating, contrary to the preliminary drawings, that the 1730s garret stair actually was placed at the west end of the southeast room, it came as a surprise to note on the 1961 measured drawing "Garret Floor Framing Plan - Center section," NHP-IND 3211-2, that the west half of the south center section of the garret floor framing was purposely headed-off as though the garret stair were to arrive there, and/or, as Lee Nelson suggested, the opening was made to haul up all the garret and roof framing members during construc- tion. Penelope Batcheler pursued evidence alone during several investigations, and took the opportunity to have Architects Lee Nelson and William Brookover review what had been found and to look for further details on June 21, 1990. The following observations have led us to the conclusion that initially they indeed did head-off this space probably to both have the garret stair there and as well to use the space for construction access. (A discussion of the actual placement of the garret stair follows this section in Appendix F.)

1. As shown on drawing NHP-IND 3211 sheet 2, the six west joists of the center south bay of the garret floor framing never were mortised, tenoned and pinned to the girder which framed the space at their north ends. No pin holes or mortises were to be found in the girder. Instead, the joists had been crudely let into the south face of the girder about 1/4 to 5/8 inch, were toe-nailed to the girder with handwrought nails, and given bearing on a 1 1/4" x 5" ledger. Subsequently the general sagging of the building's framing system, as suggested by Lee Nelson, allowed the toe-nails to pull out to the extent that a second ledger was let up under the joists and fastened with large cut nails to the original ledger and girder, probably c. 1854.

2. These six joists had all been formed with a pit framing saw rather than mill sawn as were the balance of the 1730s garret framing members. The pit sawing and the crudely chiseled slots for the joists, and the unprofessional toe-nailing, suggest that the introduction of joists into this bay was an afterthought.

3. Drawing 391/94000 sheet 3, a reflected plan of this framing, and photograph 157.545 of this same framing from below, both show that these crude joists were in place when in the 1750s Master Carpenter Edmund Woolley had the second floor Lobby finished with a plaster cove ceiling. Lath stains on the underside of the joists are to be seen except on the two westward joists which were above the west wall cove projection.

The question is, were these joists added in the 1750s or were they already in place having been added after all the garret and roof framing members were hauled up into place c. 1733?

4. William Brookover asked, would the joists be necessary in the 1730s in order to frame the south slope of the roof? Often one finds cornices supported at gables by outlookers framed into the nearest rafter. We asked if this could have been the construction method for the 1730s south exterior cornice. We then looked at the inner faces of the bottom chords of Trusses 3 and 4, to see if there were any mortises for an east-west header which could have received such cornice outlookers. There were no mortises or ledgers, or nail holes suggesting such construction. The question was asked again. Could you support roof rafters without the outward extension of garret floor joists?

Drawing NHP-IND 2471 sheet 3, shows a section through the main roof cornice at the north wall. To describe this section, a wood plate 4" x 11 1/2" is seated on the main brickwall. The garret floor joists and truss bottom chords sit on the plate and extend outward to receive the cornice fascia and crown molding, and on their soffits they supported the cornice soffit boards and modillions. Spanning across the tops of these joists and bottom chords, at their furthest projection, is a 4" x 8" rafter plate. It is let into the tops of the joists and chords to stop the outward thrust of the rafters. Its section is small enough that its equivalent could not have spanned the east-west length of the south center bay, plus receive the loads of the six roof rafters above without being supported by the extension of the garret floor joists. <u>We therefore conclude that the 1730s roof framing could not have been built without the presence of these crude floor joists, and thus this headed-off space, although planned to do so, never included the garret stairway.</u>

Other observations discussed included:

The south ends of these crude joists are embedded in an upward extension of the main building south wall. This was readied by Edmund Woolley in 1750 to receive the masonry tower north wall. Woolley removed the continuous wood wall plate, so that his tower brickwork would seat directly on the 1730s brick- work. A number of the joists are seated on short blocking taking the place of the removed continuous wall plate. The mortar joints of the inner surface of the 1730s south wall were neatly struck flush with the

bricks, whereas the 1750s extension of the brickwork was not struck at all. The 1750s brickwork was laid up around the joists as the wet mortar oozed out to meet the flat sides of the joists.

The girder at the north ends of the joists, on the south face above the level of the ledgers, shows no sign of nailing from any possible stairhorses. The east face of the Truss 3 bottom chord shows no nailing from a stair structure either. Furthermore the inner ledger, i.e., that applied to the girder first, extends the full length of the bay and thus was not installed only to receive the upper ends of stairhorses.

The eastern end of the inner ledger extends over one of the 1730s iron plates which supplemented the mortise and tenon joinery of abutting girders. Initially this ledger extension was not nailed to the girder here. But c. 1854 when the second ledger was applied, with cut nails, the carpenters added "belts and suspenders" and fastened the lower edge of this 1730s ledger with cut nails, taking care not to hit the iron plate.

There are fewer flooring nail holes in the tops of the crude joists, and the few removed by Lee Nelson (with the same nail puller he used twenty to thirty years ago) turned out to be cut nails. The suggestion here is that the garret flooring originally covered only the center of the garret from east to west gable, and this center south bay originally had no flooring.

The Actual 1730s Garret Stair

Lee H. Nelson April 1965, Penelope Hartshorne Batcheler, August 1990

The 1730s staircase from the first to second floor occupied the south end of the Central Hall (see the so-called Dickenson and Penn papers plans of c. 1732) There is physical evidence of beam pockets in the east, south and west walls of the Central Hall (see drawing NHP-IND 2462).

This staircase was apparently temporary, anticipating the addition of the Tower Stairhall. The Central Hall remained an unfinished space until the 1750s removal of the first stair and the addition of the present Doric order woodwork.

The 1730s temporary staircase arrived at the second floor at a landing south of the Long Gallery. Flanking the 1730s stairhall at the second floor to the east and west were brick partitions which supported garret floor beams, and which abutted two false windows in the south exterior wall (similar to those flanking the Chestnut Street entrance). Below the window sill level these partitions were bonded to the exterior wall (see drawing 391/94000, sheet 6).

The previous section of Appendix F discussed the evidence which shows that preliminarily the 1730s builders headed-off a space above this Lobby in the garret floor framing that provided access in carrying up building materials during construction. This space may initially also have been intended for the main stair to continue to the garret, but the evidence also shows that this idea was very soon abandoned.

Instead evidence has been found for a separate garret stair which was located at the west end of the second floor SE room, partitioned off from the room and accessed by a door in the room's SW corner. Under this stair was a closet, opened by a door in the NW corner of the room. This garret stair was about 37 1/2" wide, rose to the north, had head room of approxi- mately 6' - 6", and discharged into the garret near the center (see accompanying sketches).

The following is a list of the evidence which made us aware of this 1730s garret stair:

1. On drawing 391/94000 sheet 31A, Note 2 describes a beam with a beveled lower edge upon which bevel, fastened with hand wrought finish nails, is a portion of what must have been a sloped finish ceiling board for the garret stairway (see also photograph 157.2326 the board is between arrows 1 and 2).

2. Apparently the stair ceiling was at first to be plastered on the undersides of the garret joists, 1296X as according to Note 4 on this drawing lath was applied. But the absence of plaster stain evidence on the joists shows that there was a change in plans, no plaster was applied, and indeed the stair seem to have been put in with a sloped wood ceiling instead.

3. Evidence for the partition separating the stair from the southeast room is also recorded on 391/94000 sheet 31A. At the ceiling framing, approximately 21" o.c. there are groups of three nail holes and wrought iron nails which indicate the attachment of studs to the joist above the partition location.

4. Drawing 391/94000, sheet 5, and photographs 157.2324-26 record evidence of this 7 7/8" thick partition. At the partition location where it abutted the exterior south wall there is no evidence of original plaster stain on the brickwork.

5. And most important, on 391/94000 sheet 31A and in photograph 157.2326, it is recorded that the SE room cove ceiling returned across the west end of the room at this stair/closet partition, establishing without a doubt that this partition existed in the historic period.

6. As the stair rose from the south to the north, it had to arrive in the garret in a headed-off space. Apparently this space was defined by garret truss T-5 to the west, a N-S joist to the east, the E-W center truss partition to the north, and an E-W girder to the south. See the accompanying sketch plan.

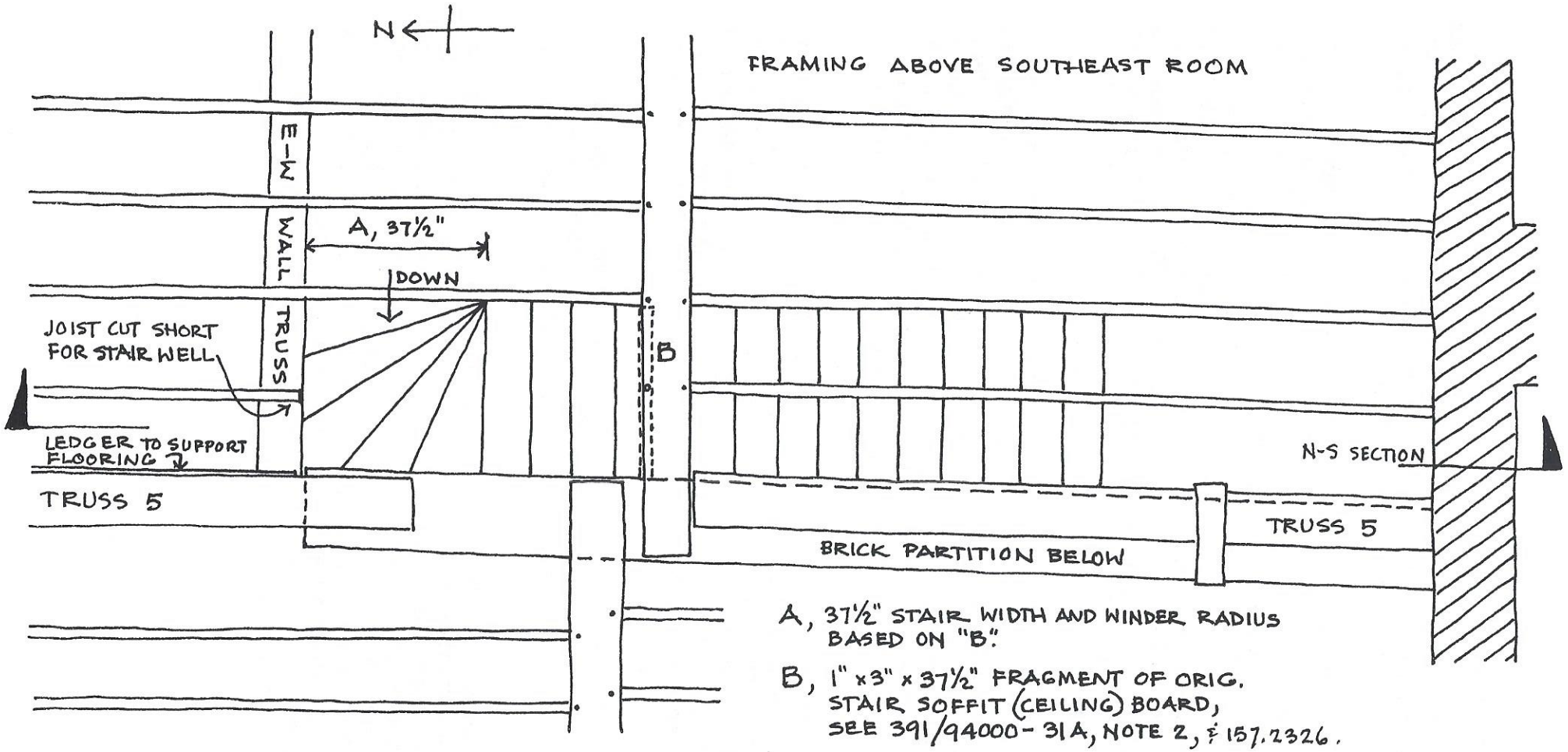
Today the joists in the bay where the stair came through into the garret date from the 1850s, apparently related to a ventilator system. During the original assembly of the garret framing this bay was made up of mortised and tenoned joists. When, early on, the decision was made to place the garret stair in this location, they apparently made an opening for it by removing the southern half of one joist, drilling out the pin and sawing the joist in two so they could pull out the southern tenoned end. Today you can see the remaining mortise and pin hole despite the 1850s joist which eventually was let in to the girder eradicating the upper part of the mortise and upper portion of the pin hole.

7. The garret flooring north of the stair was supported on a ledger applied to the east face of Truss 5. The ledger extended southward to the line of the E-W center partition, or to the head of the stair (see 391/94000 31A). The stair abutted the upper extension of the center wall truss partition which was fastened to Truss 5 below the ledger. In the bottom chord of Truss 5 there are three massive nail holes attesting to this; all three having tapered holes from wrought spikes.

This stair would have been very dark. Until the 1750s the garret was lighted from the two gable-end round windows. But after the 1750s clock heads were built in front of the gable-end windows, very little light would have been transferred back to the center of the garret. At the foot of the stair borrowed light was possible from the nearest second floor window, provided one left the door open to admit this light.

See Appendix G, "1750s Lobby Stair to Steeple," where the history of the 1730s garret stair is developed in order to explain when the Lobby stair was first altered to connect to the main building garret.

Horace Wells Sellers, Philadelphia architect involved with the 1920's second floor restoration, made the observation that as the stair in the tower (at the garret level) is "characterized of an earlier construction" ie. pre-1750's, perhaps it had served as the garret stair in the 1730 - 50 period. Actually this thought is unfounded as the above evidence shows. And the early "characteristic" is appropriate for its tower location, another instance of using an old fashioned style in a lesser space. See H. W. Sellers Papers, Folder 3, INHP catalogue 4301.



INDEPENDENCE HALL - 1730's - 1850's ATTIC STAIR

WEST END OF SOUTHEAST ROOM

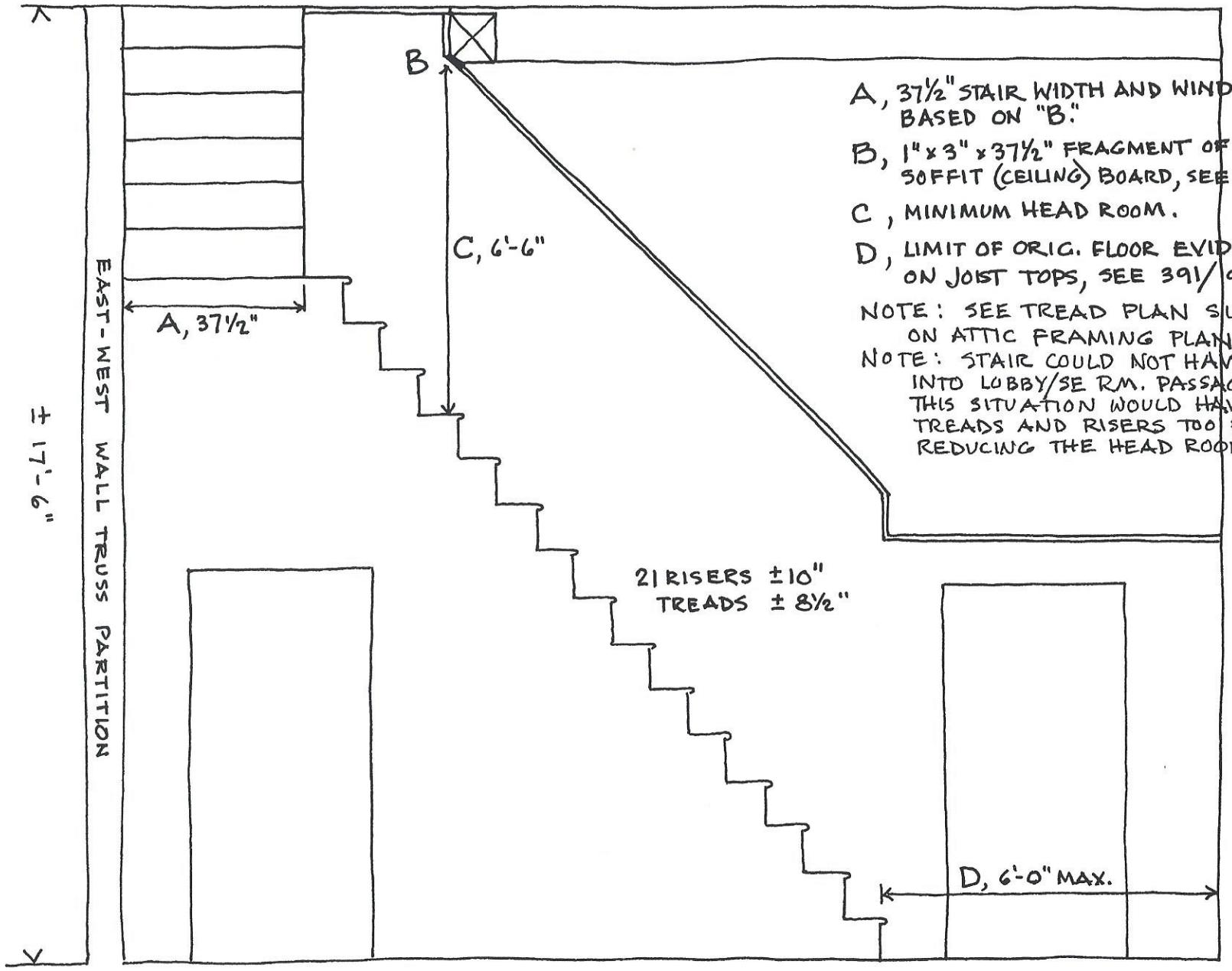
TREAD PLAN SUPERIMPOSED ON ATTIC FRAMING PLAN, 391/94000-31A

3/8" = 1'-0"

0 3 FT.

P. H. Batcheler 8/1990

Appendix F



A, 37½" STAIR WIDTH AND WINDER RADIUS BASED ON "B."

B, 1" x 3" x 37½" FRAGMENT OF ORIG. STAIR SOFFIT (CEILING) BOARD, SEE 391/94000-31A.

C, MINIMUM HEAD ROOM.

D, LIMIT OF ORIG. FLOOR EVIDENCE FOUND ON JOIST TOPS, SEE 391/94000-26.

NOTE: SEE TREAD PLAN SUPERIMPOSED ON ATTIC FRAMING PLAN 391/94000-31A.

NOTE: STAIR COULD NOT HAVE PROJECTED INTO LOBBY/SE RM. PASSAGE WITH WINDERS. THIS SITUATION WOULD HAVE RAISED THE TREADS AND RISERS TOO FAST, THUS REDUCING THE HEAD ROOM AT "C".

INDEPENDENCE HALL - 1730's - 1850's ATTIC STAIR
WEST END OF SOUTHEAST ROOM
N-S SECTION, LOOKING EAST

3/8" = 1'-0"
0 3 FT.

PH Batcheler, 8/1990

Appendix F

APPENDIX G

1750s Lobby Stair To Steeple its Connection later to Garret and Abandonment of 1730's Garret Stair.

Penelope Hartshorne Batcheler June 1, 1971-January 1991

The Lobby stair presently is in the fourth form that this stair has taken. It was first installed in the 1750's. In the mid-19th century the stair was modified and moved out to the top landing of the Tower Stairhall. In the 1920's the American Institute of Architects, Philadelphia Chapter, reconstructed the stair in its original location in the Lobby. For the National Park Service restoration/reconstruction of the second floor in the 1960's - 70's, much more evidence was uncovered allowing the fourth more accurate reconstruction. This appendix presents this evidence, describes the design sources used for missing details, describes the evidence for the passage beneath the stair which leads to the southeast room, and lastly establishes when this lobby stair was first connected to the garret making the 1730's - 1750's garret stair obsolete (see Appendix F for evidence of the 1733 - 1750 garret stair).

Evidence for Lobby Stair Restoration

The Lobby stair was located by the following evidence: on the south wall at the head of the stair is original 1750s plaster with the profiles of the wall ramped half rail and landing half rail (see drawing 391/94000, sheet 17A and 39A negative 157.1939 and .2328); no plaster was found below this half rail position indicating wainscoting along the stair wall; the top landing level of the Lobby Stair was located by the 1730s garret joists having been cut down in height to support the landing floor boards; a ledger was also added, and still exists, along the west edge of this landing to receive the west ends of the top landing floor boards; the ledger strip is nailed with rose head nails, to the bottom chord of Truss #4; when the 1730s garret joists were eventually completely cut off, the cut was not neat and has left additional indication of the floor level of the 1750s top landing (see 391/94000, sheet 17A, Section A). Thus, to reconstruct the Lobby stair upper landing levels, we had the level relationship of the top of the wainscot pilasters, its ramp, the top of the wainscot at the upper landing, and the floor level of the top landing.

Fifteen original balusters survived and enough tread-end carved brackets to confirm the tread and riser dimensions (Accession 2383.1 and 2383.3). The relationships of the foregoing evidence enabled laying out the number and dimensions of the treads and risers and the slope for the stair.

At the foot of the stair the treads and risers had to fit within the Lobby space east of the arched opening to the Long Gallery (see Appendix E).

Design Sources for 1750s Lobby Stair Restoration

Original Fabric:

INHP Accession 2383:

One complete carved stair bracket
Two half portions of carved stair brackets
Eight long balusters
Seven short balusters
(see drawings 391/94000, sheets 18, 39, 39A, 40, 41, 42 & 43)
(see photographs 157.1939, 2136, 2137, 2379-2381, 2386-7 and 2390)

Missing Fabric and Design Source:

Wall wainscot: See drawing 391/94000, sheet 17 for evidence at the head of the stairs on the south wall, of a system of paneled wainscot with pilasters and ramped half rail. Note that at landings the rail does not ramp along the flat but this does not affect the use of pilasters -- for precedent see the stairway of Hope Lodge c. 1745. Design Source: To suit the simple original balusters we have decided to use the Tower Stairhall wainscot and its pilaster details reduced slightly in scale and without carving (except the handrail to be discussed later).

Newels: Based on the Tower Stairhall and comparable stairhalls at Whitby Hall, Belmont, Cliveden, Powel House, and Mt. Pleasant, the newel in each case reflects the base details and cap support of the accompanying wainscot pilasters; i.e., the newel will have a column shaft double torus base and a Tuscan capital. Note: at The Cliffs (1741) a simple baluster, such as those of the original Lobby stair, is used with such a column treatment in the newel. The size of the newel (plinth = 4 3/4" square) is based on the relationship of baluster thickness and tread nosing projection -- where the newel is always flush with the projection of the tread nosings.

Turned drops, or pendants, as an architectural feature with Delaware Valley 18th century stairways were widely used at the bottom of newels. They are also used at the main stairway in the Tower Stairhall. Photographs of the 1850s stairway erected on the upper landing (INHP 7355) show pendants of the same simple form as the 1750s pendants of the Tower Stairhall. It is quite possible that as the Lobby stair original balusters were reused in the 1850s, they also reused the original pendants. Why they were not reused in the 1920s restoration could easily have been because they did not survive intact. Turned pendants have the unfortunate

tendency to split upon stress in removing them and or renailing them. We have decided to copy in form the pendants used in the 1850s stair -related to a 4 3/4" sq. newel.

Hand Rail: It is obvious that the stair rail of the Tower Stairhall is not the appropriate scale for the Lobby stair. The half rail at the wainscot of the Tower Stairhall was not used as a design source either. Fortunately we were able to find some evidence of the original half rail profile of the Lobby wainscot. Where the wainscot abutted the west return of the original archway between the Lobby and Tower Stairhall, a profile was recorded by the presence and absence of surviving original dark brown and blue grey paint -- see 391/94000, sheet 19. This rail evidence produced the top ogee and nosing profile and the reveal dimension to the plane of the paneling below. Evidence of the applied bead, which delineated the rail, was not forthcoming. However, upon examination of the surviving original 1750s stair rail within level 2 of the actual Tower - that rail matched the above evidence closely. We decided that this 1750s Tower rail would be an appropriate source for the missing handrail and half rail of the 1750s Lobby stair. This appropriateness is further enhanced, for the balusters used in the Tower stair have the same turnings as those in the original Lobby stair (see negs. 157,2414-2415).

Ramps & Twist: The Edmund Woolley bill for "Work done at the State house" includes "Also ye Portal at ye head of ye first stairs with ye ramp & twist stairs carried up there ..."(Norris Papers, HSP, MSS 1750s). At the foot of the grand staircase in the Tower Stairhall is the grandest ramp and twist a handrail can have. For the scale of this grand stair the robustness of the twist is appropriate. But as the Lobby stair was smaller and less elaborate it would seem correct to have a twist of a domestic scale; similar to those of the Philadelphia houses, Belmont and Whitby Hall. Twists of handrails are shown, and their construction is frequently explained in carpenters manuals of the eighteenth and nineteenth centuries. The design decision is therefore guide by the degree of elaboration as applied to the standard construction method of the twist.

The stair rail twist at Belmont mansion, c. 1760, is very tight and affords only four balusters to follow into the swirl. At Whitby Hall (1755-58), however, the rail twist is larger and therefore opens out to allow eight balusters to support the swirled rail (see plates in Colonial Houses by Philip B. Wallace, Philadelphia, 1931).

The tightness of the twist at Belmont may be due to the small area of its stairhall. The Lobby of the second floor of Independence Hall has ample space to carry out a twist of equal volume to that of Whitby Hall.

The reconstruction layout followed the disciplines in Owen Biddle's The Young Carpenters Assistant, Philadelphia, 1817. This late publication date was not considered inappropriate as such "ramps & twists" fundamentally did not change.

Treads & Risers: Drawing 391/94000, sheet 18, provides an explanation for the determination that the stair tread thickness was 1 1/4", the riser height 8 1/8", and the tread (riser to riser) was originally 9 3/4". However, we were unable to hold the 8 1/8" riser height. The total vertical rise of the stairway is less than it was originally. To preserve the original second floor joists the new flooring has been laid on modern joists spaced between the original, and raised somewhat.
The risers will therefore be only +\-8 1/16."

The Outer String Architrave: Photograph CN-18937 of 1922, and dwgs. 391/94000 sheets 6 & 17 record the original plaster profile evidence of an outer string double architrave for the Lobby stair. The evidence so closely approximated the outer string architrave of the Tower Stairhall stairway, that we have used that as a design source.

Stair Partition: The one requirement of the partition beneath the stair for which we have both documentary and physical evidence is that a doorway be included, leading to a passage to the southeast room. See the notes of H. W. Sellers for the restoration of the 1920s, INHP catalogue 4301 and negative INHP 18937 and see the evidence of the passage on dwg. 391/94000, sheet 26. H. W. Sellers said the passage floor was worn within an area 5'-9" from the south wall. The doorway in the partition is therefore limited within this dimension.

The panel treatment of the partition beneath the main stairway in the Tower Stairhall, is a source for the reconstruction of the Lobby stair partition of the same date, and made by the same craftsmen. One distinctive feature of the main stair partition is that the wide horizontal rail aligns with the adjacent passage door lock rail. There is a determined placement of the horizontal elements.

Within the main stair partition the vertical divisions made by the stiles produce visually equal width panels beneath the wide horizontal rail (they are very close in measurement but not exactly equal). And above the horizontal the panels are irregular due to the slope of the stair.

If we can use these observations in designing the Lobby stair partition, then the following points may stand. The horizontal rail of the partition should equal in width and placement the lock rail of the passage door. And the panels beneath the horizontal rail should be divided so as to be equal in width.

The passage doorway included in the partition, as at the other interior doorways in the building (see Appendix E), was given a pediment, architrave trim and six raised panels.

1750s Passage from Lobby to Southeast Room
Lee H. Nelson c. 1969 & P. H. Batcheler 1990

It appears that the space under the new Lobby stairway was connected as a passage between the Lobby and the SE room. This required "punching" through the east brick partition and running the Lobby floor boards into the SE room. The original floor nailing pattern survives on the tops of all original joists and girders, establishing the pattern for the flooring laid in the 1730s as well as that laid in the 1750s. The 1750s floor board evidence in the Lobby extended into the new passage, through the newly created opening and abutted the 1730s SE room flooring at the first joist east of the brick partition. It appears that the 1730s SE room flooring at that juncture was slightly cut back to provide some bearing for the ends of the new 1750s floor boards (see 391/94000 sheet 26). Whether or not there was originally a closet off this passage deep under the 1750s Lobby Stairway is a question, as the H. W. Sellers sketch of the 1920s research shows a line of plaster was found on the original floor boards implying a partition rather than a door to a closet (INHP cat. 4301).

Despite this architectural evidence, there are several complicating factors. 1) The flooring at the SW corner of the SE room is several inches higher than the flooring in the adjacent section of the Lobby (see 391/94000 sheet 26). Though there is no clear evidence of shimming the Lobby floor, that possibility cannot be ruled out. In any event, the floor must have sloped downward in the passage from the SE room's doorway to the new Lobby opening, but this was, after all, only a minor space. 2) The new passage could have conflicted with the old 1730s garret stairway. Instead, the 1730s stairway apparently was quite steep with winders at its head, thereby allowing sufficient room for the new passageway to pass south of it (see sketch of 1730s garret stair in Appendix F).

Evidence that the Lobby Stair was Not Connected to the Garret when First Built in the 1750's

P.H. Batcheler 1990

If the way to the garret from 1733 - 1750 was via a closeted stair at the west end of the southeast room (see Appendix F), how long

was this closeted stair in use, or, to put it otherwise, when was the Lobby stair first connected to the garret making the 1730's garret stair obsolete?

The logical assumption would be that Edmund Woolley in adding the tower in the 1750's would have built the open Lobby stair to ascend to both the tower and garret. This is what we assumed during the 1968 research for the Lobby stair.

Since that time some physical evidence has been observed which leads one to conclude that Edmund Woolley did not connect the Lobby stair to the garret, but continued to use the old 1730's garret stairway.

At the head of the Lobby stair a remarkable amount of Woolley's 1750's "Dormer" between his new tower and the main roof still exists. Below the dormer, and the reason for its existence, is a plaster walled enclosure at the head of the Lobby stair. At the south wall of this enclosure is a tall doorway leading into the steeple. This opening has its 1750's raised panel jambs and head. At the north wall of the enclosure is the present small doorway into the garret. To make this doorway, a portion of a 1730's roof purlin was cut away.

Section B of 391/94000-17A shows the enclosure west partition is original, composed of 1750's vertical boards with a lath and plaster face. The northwest corner board is open to view and can easily be examined. When installed, this board was notched with a diagonal cut made apparently to fit around the above mentioned 1730's canted roof purlin. Thus, the purlin was intact when Edmund Woolley installed the Lobby stair and walled its enclosure, thus Woolley could not have put a door through to the garret. Furthermore, the board prior to being notched could never have co-existed with the cut off purlin, as the remaining purlin tenon, in its mortise, projects into the board alignment (see accompanying overlay sketches of photographs 157.5364-5 and 157.5367).

Again referring to 391/94000-17A, section B, one might ask, why did Woolley set the enclosure north partition so far north? Woolley apparently placed this stud lath and plaster partition so that the studs would seat on the upper surface of the canted 1730's roof purlin.

Referring to Section C, Detail B/1, and Framing Plan 2 of 391/94000-17A, in creating the top landing in the 1750's, one might also ask why were the 1730's floor joists not cut back flush with the above north partition? Woolley probably wanted to reduce the span of these cut down smaller members.

And if Woolley had been opening a doorway into the garret, wouldn't he have made its exterior face at least of equal design hierarchy to the paneled jamb doorway leading to the tower? The opening has no evidence of any refinement.

In his building account (Norris Papers, H.S.P.), Woolley made no mention of connecting his new stair to the garret. He merely wrote: "adding thereto with stairs leading to the State house flat..." We assume that "flat" in this instance means the apartment created at the first level of the tower above the Tower stairhall. This apartment, i.e., flat, if you use the Oxford unabridged dictionary definition, probably was meant to be occupied by State House caretakers..Here Woolley built domestic and architectural features. Not only was it entered by a paneled door, but two fireplaces were built into the exterior wall, and the stair leading yet higher was built by Woolley with square newels, straight rail, and turned balusters.

We conclude that Woolley built the Lobby stair to lead to the tower only.

Evidence for Later Connection of Lobby Stair to Garret and thus later Abandonment of 1733 Closeted Garret Stair

Documentary evidence suggests that the Lobby stair may have been made to connect to the garret sometime between the 1750's and 1774. A 1774 description of the State House (Pennsylvania Magazine of History and Biography, Vol. XXIII, 1899, #4, pp. 417-419) says of the Lobby stair "...a handsome staircase which leads up to the third story of the steeple, and cock-loft [garret] of the house, which extends the whole length and breadth of the building..." This is a very specific description indicating the Lobby stair led to both the garret and steeple.

In 1816 C.W. Peale in listing room sizes and gas fixtures in his museum dimensioned the southeast and southwest rooms both as "40 ft. x 20 ft." (CWP to James Monroe, 1816, Peale Letterbooks, XVI, pp. 147-8). Thus the 1730's garret stair may not have been included in the southeast room at that time.

The c. 1824 plan of the State House (Philadelphia in 1824, facing p. 133, also p. 32 of Historic Philadelphia, Am. Phil. Soc. vol. 43, Part I, Transactions, 1953), does not show the 1730's garret stair.

And in 1844 the Franklin Fire Insurance Company (Survey 5044, Book 31, Hist. Society of Pa.) says: "The second story is in 4 rooms and Entry...A flight of open newell stairs up to the attic or garret which is rough floor'd, heavy moulded handrail & turned ballusters,

panneled wainscoting in the Entry..." Again, the Lobby stair is said to connect to the garret.

All of the above documentary references indicate that the Lobby stair was connected to the garret by 1774. But physical evidence related to the 1730's garret stair indicates that even though no longer needed, this early stair, or at least its partition, was not removed that early.

Physical Evidence for Removal of Garret Stair Partition by

Referring to photograph 157.2326 which looks up to the underside of the garret joists above the location of the 1730's closeted garret stair, clearly visible is evidence that the garret stair partition remained in place at least until that time when the ceiling was furred down. Confirming this is the clean bottom surface of the joist which was above the southeast room west plaster cove. (As plaster coves were applied to curved ribs that bridged between the ceiling flat and the wall surface, at least one joist had no ceiling attachment.) If the partition was removed when no longer needed, it would have necessitated a rearrangement of the southeast room ceiling and coves. The flat ceiling would have been extended westward, thus all the joists would have plaster and lath evidence, and would not have remained clean and unused, as the one joist is.

This poses the question, when were the second floor ceilings furred down? We know in 1829 Architect John Haviland included in an "Estimate...cost of altering the present rooms...making good coves and plastering ceiling..." (Haviland MSS, vol. 2, Rare Book Room, University of Pa. Library). And as late as the 1844 Fire Insurance Survey quoted above, the second floor is described as having "small coved ceilings." Thus the small coves could have remained until the 1854 major renovations. It is also possible for most of the ceilings to have retained their coves, but not necessarily all.

When the southeast room was divided into two rooms in 1828 this alteration could have included the removal of the 1730's stair partition. We know that the ceiling of the newly created room was furred down. The new room was "partitioned off with Sap Boards planed & groved - & a ceiling of boards - raised about - 12 feet from the floor..." (Phila. Contributionship Survey #3795, Jan. 1, 1828). There is some, but slim, evidence at the west end of the southeast room which places the new lowered board ceiling. One nailing block is recorded (drawing 391/94000, sheet 5) about 12 feet from the floor between the west window and the 1730's stair stud partition.

Thus if the 1730's coved stair partition was removed in 1828 the furred-down board ceiling would have kept the joist above clear of plaster. But with only a 12 foot high ceiling the old cove could

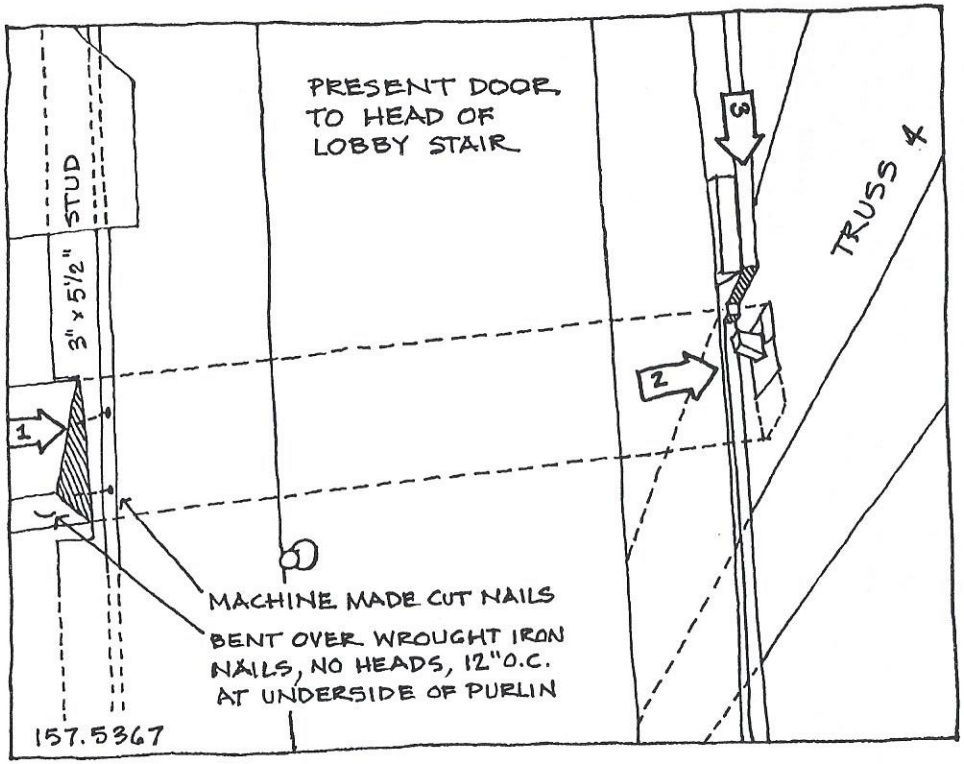
have remained undisturbed above. We have to conclude that the coved stair partition could have been removed as early as 1828, but it was definitely removed by 1854.

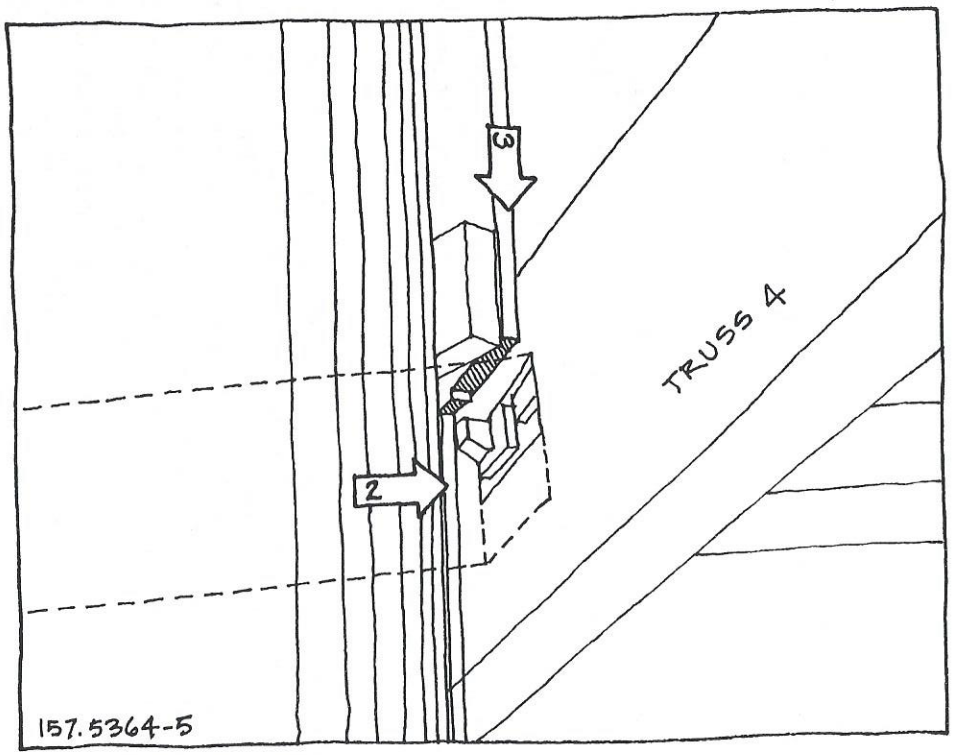
Postscript

Two items of evidence should at least be recorded even though they do not outweigh the above likelihood that the Lobby stair led to the garret as well as the steeple as early as 1774.

In 1818 a fire insurance survey (Phila. Contributionship, Survey NO. 3795, Survey Book 1795-1824, p. 218) describes the Lobby stairs "...round newel stair case from the 2nd story into the 3rd story of the steeple house.." Not mentioning a way from the Lobby stair into the garret.

The second item worth mentioning goes back to the physical evidence shown in NPS negative 157.5367 and its overlay sketch included here. We wrote earlier about the 1730's purlin not being cut off by Edmund Woolley. But we did not mention evidence of a stud which supports the cut off remainder of this canted purlin. See arrow 1 which shows a stud notched around the end of the purlin. The stud is fastened to the purlin with machine made cut nails of the post-1830 period implying that the purlin was cut off at that late date (see Lee H. Nelson, "Nail Chronology s air aid to dating old buildings.," Technical Leaflet 48, American Association for State and Local History). From previous discussions this stud may have been added c. 1854 as part of the new stair arrangements of that major second floor renovation, the cutoff purlin having been supported by other means earlier. Indeed, there are bent over wrought iron nails on the underside of the canted purlin, no doubt left from 1750's studs that created the sloped lower portion of the north partition at the head of the Lobby stair (see drawing 391/94000, 17A and negative 157.2390). These studs would have been able to carry the weight of the purlin when it was cut off.





ARROW 1 POINTS TO REMAINDER OF 1733 PURLIN WHICH WAS CUT OFF FOR DOORWAY CONNECTING GARRET TO LOBBY STAIR. ARROW 2 POINTS TO REMAINING MORTISE AND CUT-OFF TENONS FROM 1733 PURLIN WHICH ARE STILL LODGED IN TRUSS 4. ARROW 3 IS ON THE EDGE OF A 1750S PARTITION BOARD. A SLOPED CUT IN THIS BOARD WAS MADE TO FIT THE CANTED 1733 PURLIN WHEN IT WAS STILL IN PLACE. THUS WHEN 1750S PARTITION INSTALLED PURLIN WAS STILL IN PLACE. AS REMAIN'G TENON PROJECTS INTO ALIGNMENT OF 1750'S BOARD (ARROW 3), BOARD COULD NOT PASS IN FRONT OF CUT-OFF TENONS. THUS DOORWAY COULD NOT HAVE BEEN INSTALLED IN 1750S. BENT-OVER WROUGHT NAILS ON UNERSIDE OF 1733 CANTED PURLIN (3 NAILS 12" O.C.), INDICATE 1750S STUDS FOR SLOPED PORTION OF 1750S NORTH PARTITION AT HEAD OF STAIR. THESE STUDS COULD ALSO HAVE SUPPORTED PURLIN AFTER CUT OFF FOR DOORWAY. THE MACHINE MADE CUT NAILS NOW FASTENING NOTCHED STUD TO CUT-OFF PURLIN INDICATE WORK AT THIS DOOR PROBABLY C.1854 WHEN LOBBY STAIR MOVED TO TOP LANDING OF TOWER STAIRHALL.

PHB JAN 1991

Appendix H
The Second Floor Windows

P. H. Batcheler 1991

The windows of the State House are proportionately large, answering the need for daylight. Their frames are made of "larger stuff than is common." Thus Edmund Woolley as a member of the Carpenters' Company would have been able to "add to the price in proportion" (The Carp. Co. ---1786 Rule Book, annotated by C. E. Peterson, 1971, p. 9).

All the mortise and tenon frames in the building are original, but at the second floor even more survives: the sash, interior casing, sills, splayed jambs and decorative double architrave trim. Restoration repairs have, of course, been made, and during this process these parts were scrutinized. Indeed, the room paint colors were found on this original woodwork (see Appendix A).

The second floor windows originally had fixed upper sash, the lower sash hung with line, weights and pulleys. The sash are of wood assembled with mortises, tenons and pins with vertical applied muntin moldings fastened with handwrought finish nails and glue (see Accessions 90,147 and 1488, and drawings 391/94000, sheets 12-15). The windows remained with single hung sash until at least 1844 (see Franklin Fire Insurance Survey 5044, Book 31, Hist. Soc. of Pa., Appendix N).

Edmund Woolley in his account for the 1750s addition of the tower includes "hanging ye upper front sashes anew in Long Gallery," and Hugh Roberts at the same time supplied hardware including "sash line and sash pullies." These items are mentioned here as there have been others who have believed the sash of the State House originally had lead cames. This belief started when John Fanning Watson in his publication Annals of Philadelphia and Pennsylvania in the Olden Time, Philadelphia 1842, quoted a Thomas Godfrey bill for supplying "glass and lead"..."170 pounds." We believe this "lead" referred to lead weights used to counterweight the large and heavy wood sash. It is clear from the surviving eighteenth century fabric, and the fact that Woolley in the 1750s was hanging the sash "anew", that the present sash must date from the 1730-40s period.

Showing how long it took to complete these important building elements, the Pennsylvania Archives Series VIII, vol. III, p. 2682 has a committee report of the summer of 1741 that says: "the sashes were made, and the glass ready to put in ..." and they "would have the lower rooms immediately glazed ..." In 1745 the series VIII, vol. IV, p. 3077 showed that a Thomas Ellis submitted an account for glazing.

The interior windowsills have survived because they have been protected by sills added above them. We think these added sills

were first applied for the 1854 renovation. Photograph negative INHP 18460, taken in 1896 when the City was making an engineering study of the second floor structure, shows the 1854 windowsills returning upon themselves at the outer limits of the window, the original chair rails having been removed. The photographs taken when the subsequent 1898 restoration was being dismantled show that these 1854 sills were apparently reused, their outer returns cut off to form butt joints with 1898 inserted restoration chair rails (see negatives INHP 18932 and 18932-C). You can also see the original sills under these added sills. The AIA 1924 restoration also applied new sills which continued the protection. Thus in 1967 when the National Park Service removed the 1924 sills the original sill boards remained. Their condition is described on the NPS evidence drawing, 391/94000 sheet 2: they "have been notched, shaved down and otherwise damaged when later sills were applied over them. Sills are secured to nailing blocks with w.i. nails and contain vestiges of the early paint layering," (see Appendix A). When the higher later sills were installed the window splayed jambs and architrave trim were cut short.

The National Park Service has now protected the original sills by a lamination of polyethylene, mastic, and a sheet of 1/4" plastic laminate and paint. The missing chair rails have been reconstructed to meet this new thinner protective cover (see photos 157.2408-13 which show this process). The restored windows were recorded prior to painting, in photograph 157.2383, to illustrate original versus reconstructed elements.

APPENDIX I

The Second Floor Chair-rails, Baseboards and Cove Ceiling Moldings

P. H. Batcheler 1989

Drawing 391/94000, sheet 12, shows an important piece of second floor original wall plaster that survived. Its area spanned from the bottom level of the chair-rail to the top of the baseboard at the west jamb of the Long Gallery center north window.

The bottom edge of the chair-rail was distinctly defined by a sharp ridge of plaster where the plaster met the wood rail. This measurable line, when combined with the original window sill above, gave the full vertical height of the chair-rail section (5 7/8"). The vertical height for the baseboard, although less distinct, was 5 3/8" - 5 3/4."

We did not find, nor did we expect to, the section profiles for either the chair-rail or baseboards. But from the survival of wrought iron anchors and hand wrought nails, we determined the structural section of the chair-rail (see sketches here and drawings 391/94000, sheet 13 and sheet 52). The profile of the moldings was based on the baseboards and chair-rails at the Tower Stairhall Venetian window.

Lee H. Nelson, in his Log, Vol. 1, July 1961 - Jan. 1963, August 14, 1962, recorded the evidence which proved that a cove existed next to the flat ceiling.

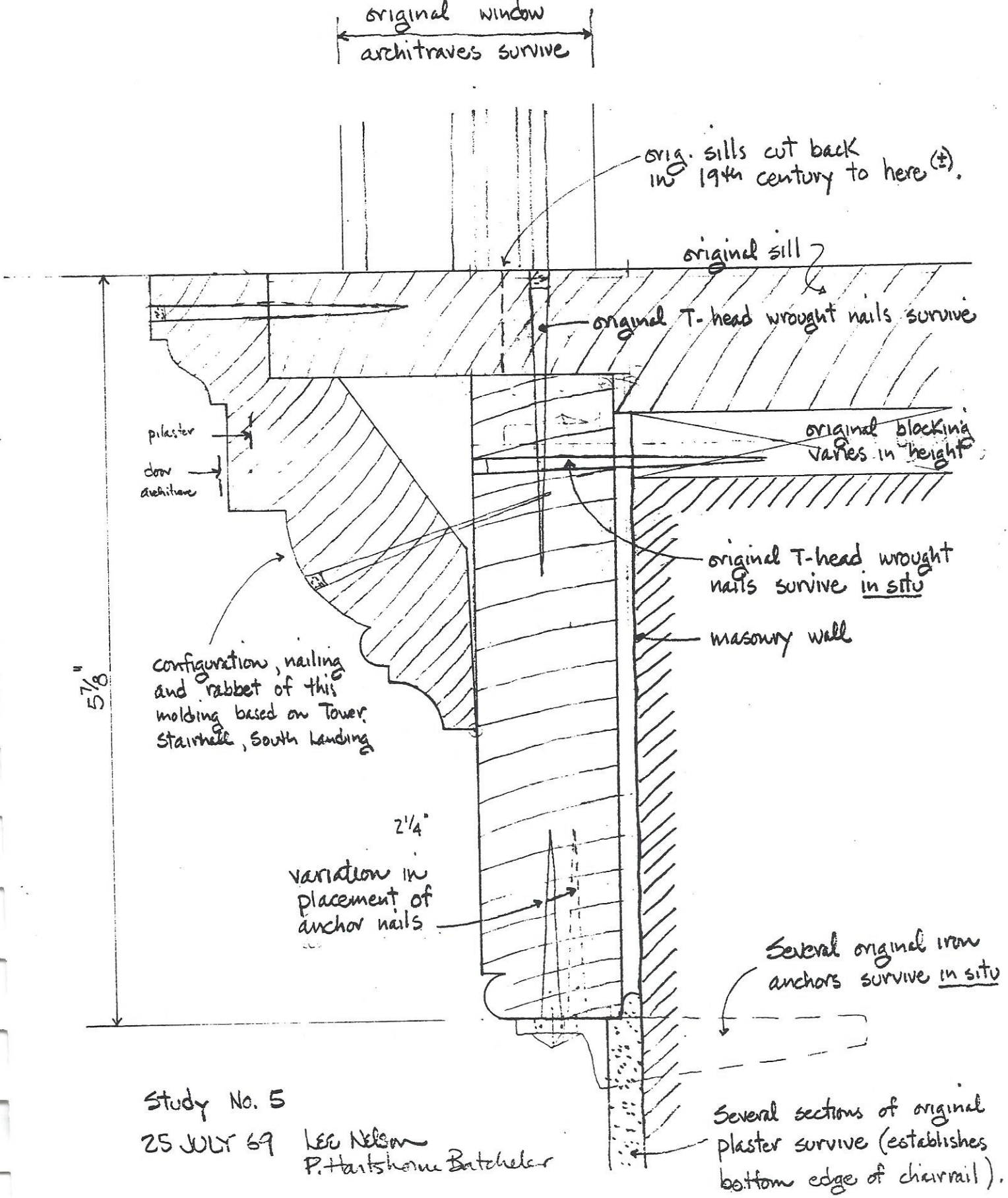
> "With respect to architectural research, there is absolutely no doubt now that the long gallery on the second floor had a cove ceiling. The type of physical evidence is very similar to that in the Assembly Room. That is, there was a cleat that ran around the room which was nailed to the bottom of the joist and the large beams, and several of the large hand-wrought nails are still in place that held that cleat, and there is no plaster evidence within the area occupied by the cove ceiling. In the areas where the contractor has removed the cove ceiling from the walls of the second floor, there are wooden nailing blocks visible in the brick work very similar to that which we found in the Assembly Room".

The cove ceiling heights and projections are all based on the absence of plaster stains on the brick walls and on the undersides of the ceiling framing (see drawing 391/94000, sheet 55, oversize). The heights include however the vertical dimension of the sidewall corona and crown moldings. And the projections likewise include the widths of the wood transition molding at the edge of the flat ceilings. The dimensions of the coronas and crowns were a function of the end wall entablature indications. The cove transition moldings were all conjecture, designed to bridge the space between

the flat ceiling and evidence of wood hangers which received the soffit and fascia moldings of this transition molding (see drawing 391/94000, sheet 55 & 55A). The dimensions of the reconstructions were all modified slightly to avoid conflict with new structural members such as girder hangers.

Ind. Hall 2d Floor Chairrail at Window Sills

Height and basic construction based on architectural evidence.
Configuration based on Tower Stairhall (south landing), scaled down.

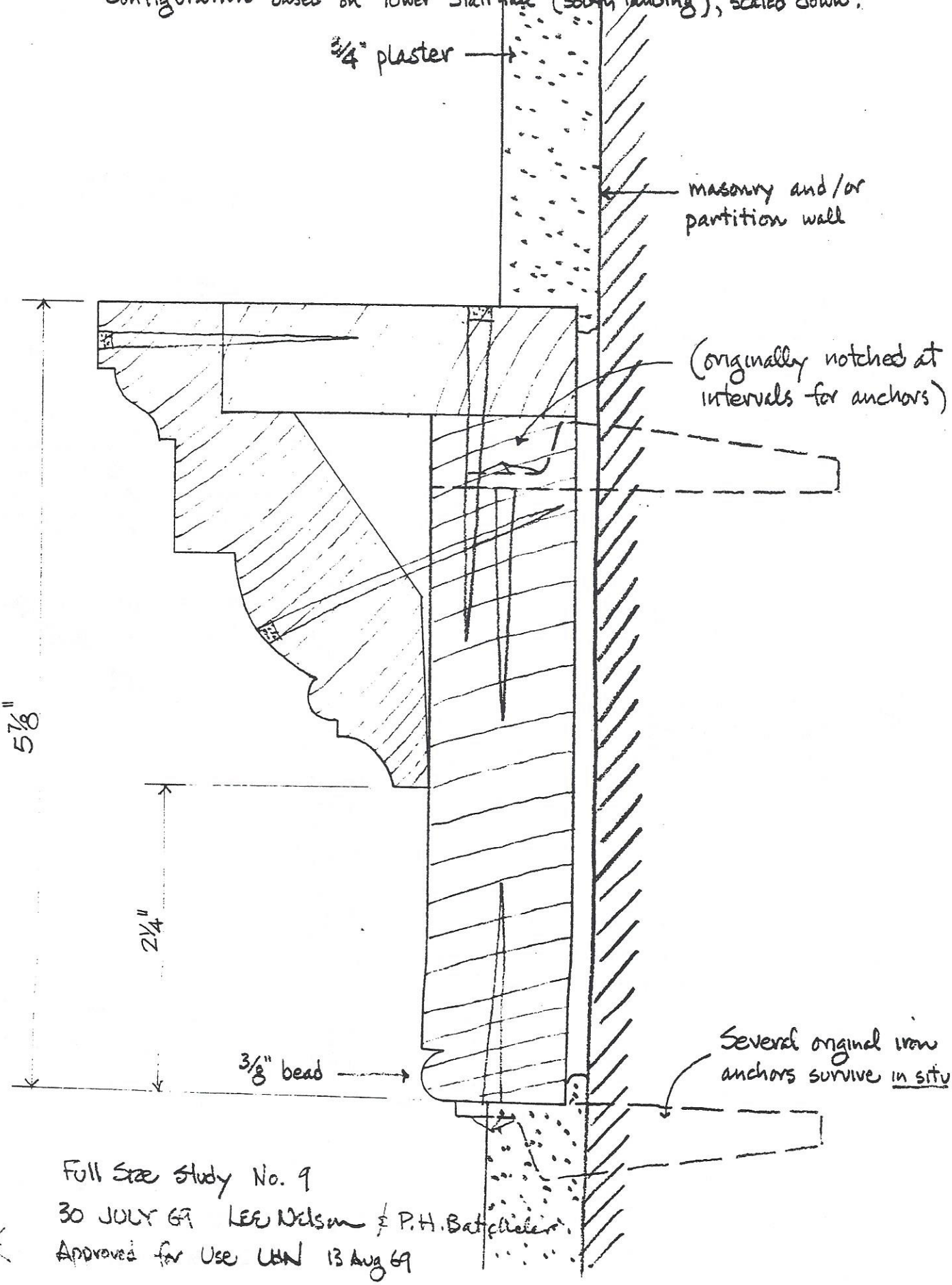


Study No. 5

25 JULY 69 Lee Nelson
P. Hartshorne Batcheler

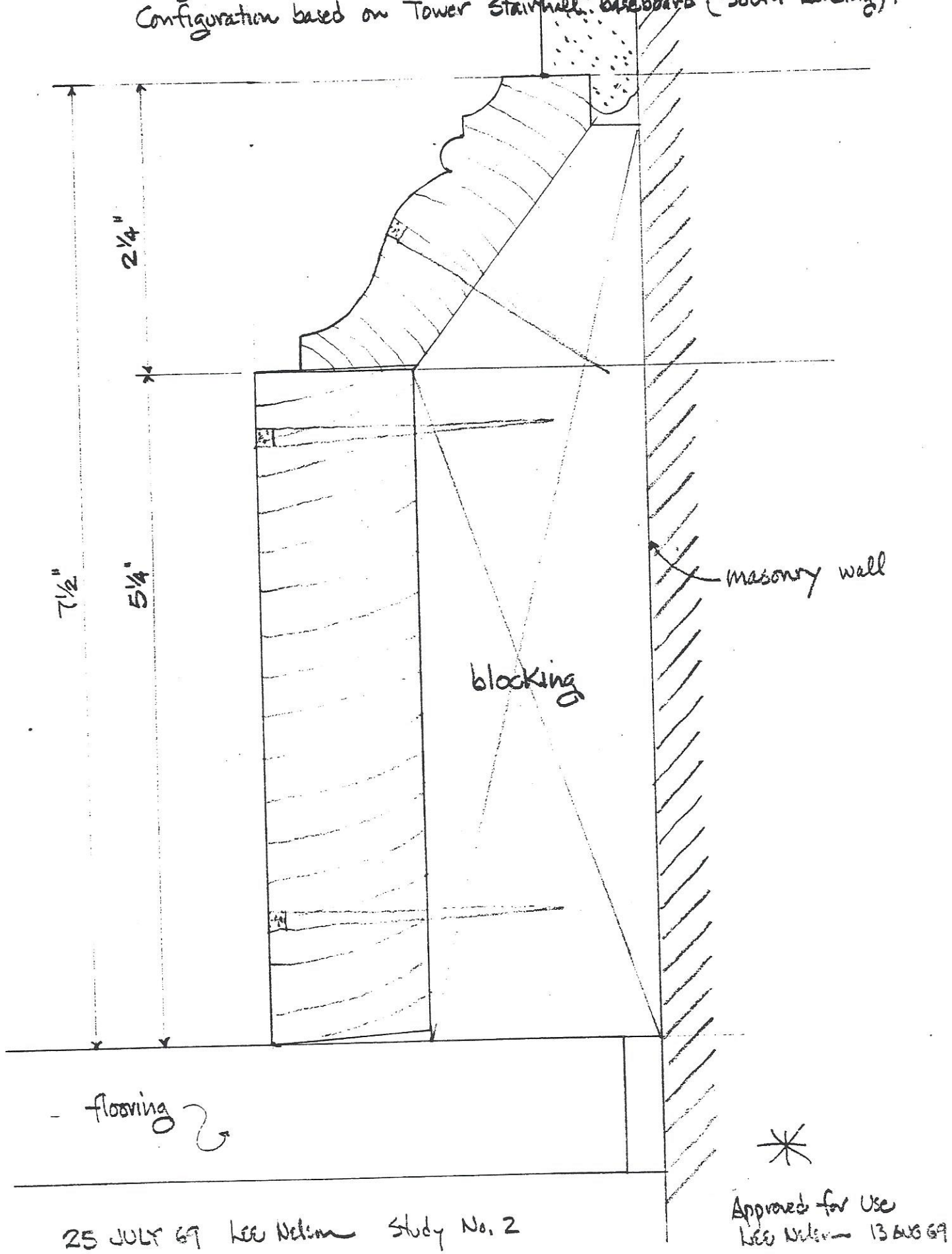
Ind. Hall 2d Floor Chairrail at Masonry and/or Partitions

Height and basic construction based on architectural evidence.
Configuration based on Tower Stairhall (south landing), scaled down.



Full Size Study No. 9
30 JULY 69 Lee Nelson & P.H. Batchelder
Approved for Use UHN 13 Aug 69

Ind. Hall - 2d Floor Baseboard Design
Height based on plaster edge (see Arch. Evidence Dwg. N. wall E end).
Configuration based on Tower Stairhall baseboard (South Landing).



25 JULY 69 Lee Nelson Study No. 2

Approved for Use
Lee Nelson 13 AUG 69

APPENDIX J

The Second Floor Flooring

P. H. Batcheler, 1989

1896 photographs INHP-18460, A, B & C show the original flooring while still in situ. It had been left in place under the furred-up flooring of the Common and Select Councils that occupied the space from 1854 - 1896. These 1896 photographs were made to record the sagging floor condition for a structural engineering survey being made by Wilson Bros. & Co. (see letter to A.S. Eisenhower, April 25, 1896, H.W. Seller Collection, INHP cat. 4301). In the T. Mellon Rogers restoration that followed in 1897-8 the old floor was covered by sleepers on which were nailed new narrow boards. Architect Rogers was rather advanced in providing a railed off see-through panel so that the visitors could look down on a portion of the original flooring (see INHP neg. 7352). In the 1920s restoration all the flooring was taken up and new higher joists were inserted between the original to support a new random width floor. Those original boards in good condition were collected and laid in the southwest room regardless of where they originally came from. The National Park Service took up and discarded the 1920s flooring, and reused most of what survived of the original boards in the south half of the southwest room. The rest of the original boards have been accessioned to the INHP Museum Collection, Accession 1554, 2016, 2384 & 2409.

The original flooring was random 8"-14 1/2" wide, 1 1/4" thick, long leaf yellow pine. A sampling was photographed to show the cross section grain pattern, density and thickness (neg. 157.1783). The 1730s boards were laid with a tongue and groove joint, face nailed. The 1750s flooring had butt joints and was also face nailed. On the undersides of the boards most of the original flooring has plaster stains left from the plaster coats applied on lath nailed directly to the boards. This coating provided a dust and sound barrier and would have provided a measure of fireproofing.

The flooring was all laid running east-west. The framing to which it was nailed was organized to run north-south. The floor board widths were indicated on the top surfaces of the framing by either water damage (from being washed) or dirt deposits. Widths were also indicated by the nail hole pairs resulting from the face nailing (see photographs 157.1795, 157.1803 and 157.1847 for typical evidence).

The butt joints were characterized by considerable dirt and water damage at the joint locations, and the face nails were located one inch in from each edge. In contrast the T&G evidence had less water damage and less dirt at each joint, and to prevent damage to the T&G joints the face nails were indented 1 3/4 inches.

The floorboard widths were all plotted by this evidence. (Photographs 157.1794, 157.1801 and 157.1811 show areas of the floors with the joints indicated by string lines or drawn lines.). Drawing 391/94000, sheets 26, 27, 28 and sheet 67 show the pattern for the entire second floor.

The very reason that so much evidence was found on the framing was one of the factors which determined that the structural rehabilitation should retain as much of the original framing as possible. New joists were installed in between the old joists at a slightly higher level. It is upon these that the reconstructed flooring was laid. The new floor pattern therefore could not exactly reflect the lengths of the original flooring as the new boards had to end on the new joists. But the reconstructed flooring reflects as closely as possible the original boards widths and placement.

The kinds of nails used to apply the original boards were handwrought L-head 3"-3 1/2" long brads, countersunk with the length of the head running with the wood grain. The nails used to apply the restoration flooring were modern cut nails with their common heads modified to resemble the heads of the hand wrought nails. The boards were pre-drilled.

The process of applying the original flooring is also shown by evidence spotted on the joist tops. Photograph 157.1803 shows chisel marks made when boards were forced tight against each other before nailing. Or, a larger leverage hole was made to receive a peg. Wedges were driven between the board edges and the peg and thus forced the boards to shift sideways. These leverage holes show that the flooring was laid starting along the north wall and working southward.

As said before, the floors were washed. There is ample written documentation supporting the physical evidence of this treatment. The restoration yellow pine floor has been left unfinished and is washed at least once a year to keep it light (see the 1822 Titian Peale water color of the Long Gallery, Detroit Institute of Arts, INHP neg. 7344).

The new flooring was all laid with tongue and groove joints. When the boards were delivered they were machine milled. The NPS carpenters hand planed their surfaces to remove the mill marks. This was very difficult work and eventually the milling marks were sanded off with belt sanders and then lightly hand planed to establish the correct surface appearance. The installation of this flooring was a noisy operation and the whole process took considerable time.

But the main problem was in acquiring the proper lumber. The flooring lumber for the second floor was purchased along with that for the Assembly Room in 1965. It took the cooperation of the

Southern Yellow Pine Association to locate a supplier that could begin to stock what was needed. The procurement of this special wood necessitated several trips to the supplier in South Carolina and the millwork contractor in Easton, Pennsylvania.

The specification intent for this lumber was: Clear Long Leaf Yellow Pine; 12 % moisture content, 5/4" thick, minimum six annual rings per inch; the color of the summer wood and spring wood must be distinct; boards 10 1/2" wide (or less) shall be all heart wood; all boards 10 1/2" to 14 1/2" shall have the sap wood limited to a strip not exceeding three inches wide along one edge of each board, or a sap strip on each edge, the total width not exceeding three inches. Milling plane blades to be properly sharpened and set to prevent all machine roller marks, or, alternatively, the machine roller marks are to be removed by belt sander, and hand planing is to give the surface the correct historic appearance, done to the approval of the NPS. Final board selection and acceptance by NPS shall be made when boards are finish planed. Boards on delivery shall be color coded on ends or bundled according to width and length. Upon delivery boards are to be stacked and stickered and the windows kept open if stored inside." Memorandum February 8, 1965 written by Lee H. Nelson for Chief Architect, Eastern Office of Design and Construction, addressed to Superintendent INHP.

The following memoranda tell of the NPS experience with the flooring subsequent to its 1960's restoration, and recommendations for prolonging its life.

United States Department of the Interior
NATIONAL PARK SERVICE
INDEPENDENCE NATIONAL HISTORICAL PARK
313 WALNUT STREET
PHILADELPHIA, PA. 19106

IN REPLY REFER TO:

November 24, 1987

H30(INDE)

Memorandum

To: Superintendent Cawood

From: Historical Architects, INDE

Subject: Report on Condition of Independence Hall Wood Flooring and Recommendations to put Matting in the Visitor Paths

Two areas of Independence Hall have original wood floor boards: the second floor Governor's Council Chamber and the top landing of the Tower Stairhall. The rest of the present flooring dates from either 1951 when the main stair slip-in-treads were installed or 1965-9 when the balance of the wood flooring was laid. See Appendix A for a detailed history of the Independence Hall flooring.

The 1960's major restoration flooring reproduced the original in both material and joint pattern. Unfortunately the choice of material in the 18th century is not appropriate for the heavy use of the 20th century visitor traffic.

Recognizing this, in 1966 and 1968, carpeting was laid in the visitor areas of the Assembly Room and Supreme Court Room. Replacements of even these sacrificial layers have taken place many times since. To protect surviving original floor areas carpeting was laid in 1977 over the original and new flooring in the Governor's Council Chamber and vinyl matting was laid on the original flooring at the top landing of the Tower Stairhall. Matting was chosen here to have a thinner layer and thus avoid a tripping hazard.

The remainder of the second floor flooring has been left bare thinking that the public would spread out and cause little wear. Unfortunately this has not been the case. Thru this Lobby and

the Long Room doorway visitor wear is concentrated and the boards are deteriorating. In addition the stair south landing is showing considerable wear.

As you know, the INHP Restoration Architects have been concerned about this condition. Either protection or eventual replacement are indicated, and the consequences of the latter must be considered.

We are not recommending a policy of replacement of worn boards for several reasons. First of all it is increasingly difficult to get boards of the needed quality. (An RFQ advertised even through the Southern Pine Inspection Bureau brought in only two quotations, neither of which completely met our specification. Each supplier we spoke to during the procurement process made it clear that the wood we need is becoming scarcer each year.) But more important is the impact of replacement work on adjacent original woodwork, on the framing system, and on the public touring the building.

In the Tower Stairhall, original woodwork lines the outer walls adjacent to the stair landings. Every time floor boards are to be taken up, the baseboards must be removed. The crown moldings of these, which are original, would suffer from being removed and reapplied, and the original stiles and rails of the paneling would receive more and more attachment holes as time goes on.

The floor joists which support the flooring can only take a limited amount of nailing before they will no longer hold - that in if we wish to maintain the original floor board widths and nailing pattern. After the joists have outlived their nail holding ability "cats" would have to be attached to the sides of the joists and the nailing pattern shifted to these. The latter can only be conveniently done if all the flooring is taken up at once, such as it was for the 1960's restoration.

All such replacement operations whether in limited areas or extended will cause interruptions to the building's interpretation. The removal and relaying of floor boards is extremely noisy, not to speak of the need to completely close off the areas for considerable time.

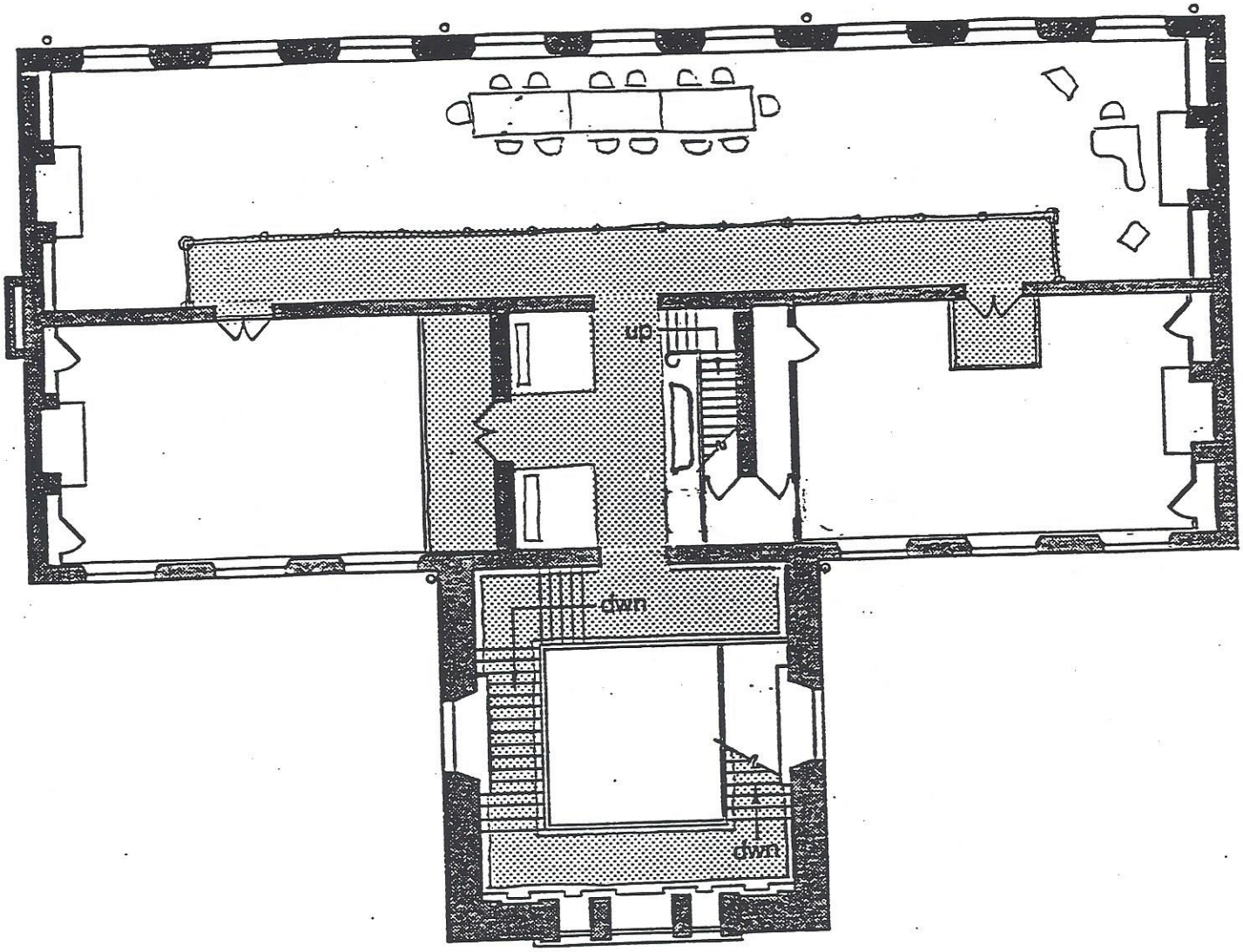
What we are recommending is to lay dark brown vinyl matting at the second floor according to the attached plan. IN&VS has agreed to this system of laying matting in the visitor path as per the attached letter. In the Long Room the visitor would still be able to view large areas of the yellow pine flooring. If you wish to see what the matting looks like, it is now installed at the top stair landing.

We would like to act on this recommendation as soon as possible now that the Bicentennial activities are waning. The winter months will also give IN&VS a shakedown period to get used to the new visitor paths.

Please let us know if we may proceed to install the matting. We would be pleased to meet you in the building to discuss this further if you'd like.

P. H. Batcheler

W. D. Brookover



Visitor Areas
Assembly Room: 9' × 42' = 378 sq. ft.
Long gallery with carpet area: 6' × 84' = 504 sq. ft.

N

SECOND FLOOR PLAN
INDEPENDENCE HALL - 0101
Independence National Historical Park

Scale: 0 5 10 15 20 25 30 feet

4/1987
~~1985~~ 8/198

History of Wood Flooring in Independence Hall

1730 - 1750	Long leaf yellow pine boards 8"-16" wide laid in Assembly Room, Supreme Court Room, Tower Staircase and Second Floor Rooms.
1850's	Assembly Room tile floor laid - probably took up original floor boards, cut in pieces, laid between joists to support mortar bed of tiling (this was done in Carpenters' Hall in 1870). Second floor rooms had carpet laid for Select and Common Councils.
1873	Supreme Court Room tile floor laid as above in Assembly Room.
1896 -8	Assembly Room - all original framing removed, new joists and beams and new narrow board flooring laid. Second floor original boards uncovered for architectural research. Sleepers laid atop original flooring and new narrrow board flooring laid on sleepers.
1917	Assembly Room and Supreme Court Room narrow flooring removed and new random width wide boarding laid. Tower Stairway - The treads and risers had been replaced probably several times thru the 19th c.
1920's	Second Floor All the original boards were removed and most discarded; the best samples were laid in the Southwest room. All floors painted dark brown.
1951	Tower Stairway - new slip-in treads were installed.
1955	" " - rubber treads installed.
1960	" " - rubber treads removed and paint remove
1961-4	All flooring lifted to examine structural framing and to find evidence of original floor board widths and placement.
1965-9	New yellow pine flooring laid according to original evidence. Assembly Room 1965; Supreme Court Room 1968; Tower Stairhall 1967-8; Second Floor 1969 and some of the original floor boards were laid in the SW room.

1976 Rubber matting laid over original floor boards at Tower Stairhall top landing.

1977 Carpeting was laid in public area of second floor sw room to cover original boarding.

UNITED STATES GOVERNMENT

memorandum

DATE: March 26, 1987

REPLY TO ATTN OF: Chief, I&VS

SUBJECT: Protecting Independence Hall Floors

TO: Historical Architect

Thanks for the opportunity to review your proposals regarding protecting Independence Hall.

Our first reaction is that we would be reluctant to see the Tower stairs and 2nd floor floorboards covered. Not only would we be adding another intrusion to the historic scene, but we would be further limiting visitor access. However, we certainly can see your point regarding the need to extend the life of the wooden flooring so that we can limit the number of times it must be replaced.

If management should decide that some type of floor covering is needed, we would like to see it limited to visitor walkways rather than be wall-to-wall. Also, we would like to see matting used, rather than carpeting. Our reasoning is that matting has a more temporary and utilitarian look than carpeting.

Another point that we would like to make is that, no matter what is decided, we don't see any need to open the west door to the Committee Room. Visitors seem to have adequate access at the present time, so we think we can continue with using the north door only.

Thanks again for getting us involved. We wish you luck in solving this problem.

Kathleen L. Dilonardo

cc: John Osaki
Russ Smith

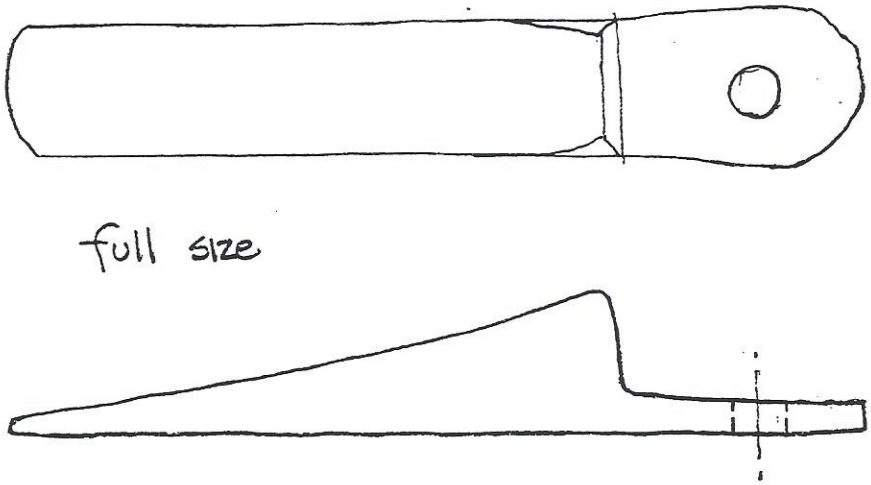
OPTIONAL FORM NO. 10
(REV. 1-80)
GSA FPMR (41 CFR) 101-11.6
5010-114

APPENDIX K

Second Floor Hardware Schedule
May 1969 --See also Drawings 391/94000, sheet 41, 45 and 46
(A) = Antique, (R) = Reproduction

Door Location	Hand	Thickness	Hinges	Lock or Latch	Misc.
Lobby - SW RM	RH-DBLE	2 1/4"	14" HL (R)	Brass case Knob Lock(A)	Foot Bolt
SW RM- Long Gal.	LH-DBLE	2 1/4"	"	"	"
SE RM- Long Gal.	RH-DBLE	2 1/4"	"	Iron Knob Lock (A)	"
SW RM- S.CL.	LH	1 1/4"	10" HL (R)	Iron Lock, Key only (A)	
SW RM- N.CL	"	"	"		
SE RM- NE.CL.	RH	"	"	"	
SE RM- SE.CL.	"	"	"	"	
SE RM- NW.CL	LH	"	"	"	Cyl. Lock with knob inside.
SE RM- Passage	RH	"	"	Iron Knob Lock (A)	
Lobby- Passage	LH	1 9/16"	"	Iron Knob Lock w/night bolt (A)	
Passage- Lobby Stair CL.	"	1 1/16"	8" HL (R)	Iron Lock, key only (A)	Cyl. Lock with knob inside.
Passage- Gar.St.	RH	"	"	Thumb Latch (R)	"
Lobby St.- Tower	RH	1 9/16"	10" HL (R)	Iron Knob Lock (A)	"

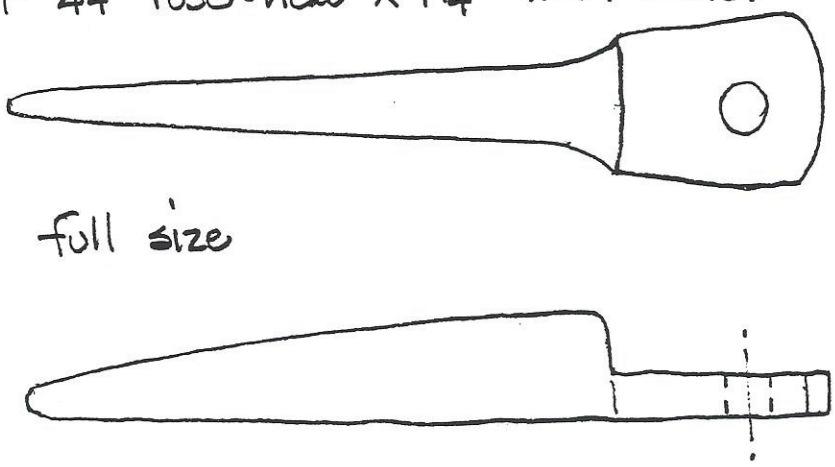
Note: All knobs to be brass, escutcheons to be oval brass. Fix all keys in closet locks. Cripple bolts of knob locks where modern cylinder locks to be used. HL hinges derived from original of Tower Stairhall, Cat. 7016. On reproduction pieces craftsman's stamp to be applied on backside.



full size

Type "A"
36 Req'd.
(for closet shelving)

All anchors to be hand-forged of wrought-iron, and stamped with maker's name. Also furnish a total of 44 rose-head x 1¼" wro't nails.



full size

Type "B"
8 Req'd.
(for fireplace wall paneling at ext. walls)

Independence Hall.
Iron Anchors Required for 2d Floor Restoration
(See INHP Museum Acc. No. 2383-9)

UHN 27 April 1970

APPENDIX M

Extent of Structural Alterations Needed in 1778-9 when the Second Floor East End was Made into One Large Square Room .

Penelope Hartshorne Batcheler, June 1992, in consultation with: Lee H. Nelson, AIA, and Structural Engineers Nicholas Gianopulos and Suzanne Pentz of Keast & Hood Co.

1733 Structural System

As a basis for understanding the structural changes needed in 1778-9 to make one large square room at the east end of the State House second floor, we should start with the structural system of the building as first built.

The 1730s master builders of the State House, Edmund Woolley and Ebenezer Tomlinson, said of this project "...the Work expected from them was heavy, and to be carried on in an extraordinary Manner" (Pa. Archives VIII, Series III, 2154). Indeed, they created some of the largest interior spaces in the colonies employing unusual structural methods, and as Lee Nelson suggests, they may have "lost sleep" over the project.

The gambrel roof of the State House was originally supported on braced arch trusses. (The term "braced arch" was coined by Lee H. Nelson in his article "Independence Hall: Its Fabric Reinforced," Chapter 15 of Building Early America, Charles E. Peterson, Editor, The Carpenters' Company of the City and County of Philadelphia, 1976.) The lower ends of the sloped chords of the arches curve downward similar to cruck construction. These members tenon into mortises in the bottom chords at the bearing points on the north and south exterior brick walls. The upper ends of the sloped members join a top horizontal chord in mortise and tenon joints, and these members are further braced by diagonal members let into the sides of the sloped and top members where they are fastened together with wrought iron spikes, creating a rigid triangle to brace the arch (see drawings NHP-IND 3211, sheets 1-12, sheet 10 attached).

The bottom chords are not continuous from north to south walls, partly because Woolley chose to work in oak and these 11"x 11" members could not be had in lengths sufficient to span the 40 foot distance between the bearing walls. The bottom chords were made up of two sections linked together with iron straps, which develop what Lee Nelson terms "tension continuity" in order, as Nick Gianopulos says, to act as a restraining tie to the braced arch.

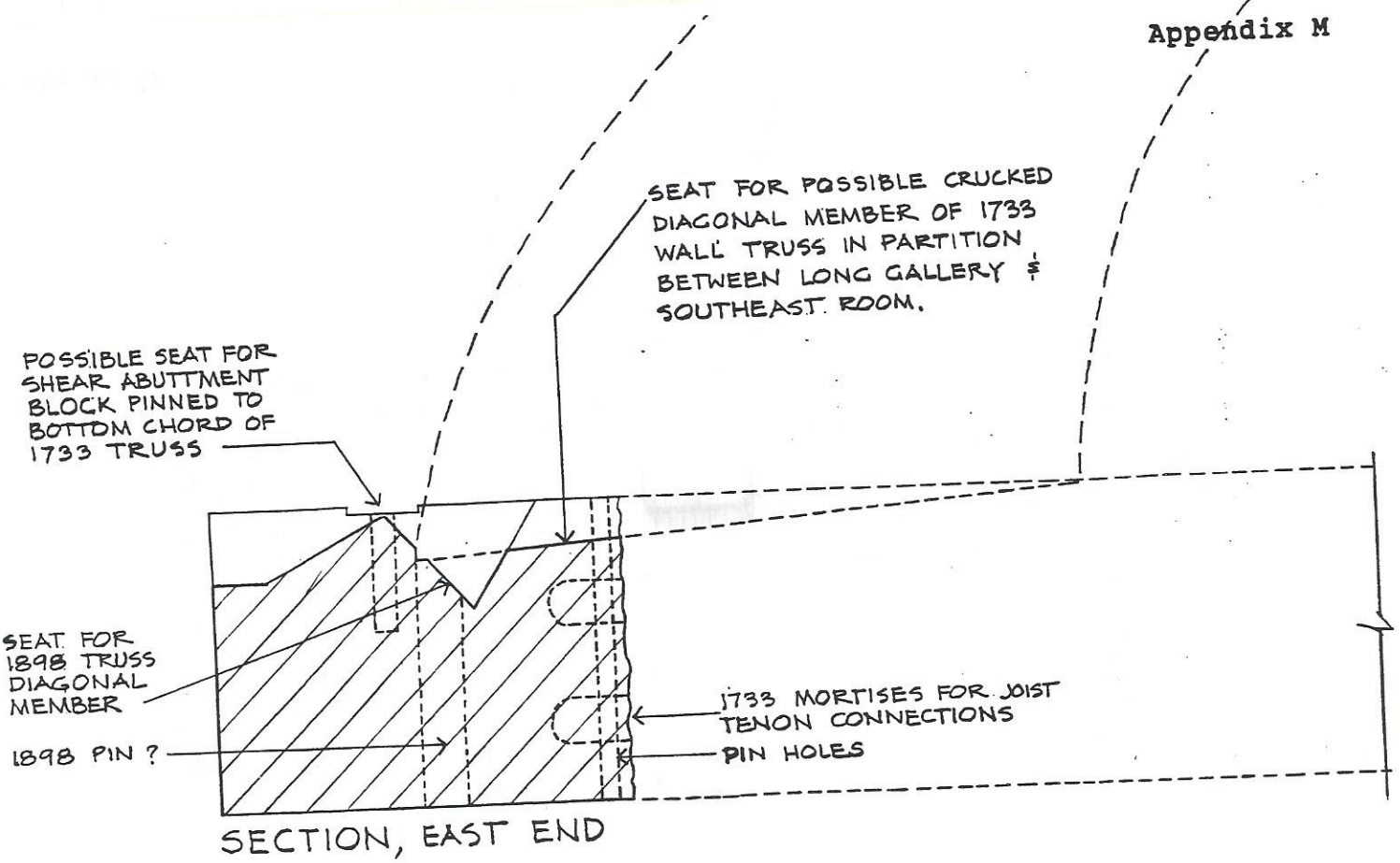
The bottom chords were made up of two sections also because they were part of the unusual garret floor framing system. This floor framing system was installed by Woolley and Tomlinson at the second floor as well. Lee Nelson has called this framing a "hand-in-hand"

system having "4 timber girders arranged so that no single girder spans more than two thirds the width of the room, with each girder interlocked at third points with other girders at right angles, thus forming the hand-in-hand design." The use of this design would certainly have been considered "an extraordinary manner" of framing, one with little precedent to give confidence. But according to our engineers Nick Gianopulos and Suzanne Pentz the hand-in-hand systems could have supported themselves at least.

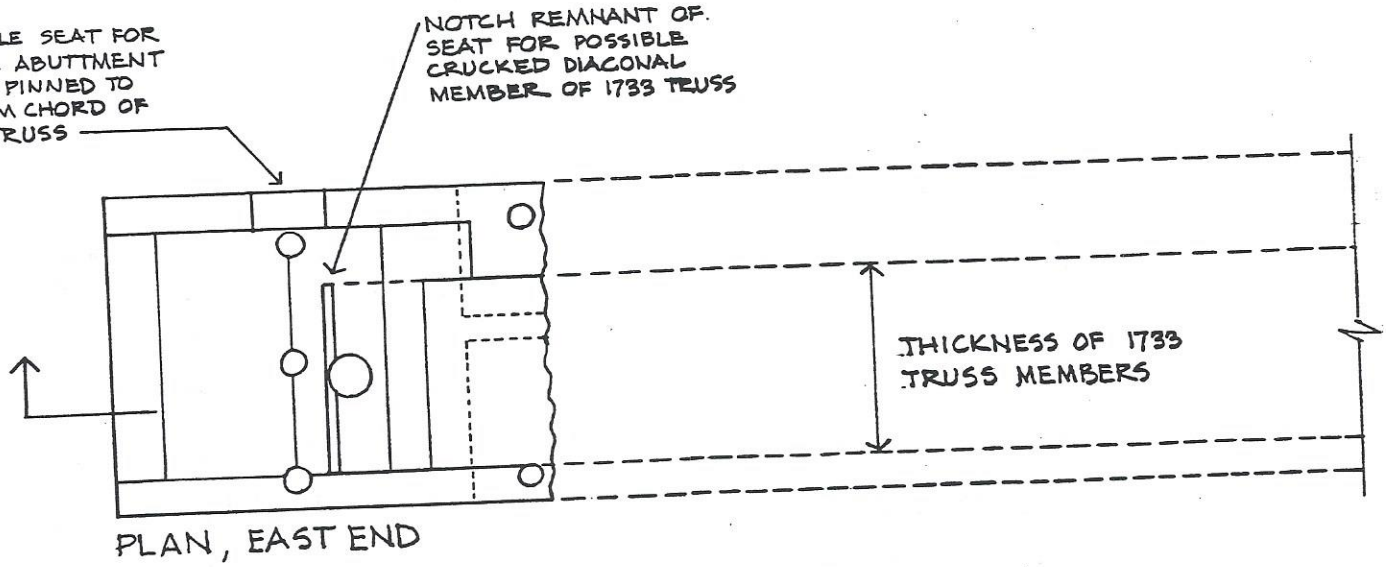
However at the second floor level, to supplement the floor framing, trusses were constructed within the east-west partitions between the Long Gallery and the southeast and southwest rooms. Drawings 391/94000, sheets 24-24A and photographs 157.531 and 157.5556, record the surviving four ends of the bottom chords of these wall trusses. Suzanne Pentz and the writer reexamined these bottom chord ends in 1992 to find evidence that, like the roof braced arches, the second floor wall trusses seem also to have had sloped chords with crucks at their bases. The 1730's second floor wall trusses were apparently also braced arches.

And, as in the garret, the second floor bottom chords were discontinuous. This time, however, the discontinuity was not due to the hand-in-hand framing as these bottom chords did not line up with the hand-in-hand members. The east-west bottom chords were made up of two 11" x 11" members in the outer thirds, and in the center third of the chord lengths a 2" x 11" plate was let into the tops of the north-south members. The tension continuity needed for these three-part bottom chords was developed by mortise, tenon and pin joints where the 11" x 11" chord timbers abutted the sides of 11" x 11" north-south members which intersected the bottom chords, and by dovetailing the ends of the 2" x 11" plates where they connected to the same north-south members (see attached sketch and photographs 157.550,.884,.885, &.1799). The mortise and tenon joints were reinforced by Woolley and Tomlinson with what Lee Nelson calls "bending stress straps". Nick Gianopulos suggests that these reinforcing straps also resisted the tendency for rotation imposed by the tenons of the abutting girders, and the body of456Xthegirdewas strengthened by the straps where the tenon locking pins took away even more wood.

The second floor braced arches were capable of carrying: themselves; the other partition materials; the center doorway frame and finish; and possibly they shared some of the floor live loading as the 11 x 11 north-south members they were connected to were part of the second floor hand-in-hand floor framing. Pairs of large round-headed 1 3/8" diameter rods were found (Accession 2383-8, see attached sketch and photographs 157.739,.740,.885 & .1727). These headed rods had been inserted up though the intersection of the hand-in-hand members and the bottom chords, above which the round rods had been forge-welded to flat bar straps.



SECTION, EAST END

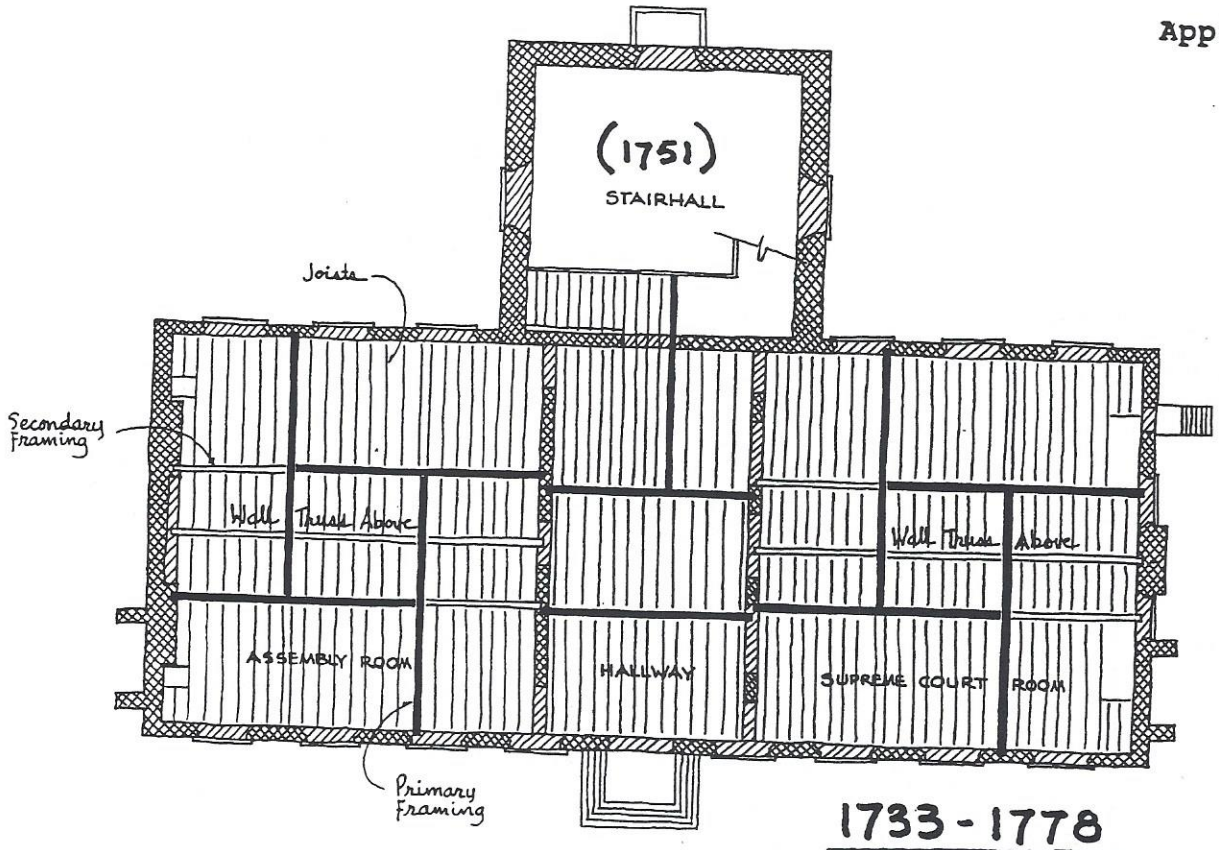


PLAN, EAST END

INHP CATALOGUE 6826
ACCESSION 1997

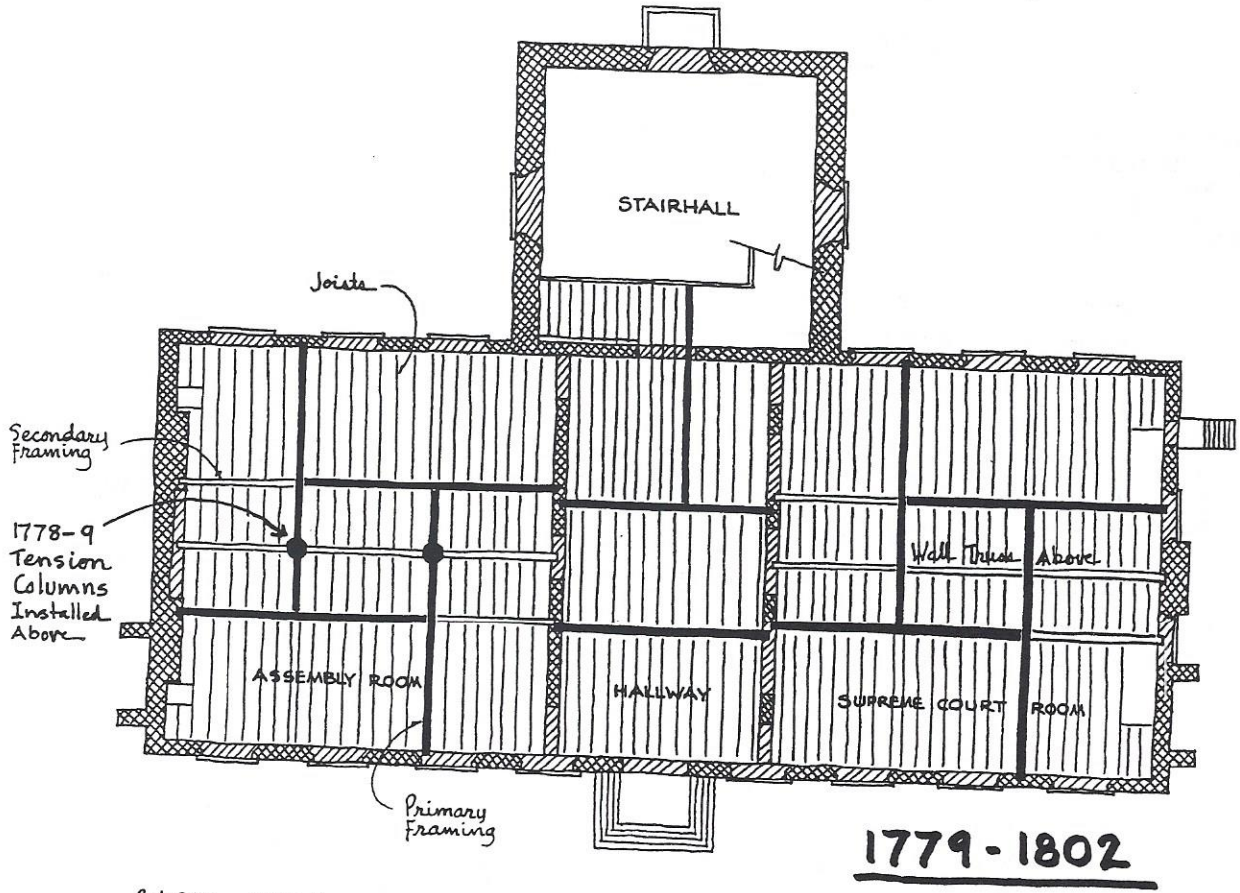
TYPICAL EVIDENCE CRUCKED MEMBERS AT ENDS OF ORIGINAL 1733 BOTTOM CHORD OF TRUSS PARTITION ABOVE ASSEMBLY ROOM, INDEPENDENCE HALL

PORTION OF D'WG 391/94000-24A



BASIC STRUCTURE - FIRST FLOOR WALLS & CEILING FRAMING
INDEPENDENCE HALL

LHN - PH, JULY 1966



BASIC STRUCTURE - FIRST FLOOR WALLS & CEILING FRAMING
INDEPENDENCE HALL

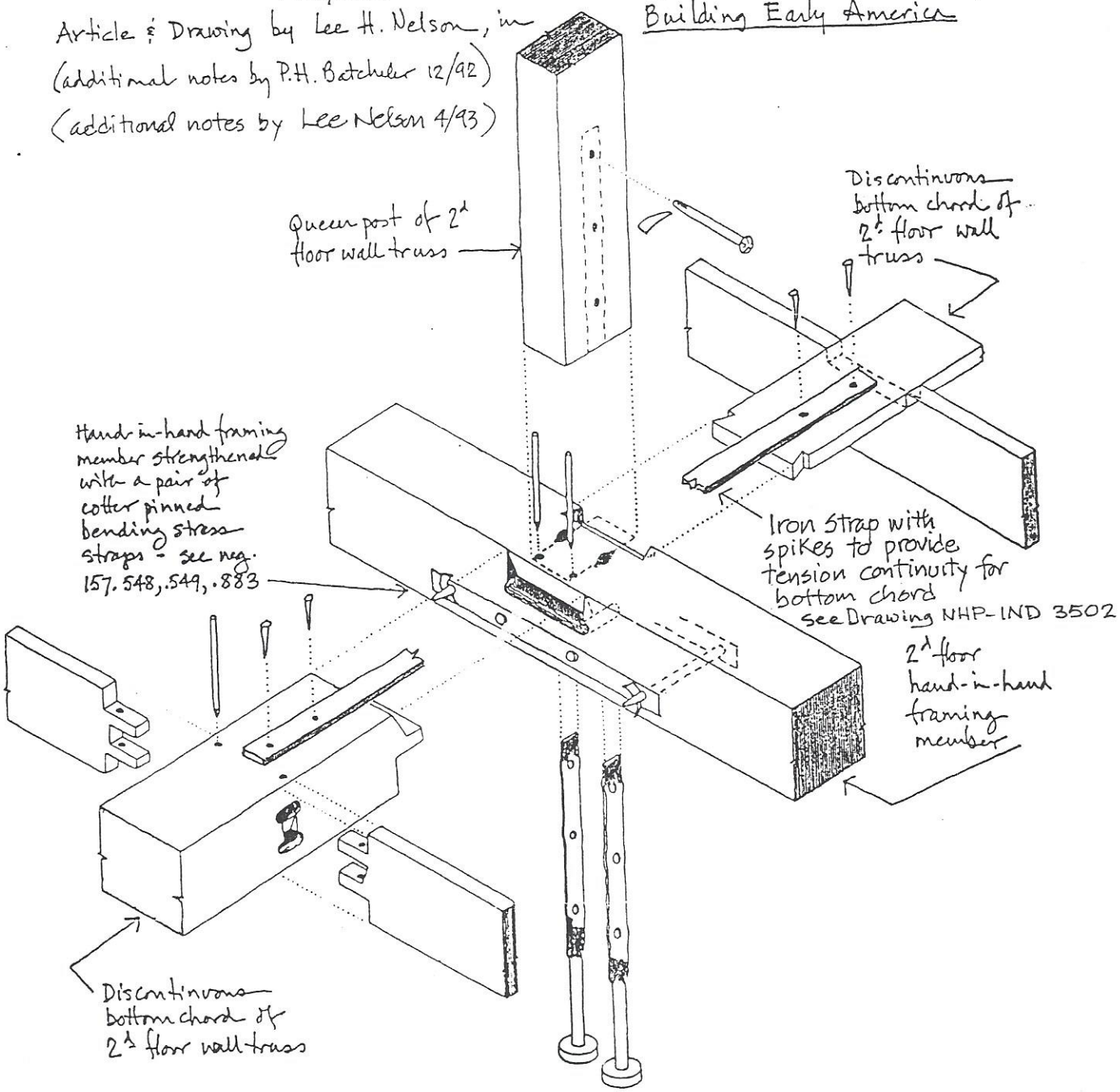
LHN - PH, JULY 196

Independence Hall: Its Fabric Reinforced

Article & Drawing by Lee H. Nelson, in Building Early America

(additional notes by P.H. Batcheler 12/92)

(additional notes by Lee Nelson 4/93)

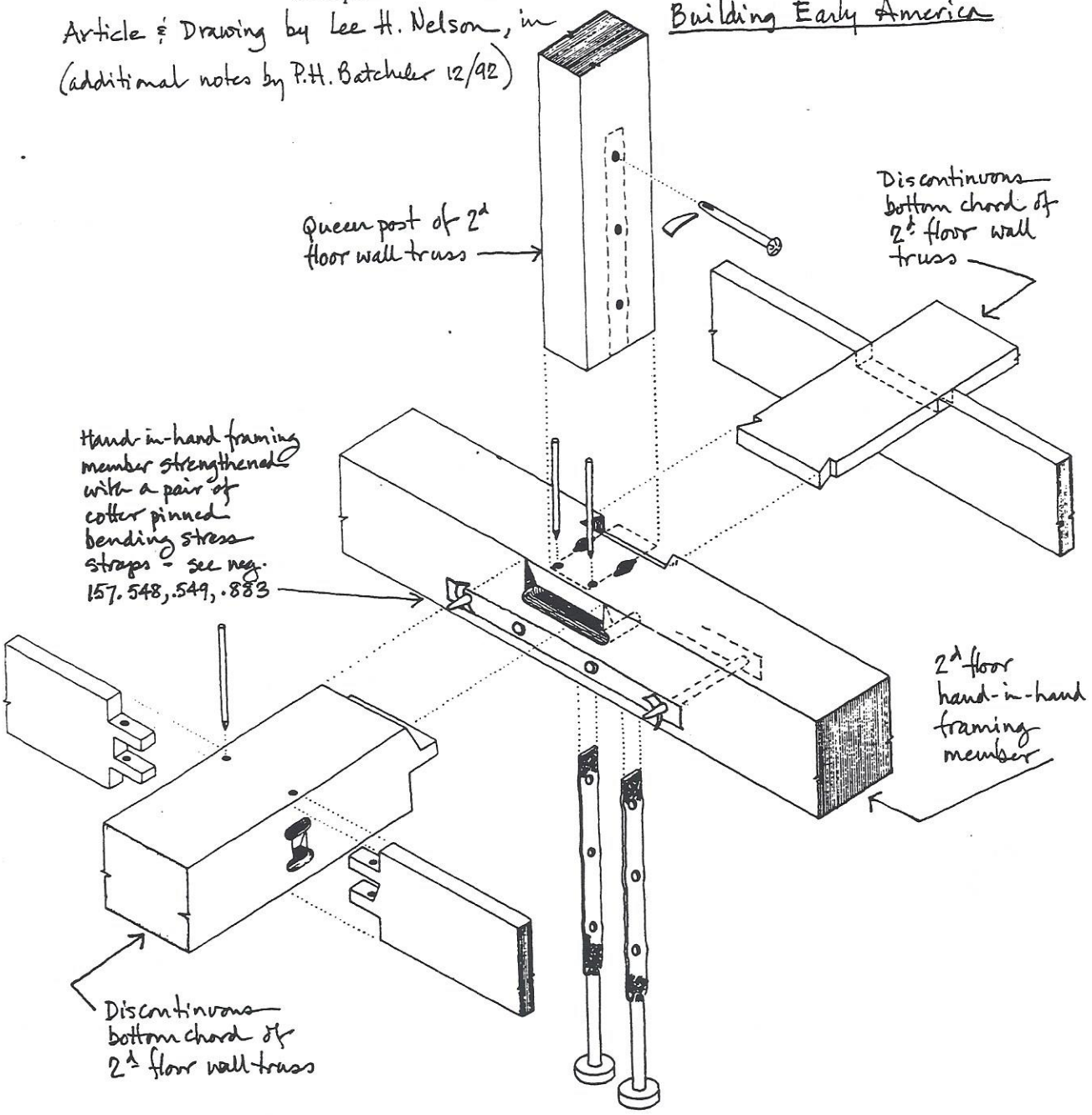


1733 SECOND FLOOR FRAMING CONNECTION

Fig. 15.6 Exploded diagram of probable connection at juncture of hand-in-hand framing and the queen post of the trussed partition on the second floor. The queen post (at *top*) was secured to the girder with large wrought iron bar straps. The heads were let-in (flush with the bottom of the girder) and the bar strap changed in section from a round bar to a rectangular strap at the queen post.

Independence Hall: Its Fabric Reinforced

Article & Drawing by Lee H. Nelson, in Building Early America
(additional notes by P.H. Batcheler 12/92)



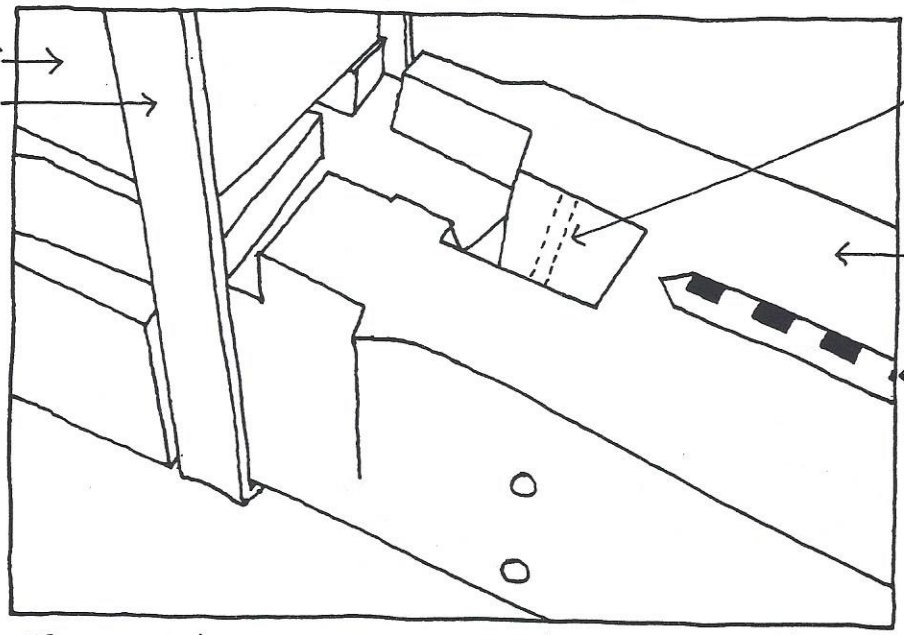
1733 SECOND FLOOR FRAMING CONNECTION

Fig. 15.6 Exploded diagram of probable connection at juncture of hand-in-hand framing and the queen post of the trussed partition on the second floor. The queen post (at *top*) was secured to the girder with large wrought iron bar straps. The heads were let-in (flush with the bottom of the girder) and the bar strap changed in section from a round bar to a rectangular strap at the queen post.

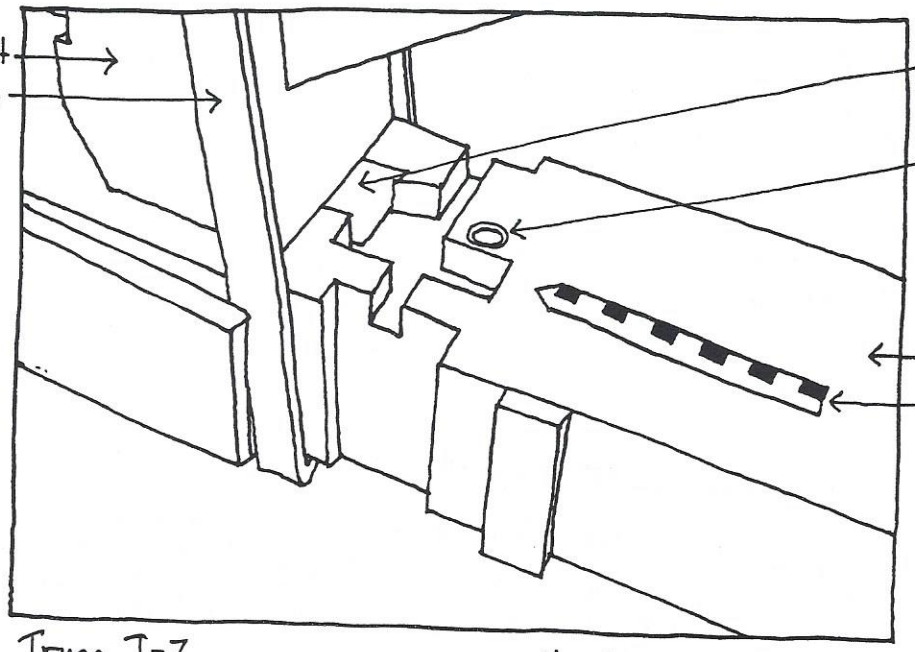
Independence Hall, East End of Garret

Unique Complex Mortises in Bottom Chords at Center of 1733 Roof Trusses T-6 and T-7.

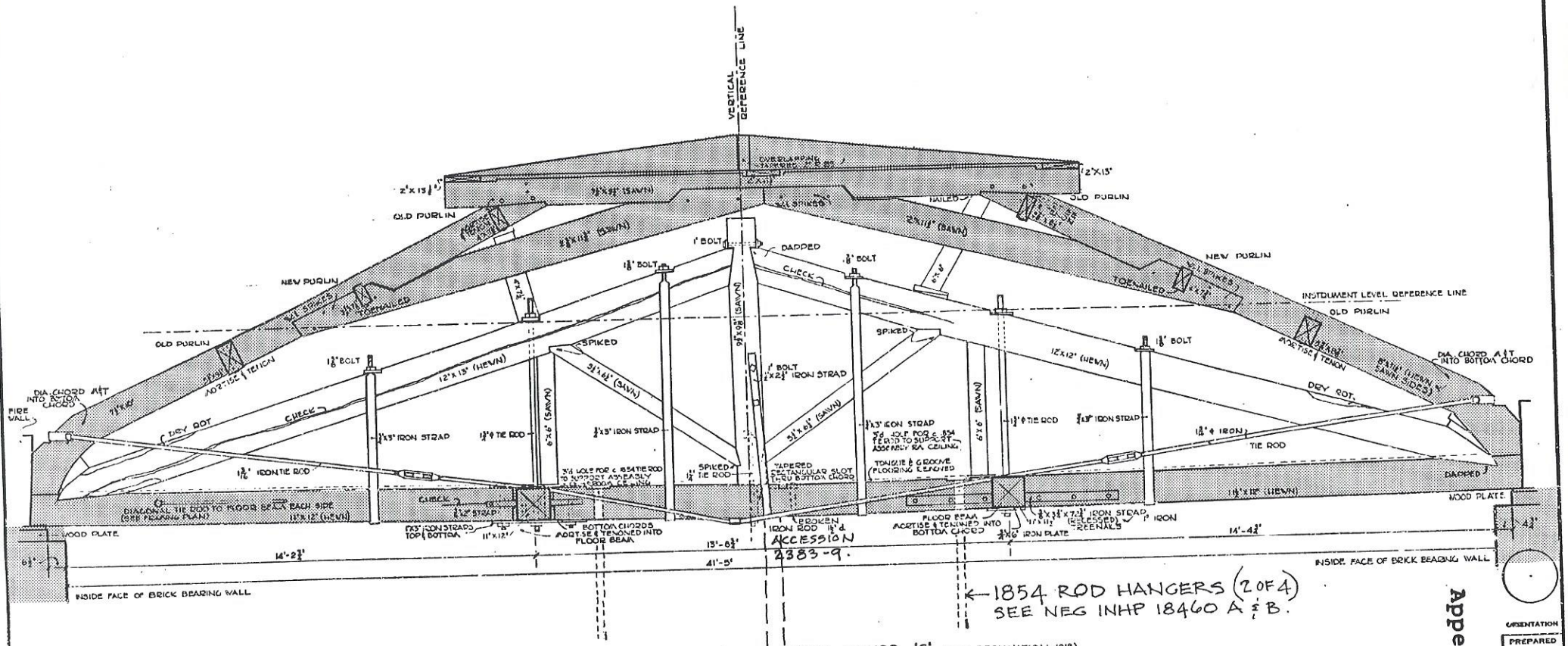
Mortises probably made in 1778-9 when 1733 2d floor truss partition removed to create large square room. Mortises used to connect garret framing to 1733 2d floor wall truss Queen posts retained as hangers in supporting 2d floor framing.



Truss T-6 Neg. INHP 157.5556, 15A



Truss T-7 Neg. INHP 157.5556, 18A



← 1854 ROD HANGERS (2 OF 4) SEE NEG INHP 18460 A & B.

MEASURED DRAWING OF ATTIC TRUSS 'G' (A.I.A. DESIGNATION-1918)
OR 'T-7' (EWING REPORT - 1958)
SCALE: ¾" = 1'-0" — LOOKING EAST

0 1' 2' 3' 4' 8'

NOTES
FLOORING: ¾" T & G RANDOM WIDTH BOARDS INSTALLED IN 1890'S REMOVED JULY 1961.
IRON TIE RODS: PROBABLY INSTALLED IN 1890'S.
'MODERN' BRICK FIRE WALL BUILT ON TOP OF WOOD PLATES.

1733 BRACED ARCH

1854 TRUSS IN-FILL

← 1778-9 CONNECTION ATTIC TRUSS TO 2d FLOOR QUEEN POST/ HANGER/COLUMN, (1 OF 2).

BASIC DATA: EXISTING CONDITIONS

Appendix M

ORIENTATION

PREPARED
DESIGNED
DRAWN L.H. OLSON
CHECKED
92 PHB
DATE | INITIAL
REVISED

SCALE: SEE ABOVE

RECOMMENDED
APPROVED

MARK	DESCRIPTION OF REVISION	DATE	INITIAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DIVISION OF DESIGN & CONSTRUCTION
PREPARED BY EASTERN OFFICE

INDEPENDENCE HALL — ATTIC TRUSS "T-7"
TITLE OF DRAWING
INDEPENDENCE SQUARE GROUP
LOCATION WITHIN PARK
INDEPENDENCE NATIONAL HISTORICAL PARK
NAME OF PARK

REGION FIVE
PCP NO.
SHEET 10 OF 1
DRAWING NO. NHP-IND 5211
DATE

Ind. Hall 5211 #10

APPENDIX N

Independence Hall Fire Insurance Surveys

Independence Hall, Feb. 26, 1818,
Phila. Contributionship Survey No. 3795,
Survey Book 1795-1824, p. 218, Microfilm, INHP

I have Surveyed the Centre Building of the State House belonging to the Corporation of the City of Philadelphia Situate on the South Side of Chestnut St. Between Fifth & 6th Street 107 feet front 44 feet Deep, two Stories high. Building back Supporting the Steeple 34 1/2 by 31 feet 4 Stories high the walls 18[&]22" thick, the lower Story of the front building is divided into two large Court rooms & hall in the middle. The Eastern room finished with 5/4 in. yellow pine floor, base round, large pilaster architraves to the Doors & windows with an Entabliture over each, two Square pilasters & half pilasters supporting three Eliptic arches on the East Side of the room 3 ranges of circular benches with turned banisters & painted rail backs, the West room with yellow pine floor base round wainscoted from the surbase up on three sides with large 12 large [sic] fluted pilasters and Entabliture near the ceiling the glass in both rooms 12 by 16 in. Double architraves round all the windows the hall floored with brick finished with pannel'd work & 16 fluted columns & Entabl[iture] Fronticepiece with fluted columns and flat pediment front. The 2nd Story in three rooms floor of common yellow pine base round Double architraves round the doors & windows, all occupied with the Museum Glass 12 by 16 In. an newel Stair Case from the 2nd Story into the 3rd Story of the Steeple house, with brackets & turned banisters painted rail, and Large open Stair Case much worn leading from the hall below into the 2nd Story of the front building at the head of which is a small room occupied as a work Shop. The 3rd Story of the back building or Steeple house floored with com[mon] yellow pine occupied with a part of the Museum. The 4 Story occupied for the preparation of Gas for lighting the Museum modillion eve front the roof Broken pitch, the upper or flat part covered with copper.

No. 3795 2nd Mo. 26 1818 Jno C Evans
Dollars 10000 @ 4 per Cent $400

Phila. Contributionship Resurvey No. 3795
Independence Hall, 1 Jan, 1828

I have Resurveyed the Centre Building of the State house, alterations made therein as follow viz --in the 2d Story Southeast room are two rooms --partitioned off with Sap Boards, planed & groved --& a cieling of boards--raised about--12 feet from the floor--two ledged doors therein.
1 Mo 1st 1828

John C. Evans
No. 3795 January 4, 1828
Alterations allowed

Independence Hall

Phila. Contributionship Survey, No Number, 2 Feb. 1829

I have Resurveyed the Centre Building of the State house - having recently a Steeple erected thereon. The lower die or base of which is [blank] feet square, by 23 1/2 feet high with a return'd pilaster at each corner finished with a Corinthian cap & coresponding entabliture ~~with~~ and twelve vases on the crown or cap ^ . the next section is [blank] feet at the base & 10 feet high with balustrading round the top & Eight urns or vases on the cap with cornice & modillions next above the cupola, octagonal - which (including the dome) is 15 feet high with windows in each angle, circular heads & finished with single architrave. & plain Cornice under the dome. floor of clean yellow pine. from this to the top of the second dome is about 18 1/2 ft in which are [blank] windows - with circular heads - from this to the top of the spire is 28 feet - making the whole height of the steeple 95 feet above the Brick work or pedestal of the same - in the 2d Section are 4 clock dials ~~circular~~ with a carved wreath ~~over~~ under each - there is a Stair way inside with square posts & straight rails the steps planed leading up to the cupola.

2d Mo. 2d 1829 - John C. Evans

Independence Hall 1844 Franklin Fire Insurance Survey 5044, Book 31, Historical Society of Pennsylvania.

Survey made February 17th 1844 for the Mayor,- Aldermen and Citizens of Philadelphia-

A Two story Brick Building situate on the South side of Chesnut Street between Delaware Fifth and Sixth Streets and known as the State house, in the City of Philadelphia $13334. Insured including the Steeple & Clock For Dimensions see Sketch, Oak joist, heart pine floor boards, and lathed and plastered, cased window frames with stone sills and Key blocks, sash single hung.

The First story is in 2 rooms with a Hall through the center, and occupied as a court room and the Hall of Independence, the walls are paneled, with fluted pilasters & moulded Caps to them double faced architraves and paneled jambs to windows & doors, wood Cornice, and Story 20 feet high in the Clear,the Hall is flagged with Stone and has 6 fluted Columns on each side and 2 ditto at the Ends, heavy Cornice dentils & Modillions, there are in the Court room 4 Cast Iron Columns to support the Ceiling.

The Second Story is in 4 rooms; and Entry, the West room is occupied as a Court room and the other rooms by the Marshall and as Jury room surbace & washboard double Gnead [sic] architraves, plain Casings, small coved ceilings, plank folding & passage doors, 18 feet Story, the Court room has a projection into the room 2ft 6 and 20 feet long or wide, with 2 fluted Columns & Caps, pilasters or antaes, neat Entablature and Cornice; the North room has a Fire Proof Closet on the East side; pediments over the doors; The First Story has 14 - 24 light 12 by 17 windows and the Second Story has the same; A large doorway front with outside frontispiece Circular transom & sash, 2 Colums and pediment head first story; A flight of open newell stairs up to the attic or garrett which is rough floor'd, heavy moulded handrail & turned ballusters, paneled wainscoting in the Entry,

[page 2]

The roof is broken pitch about [sic] and about 11 feet high, A Cicular window with venetian blind East & west end, 7 principal rafters, the lower part of the roof has Cedar shingles and the upper part is Cover'd with Copper and has a heavy balustrade Extending the whole front on each side and passageway from the Steeple to it. heavy wood eaves and Cornice and dentils Carved & ornamented.

The Steeple is about 66 feet high from the ground to the top of the Brick work and is surmounted by a superstructure of framework about 95 feet high including the Spire & having a Ball and Vane and Cap on it; the Ball is four stories high. The first & second stories being in one having a doorway & 2 - 24 light 12 by 16 windows in

the lower part & 2 - 24 light windows and 1 - venetian window with 84 lights 10 by 16 and 20 lights in the circular part, paneled jambs & architraves, A flight of open newell stairs 6ft 6in going, heart steps & rizers, heavy moulded rail, & turned ballusters, scroll & curtail step, open string, paneled wainscoting; heavy wood Cornice to Ceiling richly ornamented, & brick pavement below. The Third Story is in 4 rooms & Entry with 3 round windows sash in 2 parts hung with hinges, rooms plastered, Carolina floor, panel & ledge doors, the upper Story has 4 windows one of which is to the floor being a passageway to roof of Main building; the Superstructure has 4 posts 15 in square setting on Iron bracketts in the wall, and is 13 feet square at the Octagonal section or bellfry, the octagonal section is formed by 8 posts running down and strongly bolted into the first section and the upper sections are the same, the first section or Base has the dials for the Clocks, and is neatly weatherboarded on the outside, pilasters with Corinthian Caps at the Corners, and neat entablature, a neat balustrade over it with turned ballusters, & urns, the Octagonal section or bellfry has 8, openings with Circular tops & pilasters with moulded caps on the outside, Circular top to roof, cedar shingles, the next section the same, roof the same and the upper section is shingled; the Eave of the Main building is continuos around the base of the Steeple, neat pediments over the round windows and neat wood cornice over each Story. the walls below are 3 feet thick and in the upper story 1 ft. 6 in. falling off on the outside Each Story; and the base is 28 feet Square in the Clear inside. Steps in Steeple up to the belfry.

D H Flickwir Surveyor
John Diehl [Commissioner of City Property]

[note at top of first page]
5/599 - p 6667 = ReInsures Perpetually in Penna Fire Ins. Co. Pol #27570=

[note in left margin]
No 5044 $13334 $266 68/100 $3

[note at side of first page]
March 29th 1853 a small room has been partitioned off in the steeple between the Clock and Bell for Watchmen and 4 - O windows put in the outside [planed landing 5 floor to it] gas pipe introduced. [signatures unidentifiable]

[note at side of second page]
It being understood and agreed that this Company have the right after the expiration of Seven years from this date to cancel this policy on giving thirty days previous notice to the assured and [?] a return of the premium deducting [?]

transcribed by
P. H. Batcheler, Jan. 1991

APPENDIX O

List of Independence Hall Second Floor Artifacts in INHP Museum Collection

Acc. No.	Cat. No.	Description
2	4257-8	Portions of original sash from Long Gallery.
36	4301	Papers of 1920s 2nd floor restoration, Horace Wells Sellers.
34	4260	Nails 2nd floor flooring and ceiling lath removed 1896.
90.5	4259	Original window sash meeting rail.
140.29		Lobby archway to TSH portion of orig. keystone.
142		Wallpaper fragments (see Acc. 2862)
147		Long Gallery sash bottom rail.
168.3		Ornamental plaster fragments.
176.9		Fireplace brick 5 x 5 1/2 from NE fireplace.
199		East wall plaster.
366		Window weight box board
425	24.022	Original SW room carved modillion.
654		Handwrought nail, relic.
709	6577	Scab of wood from under north window.
829		Sherds (see also 955, 963, 980, 1371, 2383, 2420).
1350		1730s & 1750s plaster, underside of flooring.
1488	4255	Original sash parts.

Acc. No.	Cat. No.	Description
1554		Original flooring (see also 2016, 2384, 2409).
1997		22 sections original 2nd floor girders.
2383.1		15 original balusters Lobby stair.
2383.3		Lobby stair carved brackets (orig. & 1920s). See also 2383.53.
2383.8		4 wi hangers Assembly Room Ceiling.
2383.9		2 wi rod portions Attic Trusses T-6. T-7.
2383.17		Wi nail for Lobby.
2383.25		Fragment partition framing Lobby stair.
2383.27		Piece of 1898 trim.
2383.28		Piece of 1854-1896 trim.
2383.43		2 gilded balls, flagpole decorations.
2383.46		Sherds found back of Supreme Court Room Cornice.
2383.51		2 pieces of wood removed from Long Room when chasing walls.
2383.53		1920s Lobby stair bracket.
2414	8298	Broken half of original square hearth brick.
2468	8427	Long Room window architrave portion with paint evidence.
2468	8428-30	Portions window jambs and sills with paint evidence.
2491		Paint samples.

Acc. No.	Cat. No.	Description
2580		Plaster found behind Assembly Room cornice. Pre-1898 wallpaper fragments.
2826.4		4 iron rim locks 1924 restoration.
3602		C. 1895 photos of Council Chambers.
3687. 33-36		Drawings of the T. Mellon Rogers second floor restoration of 1897.
3752		

APPENDIX P

List of Architectural Evidence and Restoration/Reconstruction Drawings, Second Floor, Independence Hall, Office of Archeology and Historic Preservation, Branch of Restoration, NPS, 391/94000, 1968.

NO.	TITLE OF DRAWING
1	Title Sheet
2	North Wall Evidence West End
3	North Wall Evidence Middle
4	North Wall Evidence East End
5	South Wall Evidence East End
6	South Wall Evidence Middle End
7	South Wall Evidence West End
8	East Wall Evidence Stage 1
9	East Wall Evidence Stage 2
10	West Wall Evidence Stage 1
11	West Wall Evidence Stage 2
11A	West Wall Evidence Stage 3
12	North Wall Evidence Center Window
13	Typical Original Window Details
14	Typical Original Window Sash Details
15	Typical Original Window Sash Details
16	Original Corinthian Modillion and 1920 Cove Cornice
17	Lobby Stair
18	Original Lobby Stair Details
19	Details of Archway between Lobby and Tower
20	Original Hearth Framing, North Fireplace, East Wall
21	Original Hearth Framing, South Fireplace, East Wall
22	Original Hearth Framing, North Fireplace, West Wall
23	Original Hearth Framing, South Fireplace, West Wall
24	Detail at Ends of Original Wall Truss Girder - Over Supreme Court Room
24A	Original, East, Wall Truss Bottom Chord Ends
25	Plan of Entry Hall Ceiling Framing
26	Evidence of Lobby Flooring, Partitions and Doorways
27	Plan of Assembly Room Ceiling Framing (Oversize)
28	Plan of Supreme Court Room Ceiling Framing (Oversize)
29	Trimmer Arch Outline - Full Size (Oversize)
30	Reflected Plan of Second Floor Ceiling Framing (Oversize)
31	Reflected Plan of Second Floor Ceiling Framing (Oversize)
32	Reflected Plan of Second Floor Ceiling Framing (Oversize)
33	Super-Imposed Floor and Ceiling Plans (Oversize)
34	Evidence of Long Room Cornice - West End
35	Evidence of Long Room Cornice - East End
36	Evidence of Cornice in Southeast Room
37	Evidence of Southwest Room Cornice
38	Evidence and Reconstruction of "Draps of Husks" Lobby South Archway
39	Evidence of 1753 Lobby Stair

39A Lobby Stair Dado Ramped Rail Evidence
40 Details of Lobby Stair
41 Reconstruction of Lobby Stairway
42 Lobby Stair Bottom "Twist"
43 Lobby Stairway Spandrel, Door Pediment, Ramped Rail and Balusters
44 Details Archway Lobby & Long Room
45 Details Double Doorways
46 Lobby Plan and Dado Paneling
47 Second Floor Room Elevations
48 West Wall Fireplaces & Woodwork
49 East Wall Fireplaces & Woodwork
50 West Wall Paneling Systems
51 East Wall Paneling Systems
52 Long Room Details
53 Long Room Ionic Pilasters, Base & Capitals
54 Marble Fireplace Trim
55 Cove Ceiling Details
56 Corinthian Entablature SW Room
57 Details SW RM Closet Doors & Tabernacle Frame Carving
58 SW RM Tabernacle Frame & Pediment

SHOP DRAWINGS

59 East Wall Fireplaces & Woodwork
60 West Wall SW RM Stud & Framing Details
61 East Elev. Long RM Stud & Framing Details
62 West Elev. Long RM Stud & Framing Details
63 Hearth Reinforcement
64 Plan Second Floor with Partition Section Lines
65 Partition Sections
66 Partition Details
67 Flooring Pattern

Note: The titles given are abbreviated and the subject matter clarified. The original tracings at this time are filed in the Federal Record Center associated with the National Park Service Denver Service Center. These have been microfilmed. Microfilm copies are filed at Independence Park, the Mid-Atlantic Regional Office and the Washington Office. Half size prints of the microfilms are on file at the Historic Architect's Office at Independence Park.

APPENDIX Q

Whereabouts of Evidence Photographs and Archive Data

The photograph collections in the Library of Independence National Historical Park have developed in three groups. INHP's initial collection, with negative numbers ranging from 1 to over 12,000, consist of negatives in acid free numbered envelopes, and positives mounted on green 9 x 12 cards, filed by subject matter.

The Park also inherited what are called the City Negatives, having numbers ranging from CN 7000's to CN 40,000. There are actually not that many photographs on file for many of this sequence were of inappropriate subjects and were returned to the City Archives. The CN negatives and positives are filed as above.

The NPS Eastern Office of Design and Construction and its succeeding professional offices developed a separate photograph collection. In the early days of EODC when the number of photographs of historic buildings in the eastern area was small, the photographs were numbered sequentially. A need for better organization forced a number change. In addition, those photographs of Independence Park buildings were all given the prefix 157.----. If needed, a conversion table is filed with the negatives. Some of these 157.---photographs have been mounted on brown 9 x 12 cards, and are filed by subject matter. The majority have not. Instead, each of the 157.---photographs have index file cards describing them. These are filed by subject matter. The index is in the office of the Park Historical Architects. And the negatives, extra prints, and photograph descriptions, also in acid free envelopes, are stored in the Park Library.

The INHP Library has an archive of papers generated during the formation of the Park. Filed here are all papers of the NPS Historical Architect's which relate to the restoration of the buildings.

APPENDIX R

Participants in the NPS Restoration of the Second Floor of Independence Hall

Lee H. Nelson, Project Supervisor, Independence Hall Structural Rehabilitation and Restoration, 1960-1972

Joseph Petrak, Project Architect in charge of restoration and Construction, 1970-72

Penelope Hartshorne Batcheler, Historical Architect, 1955-72

Architects and Student Architects:

1956 Edwin G. Close
1962 Ken Clark, Gary Dysert
1963 Joan Salzman, George Millen
1965 Peter Brill, Matzgin, Youel
1966 Christina Weyl, Hedrick
1967 John D. Milner*
1968 Robert Alvord*, C. E. DuPont, Fowler
1969 W. D. Stowell
1970 Craig Morrison

* with Price & Dickey, Architects, Media, Pa.

Photographer	George Eisenman of James L. Dillon & Co.Inc.
NPS Carpenters	Edward Whitlock, Foreman; Howard Gliffort; Fred Hoehn; Gordie Whitington. (They laid flooring, studded walls to receive millwork and then installed millwork.)
NPS Painter	Louie Pavonie
NPS Laborer	Leotha Wise
Millwork	NPS carpenter Whittington made all cornice moldings. All other millwork made by Frey & Son, Lancaster, Pa. for John A. Yohn Co. June 25, 1969-June 22,1971.
Plasticene Models	George Krier, Phila.
Woodcarver	Albert S. Cooper, Doylestown, Pa. 1970-71 and William A. Kootz & Co., Inc., Phila.
Marble Fireplace Trim & Brick Hearths	Wm. H. Watts & Co., Phila.

Metal Lathing & Plasterers	?
Reproduction	Keyser Bros., Phila. and Donald Streeter, Iona, NJ.
Wrought Iron Anchors	Donald Streeter, Iona, NJ.
Reproduction Wrought Iron Hinges	Donald Streeter, Iona, NJ.
Antique Locks	Robert Trump, Flourtown, Pa.
Misc. Iron	Berko Bros. Co., Phila.
Window Weather Stripping	Chamberlin of Philadelphia, Hatfield, Pa.

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Illustration 1

First and second floor plans, and elevation of the Pennsylvania State House dated "A.D. 1732" within the panel above the entrance.

The variations between this drawing and what was built are substantial enough to show clearly this was a preliminary drawing presenting the program and level of sophistication desired for the building.

Indeed this is probably the drawing referred to in the following quotation: "Mr. Speaker, [Andrew Hamilton] produced a Draught of the State-House containing the Plan and Elevation of that Building; which being viewed and examined by the Several Members was approved of by the House" (Pa. Archives Series 8, III, 2154). This drawing survived as did Illustration 2 because they were undoubtedly not used during construction.

At the second floor, note that the building committee at first intended two smaller rooms on each side of the stairway. These were to be the Committee Room, Petit Jury Room, Grand Jury Room and Council Chamber.

Note also that the chimney breasts throughout the building were diagrammatically shown projecting into the rooms as though there were to be no closets at their sides, nor paneling across the room ends fronting the chimneys.

For the c. 1896 restoration of the second floor this preliminary drawing was given full credence as though the chimney breasts had actually been constructed in this manner.

(Dickinson Papers, Historical Society of Pennsylvania, INHP negatives 472 and 157.809.)

Illustration 1

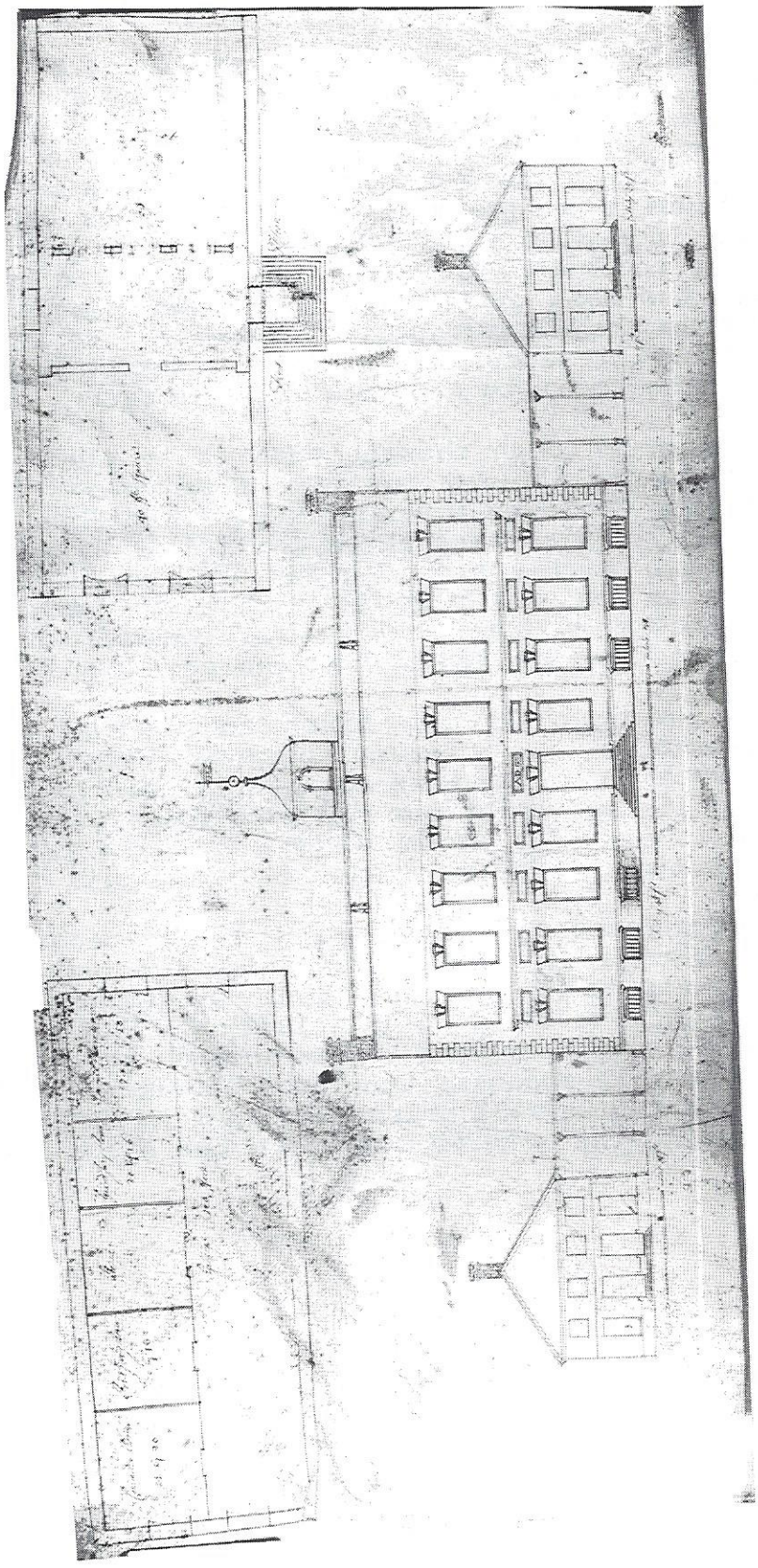


Illustration 2

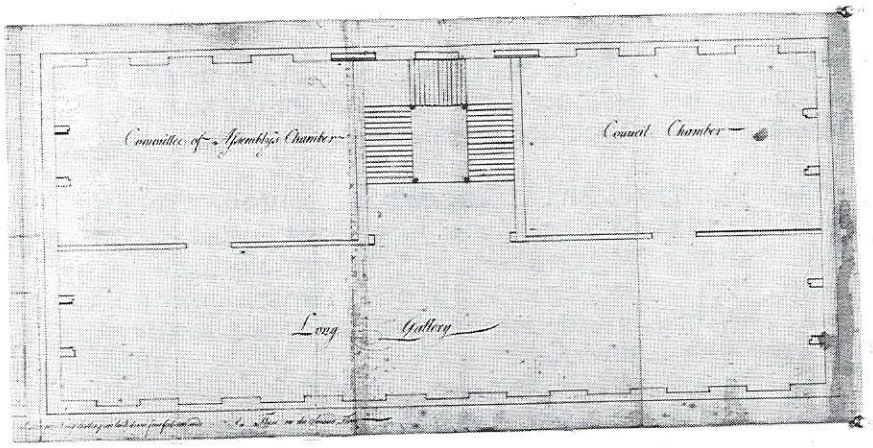
Another preliminary drawing, these first and second floor plans of the Pennsylvania State House come closer to the way the building was built, except that they show too many archways between the Supreme Court and Central Hall, and they do not include the stair to the garret which is known to have led up from the second floor southeast room (Committee of Assembly's Chamber) along its west wall. Indeed, the preliminary nature of this drawing is reinforced by its recommendation that the garret stair instead continue up above the main stair. The first two newels of the stair leading off from the first floor are shown filled in dark. Those leading off from the second floor are also rendered dark, i.e., the author meant the stair to ascend to the garret.

It has often been thought that these plans were part of the set which Edmund Woolley was paid five pounds for on July 22, 1736, after the building was completed (Penn Papers, Historical Society of Pennsylvania). The above preliminary recommendations would not have been included by Woolley if that were the case. Probably Woolley's set was made to show the completed structure to the Proprietors of the Province of Pennsylvania, the Penn family. Unfortunately Woolley's drawings have not been found to date.

These drawings of the first and second floor plans, as with Illustration 1, survived because they were not used during construction. They were apparently used by the building committee during its deliberations and were then filed away to be eventually found among the Penn Papers at the Historical Society of Pennsylvania (INHP negatives 920 & 1526).

Master Carpenters Edmund Woolley and Ebenezer Tomlinson, when faced with these preliminary plans, said "the Work expected from them was heavy, and to be carried on in an extraordinary manner..." (Pa. Archives, Sev. VIII, v. III, 2154-55, 1732). They were referring no doubt to the unusual hand-in-hand, or pinwheel, framing system to be used in spanning the large Assembly and Supreme Court Rooms, supplemented by wall trusses encased in the second floor partitions separating the Long Gallery from the south rooms.

Illustration 2



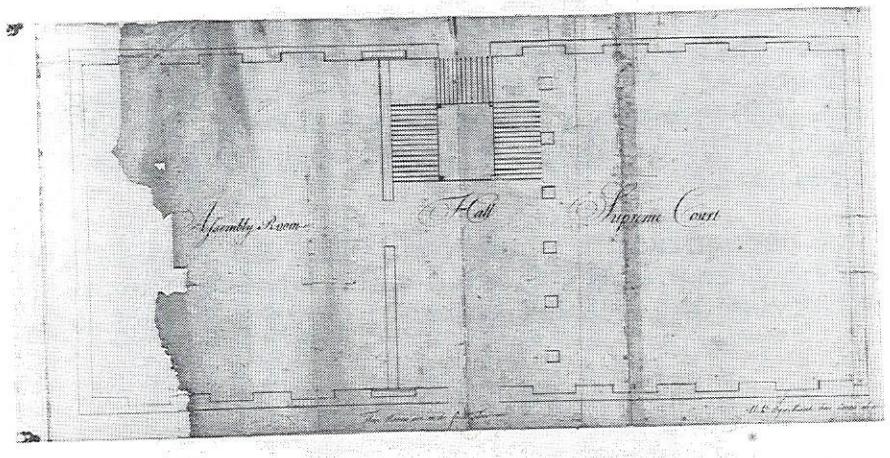


Illustration 3

No plans of the second floor were made between the preliminary plans of Illustrations 1 and 2, and this sketch plan made by Charles Willson Peale in a letter of February 18, 1800 (C. W. Peale Letterbook III, pps. 65-69, American Philosophical Society, INHP neg. 157.745).

Peale in writing to a Mr. William Findley described and drew the second floor plan as he had remembered it after the addition of the Tower Stairhall and prior to the east end room changes of 1778-9.

In 1778-9 the Pennsylvania Assembly moved to the second floor, offering its first floor room to the Continental Congress. To meet its needs the Assembly created one large square room at the second floor east end, removing the 1733 east-west center truss partition, and supplementing the hand-in-hand floor structure with two hangers from the garret structure.

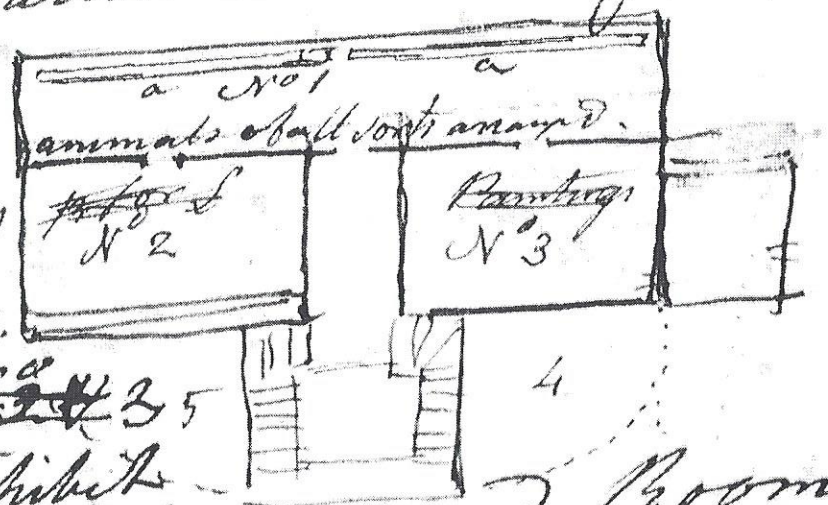
Peale, in 1800, no doubt wanted to return the second floor to its original layout to regain the drama of the Long Gallery space. He probably incorporated the two 1778-9 structural hangers within his replaced center partition.

For the museum, Peale hoped to have in the Long Gallery, (No. 1), "Animals...again[st] the Partition walls," No. 2 and 3 were to have insects, minerals, fossils, works of art, and a library, and outside at 4 and 5 live animals were to be fenced in.

The purpose of this plan was not to show a literal representation of the second floor. It leaves out details we know to have been present: the chimney breast and closet projections at the end walls, the Lobby stair to the tower, and the original garret stair closet at the west end of the southeast room. And Peale omitted a representation of the surviving 1750s archway between the Lobby and the Tower Stairhall.

One detail is recognizable, however. The opening between the Lobby and Long Gallery is clearly wide, but not as wide as suggested in the preliminary plan (Illustration 1) where it is as wide as the Lobby.

r, and conclude this with giving a sketch of
the disposition of subjects, on a supposition th
ate House should be allowed converted into
e front of that building up stairs was former
ng room & ~~xxxx~~ lighted by windows to the nor
visions ~~xxxx~~ of Partitions according to this small pl



the long room for the
osal of Animals
assical Arrangemt
in the Parthon walls.
2 ~~the Rooms of N°~~ 3
~~contain~~
tables a a to exhibit
ets minerals & fossils &c and Rooms N.° 2 &
hs of Art & Library ; Utensils Drapery &c &c
om where the assembly sat below for the purp
lowing Lectures ← It is unnecessary to go int
tail ~~all that was~~ but merely to give some genera

Illustration 3

PEALE'S MUSEUM,

IN THE STATE HOUSE, PHILADELPHIA.

ADMITTANCE 25 CENTS.

THIS splendid and valuable establishment, founded in 1785, is the first in the United States, and but little inferior to the imperial Museums of Europe. It is displayed with scientific method and pleasing neatness. The Quadruped room contains 212 Animals, all preserved in appropriate attitudes, and all but the largest in glass cases; besides horns, skins &c. Amongst the most remarkable are the Elephant Seal from the south seas, measuring eleven feet in length, and nine feet in girth; the Madagascar Bat, three feet, two inches from tip to tip; the Ourang-Outang or wild man of the woods, the great Ant-Eater, Lion, Grisly Bears, Hyaena, Porcupines, Cow with five legs, and a large and powerful Electrifying Machine, &c.——The long room displays an elegant range of cases, containing Birds from every quarter of the globe to the number of 1240; 180 Portraits of characters distinguished during the American revolution, and since, besides Philosophers of Europe and America; a splendid collection of Minerals, Fossils, and miscellaneous curiosities, amounting to near 8000 articles; various optical amusements, and Lukens's model of Perpetual Motion.——The Mammoth room exhibits the stupendous skeleton of the Mammoth, which was dug up in the state of N. York in 1801 by C. W. Peale, at great expense. This skeleton of an Antediluvian animal whose species no longer exists, measures 18 feet in length, 11 f. 5 in. in height. In this room are likewise, Wax Figures of Indians &c. habited in their own dresses, Instruments of War, Tools, Dresses, upwards of 800 in number, and a large picture of the harbour of Gloucester representing the Great Sea Serpent.——The marine room (up the lobby stairs) containing 121 Fishes, 148 Snakes, 112 Lizards, 40 Tortoises and Turtles, and 1044 Shells, Corals &c. Shells of the great India Oysters, weighing 350 pounds: besides cases humorously exhibiting a variety of Monkeys, employed in the occupations of men; and lastly, a portion of this room is appropriated for Anatomical preparations, double headed animals, deformities, skeletons, &c.

N. B. The whole Museum is brilliantly Illuminated with Gas Lights, very Tuesday, Thursday and Friday evenings, and during the winter season, a number of Chemical and Philosophical experiments are exhibited, and the whole enlivened by Music, principally by a large and rich toned Organ, on which visitors of taste perform; rendering the Rooms an agreeable and fashionable lounge.

*** *The Profile Cutter attends every day and evening.—— Frames furnished at the door.*

Philadelphia, Jan. 1820.

[Peale's Museum, Society Collection, Jan. 1820, Historical Society of Pennsylvania]

Illustration 5

This is a view of Peale's Museum as installed in the Long Gallery. The base perspective was drawn by Charles Willson Peale; the details of birds, portraits, fossils, busts, and the organ were added in watercolor by his youngest son Titian Ramsay Peale in 1822. The original drawing is in the collection of the Detroit Institute of Arts, negative 11036 (INHP copy negative 7344).

Rendered as a study for C. W. Peale's self-portrait (Illustration 6), its detail is described in the Museum printed guide (Illustration 4), and in several other descriptions: The Portfolio, 4, November 1807, p. 294-5; and "A walk with a friend to the Philadelphia Museum" by C. W. Peale 1802-1810, Peale Papers, Historical Society of Pennsylvania; and discussed in an Antiques Magazine article of October 1960, p. 343, by Jessie J. Poesch, "Peale's Museum."

Our interest in this view is for the architectural detail shown: the original wide unfinished yellow pine floor; the plaster cove cornice still showing along the north window wall, but hidden behind the portraits along the south and west walls; the wallpaper border applied above the range of stuffed birds; the window architraves, splayed jambs and sash; the doorways leading to the southwest and southeast rooms; the lack of a center doorway to the Lobby (where Peale had set up seating for a lecture room); and the six (or seven) chandeliers hung along the ceiling centerline.

Previous to making this view Peale had been lighting the museum for evening hours by a gas works set up by his son Rembrandt (see Illustration 7). In 1820, alarmed by the potential danger of the gas and its primitive manufacture apparatus set up in the tower rooms, the City of Philadelphia, which owned the building, asked Peale to remove this fuel source. Thus the chandeliers we see in this view were fueled with oil in fixtures of the Argand type (see Loris S. Russell, A Heritage of Light, Univ. of Toronto Press, 1968).

The chandelier hanging devices used by Peale did not survive in the garret. Nor were significant holes found in the sides or undersides of the framing timbers. Therefore, we cannot verify the exact number of chandeliers Peale had, nor exactly how they were hung. As the garret was an unfinished space, all that was needed would have been to hang the chains or wires from rods bearing upon the garret joists and beams.

Illustration 5

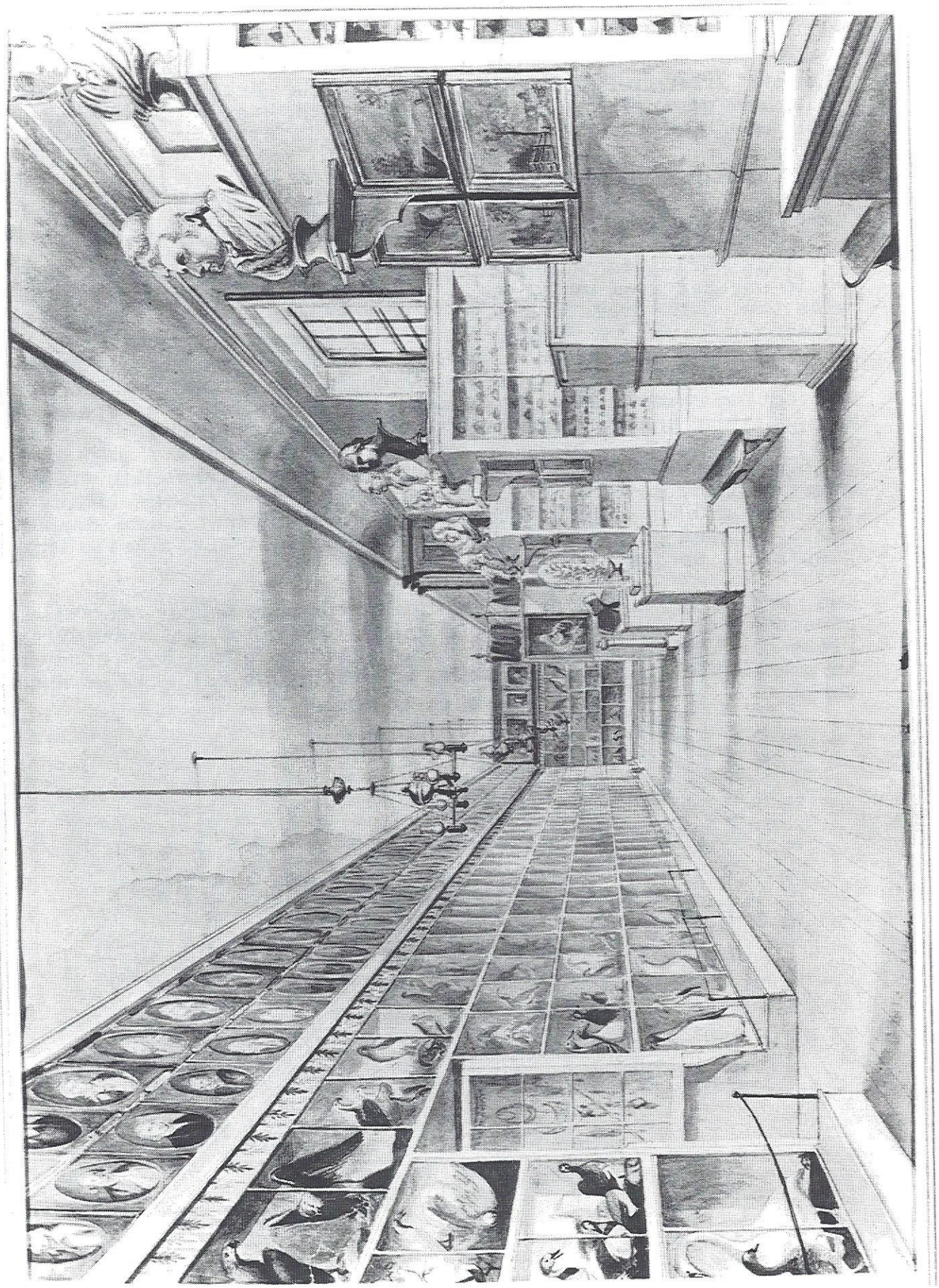


Illustration 6

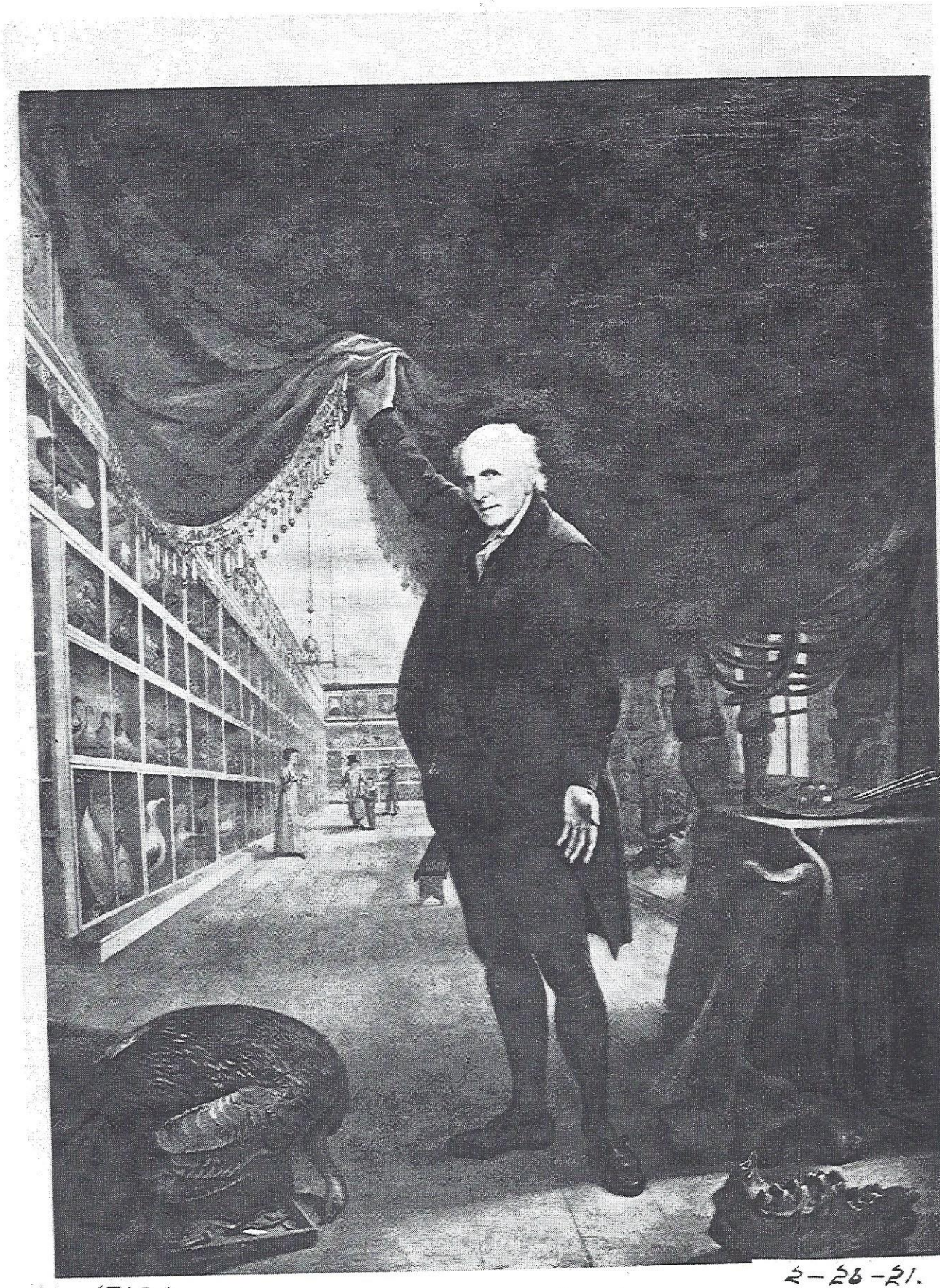
Charles Willson Peale self-portrait "The Artist in His Museum" 1822, oil portrait in the collection of the Pennsylvania Academy of Fine Arts (INHP negatives 17183, or 157.2101).

Peale wrote to his son as follows:

"Dear Rembrandt Philada Augt 2d 1822

....this whole length Portrait of self. I waited to hear what you would say before I would begin it....my first thoughts which I now give you....My dress a suit of Black Breeches and silk stockings, holding up with my right Hand a dark crimson curtain, to give a view of the Museum from the end of the long room, thus showing the range of Birds and revolutionary characters, and instead of the projecting cases behind me, I contemplate as much & as conspicuous as possible the Skeleton of the Mammoth & perhaps some of the quadrupedes more distant....Now for the likeness I make a bold attempt by the light behind me, and all my features lit up by the mirror, the top of my head on the bald part a bright light, also the hair on each side..."(C. W. Peale to Rembrandt Peale, August 2, 1822, Extract of letters of C. W. Peale, 1821-1823, Peale Papers, Historical Society of Pennsylvania.)

The artist's manipulation of the subject matter to his own advantage should serve as a warning to all of us that artists' views should not be taken literally. Illustration 5, a study made in preparation for this painting however is as reliable as artwork can be.



17183

2-28-21.

Illustration 7

Charles Willson Peale's description and sketch diagram of the gas manufacturing apparatus installed in the tower of the State House in 1816 to light the Museum for evening visitors (C. W. Peale to Angelica Peale, May 15, 1816, C. W. Peale Letterbooks 1816, vol. 14, p. 36-40, American Philosophical Society, B P31 No. 3/FL.D.)

Housed in the tower, Peale was asked by the City to remove this apparatus and fuel source in 1820. It is extraordinary that no catastrophe arose during the four years of its use.

Peale explains in a letter to James Monroe, March 4, 1816 (C. W. Peale Letterbook 1820, p. 147-8, Am. Phil. Soc.) "the chandeliers in the mode I propose to attach the pipes to must prevent their being lowered down because the gas pipes wold be attached to the framework on the inside..." Fixed gas pipes were a new convenience as it was necessary to lower oil chandeliers on pulleys to refuel them.

Illustration 7

will be the admiration of the World, provided it is kept together intire, and increased in proportional ratio to its stateliy, and which I hope to put in train shortly. You have heard of our illumination of it with Gas-Lights. Yesterday Benjamin Bimbrodt was determined to make himself perfectly Master of all the best modes of producing those lights, and very probably will do essential service to the publick of Baltimore, for this mode of lighting Cities throughout the Streets as well as the Dwellings is immensely brilliant, and very economical. I am confident more light is produced at one fourth the of the expence, and perhaps at ½ cheaper than with Tallow or Oil. I may amuse you by a description of an apparatus of slight sketches, but you must put on your conjuring cap to comprehend it, however I will make it as plain as I can by the Drawing, if upon an

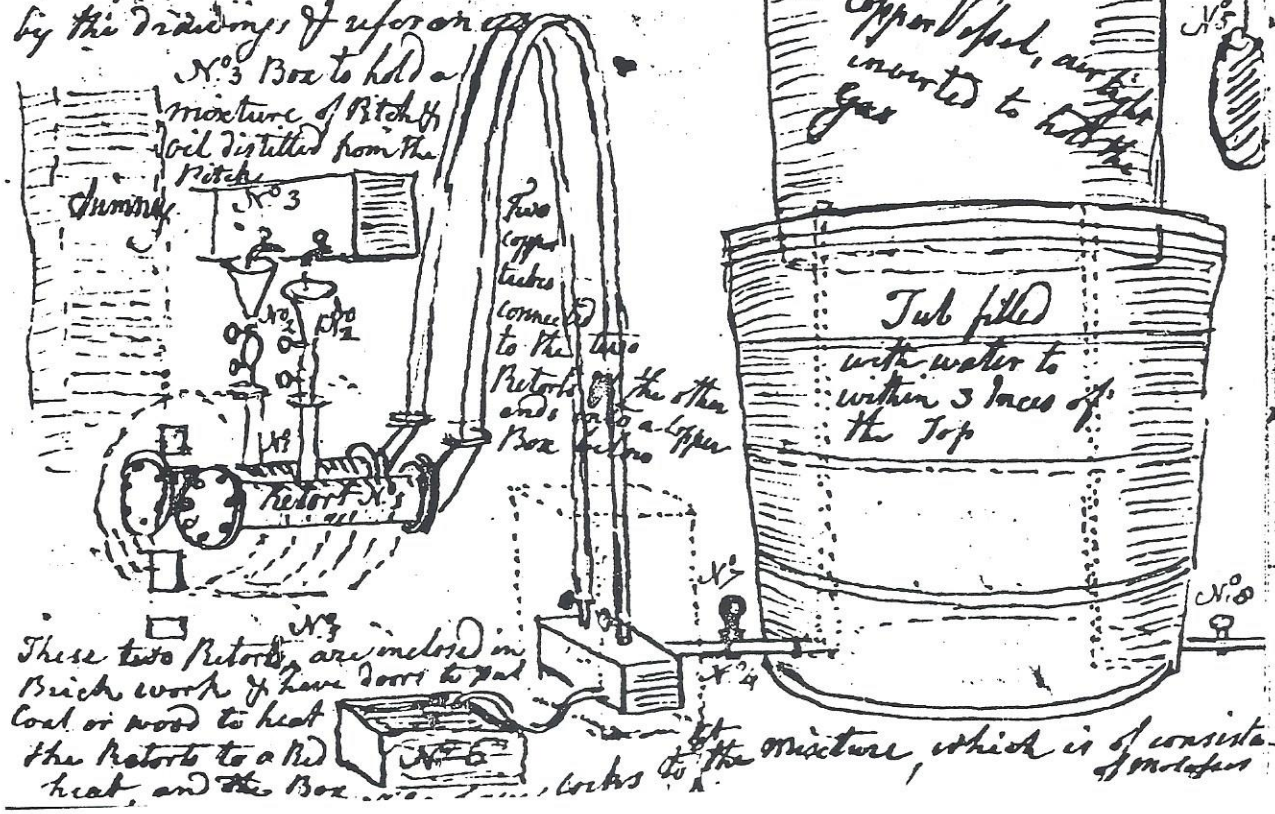


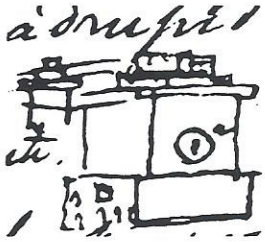
Illustration 8

C. W. Peale's "Smoke Eater", the Weekly Magazine vol. 2, 1798, p. 353, also reproduced in Mr. Peale's Museum, by Charles Coleman Sellers, W. W. Norton Co. Inc., New York, 1980, p. 96; and two sketches of "My Stoves" in a letter of C. W. Peale to Rembrandt and Rubens, Dec. 12, 1802, The Selected Papers of Charles Willson Peale, vol. 2, part 2, pp. 472-473.

Always the experimenter, Peale devised these masonry stoves and installed them in his museum in 1802. The bust of a famous personage and the architectural column and pedestal were to further the educational purpose of the museum.

Illustration 8





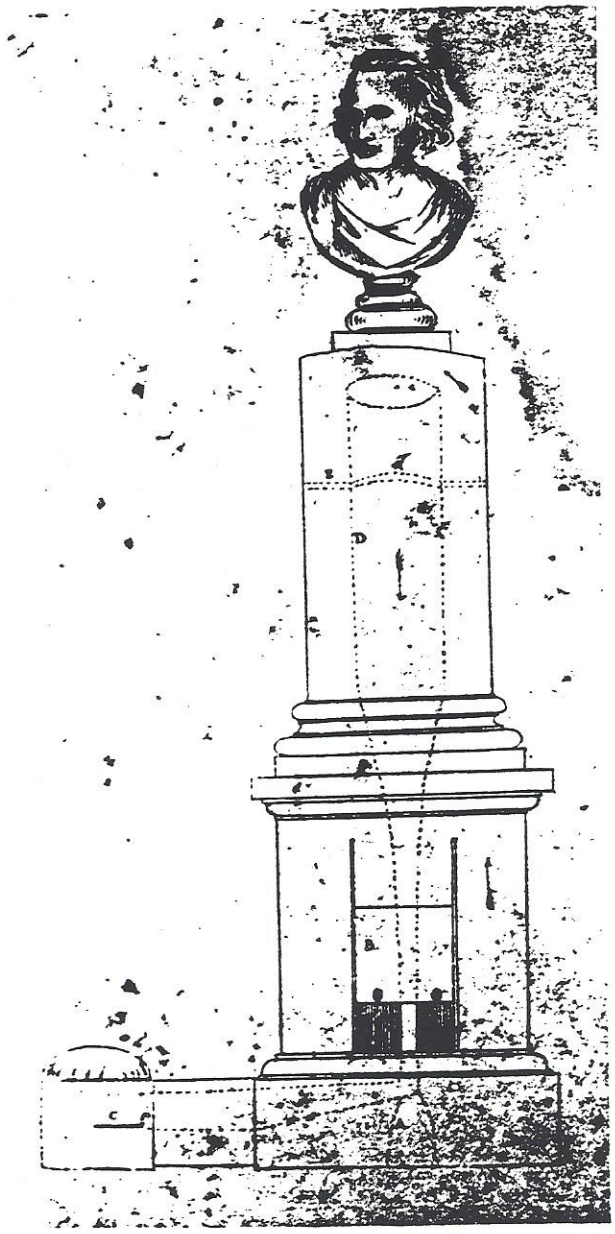


Illustration 9

Plan of the State House from PHILADELPHIA IN 1824; OR, A BRIEF ACCOUNT OF THE VARIOUS INSTITUTIONS AND PUBLIC OBJECTS IN THIS METROPOLIS: BEING A COMPLETE GUIDE FOR STRANGERS,...PHILADELPHIA; H. C. CAREY & I. LEA, CHESTNUT STREET AUGUST 1824, American Philosophical Society 917.4811 P53, opposite p. 133. On pages 133-138 are descriptions of the user organizations, but no written description of the physical layout was included.

In 1812 the original State House wings and arcades were replaced by fireproof offices designed by Architect Robert Mills as shown in this plan. Peale had hoped that his museum could be extended on the second floor of such wings. Apparently the city's official needs took precedence.

This plan of Peale's Museum on the State House second floor documents the use of the rooms, their layout, the openings from the southeast and southwest rooms to the Long Room, and the lack of a doorway between the Lobby and Long Room.

Again, the diagrammatic aspect of this plan omits a great many other features such as the doors connecting the Lobby to the southwest room, and the passage leading to the 1730s garret stair at the west end of the southeast room, and the landing at the head of the Tower Stairhall stairway.

Illustration 9

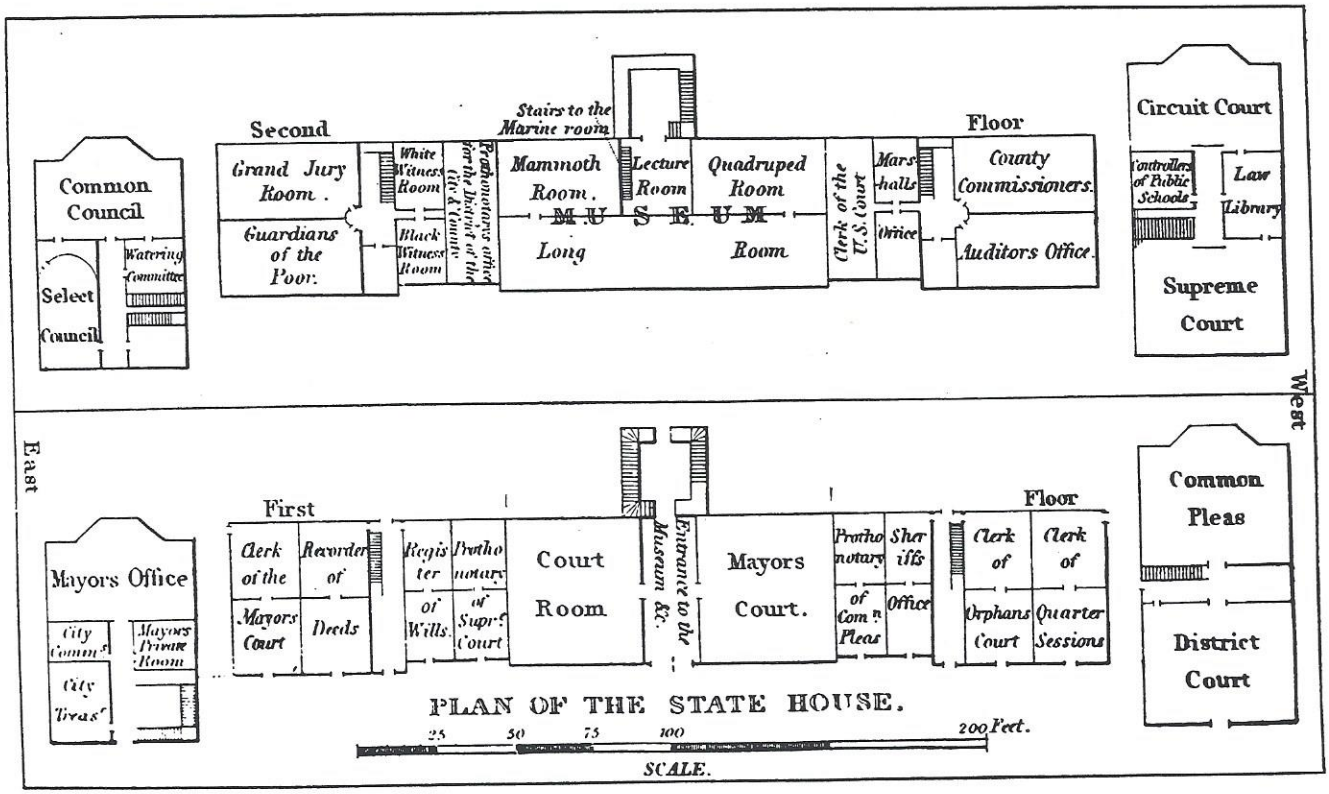


Illustration 10

Recollection of Peale's Museum in a plan drawn by James R. Lambdin of 211 Price St., Germantown, Philadelphia, on October 12, 1872 (Etting Papers, Historical Society of Pennsylvania).

Colonel Frank M. Etting, chairman of the Committee for the Centennial restoration of Independence Hall, asked Lambdin to write down his memories of Peale's museum: As "a very constant visitor for many years, the situation of everything contained in the collection is so impressed on my memory that I think I could replace them in almost the exact position occupied by them 40 years ago."

Lambdin was more interested in the Museum display than the building's features. The most he said was "The large gallery extended the whole length of the Chestnut St. front... The southern half of the building was divided into an anteroom, of the width of the vestibule below... a room on the right, called the South East room, and ... one of similar size on the west side..."

The plan does not have the correct number of north windows, but it does confirm the circulation pattern between rooms, and the stepped seating for the lecture audience in the Lobby. It doesn't, however, answer the conflict of this seating with the foot of the Lobby stair to the Tower. It also does not show the original 1730s garret stair and its partition at the west end of the southeast room.

The researcher must be aware that Frank M. Etting made a copy sketch of Lambdin's drawing also filed in the Etting Papers, Historical Society of Pennsylvania. And Architect Horace Wells Sellers also copied Lambdin's drawing while researching the "Etting Correspondence" (Horace Wells Seller Collection, INHP Catalogue 4301, folder 2).

Illustration 10

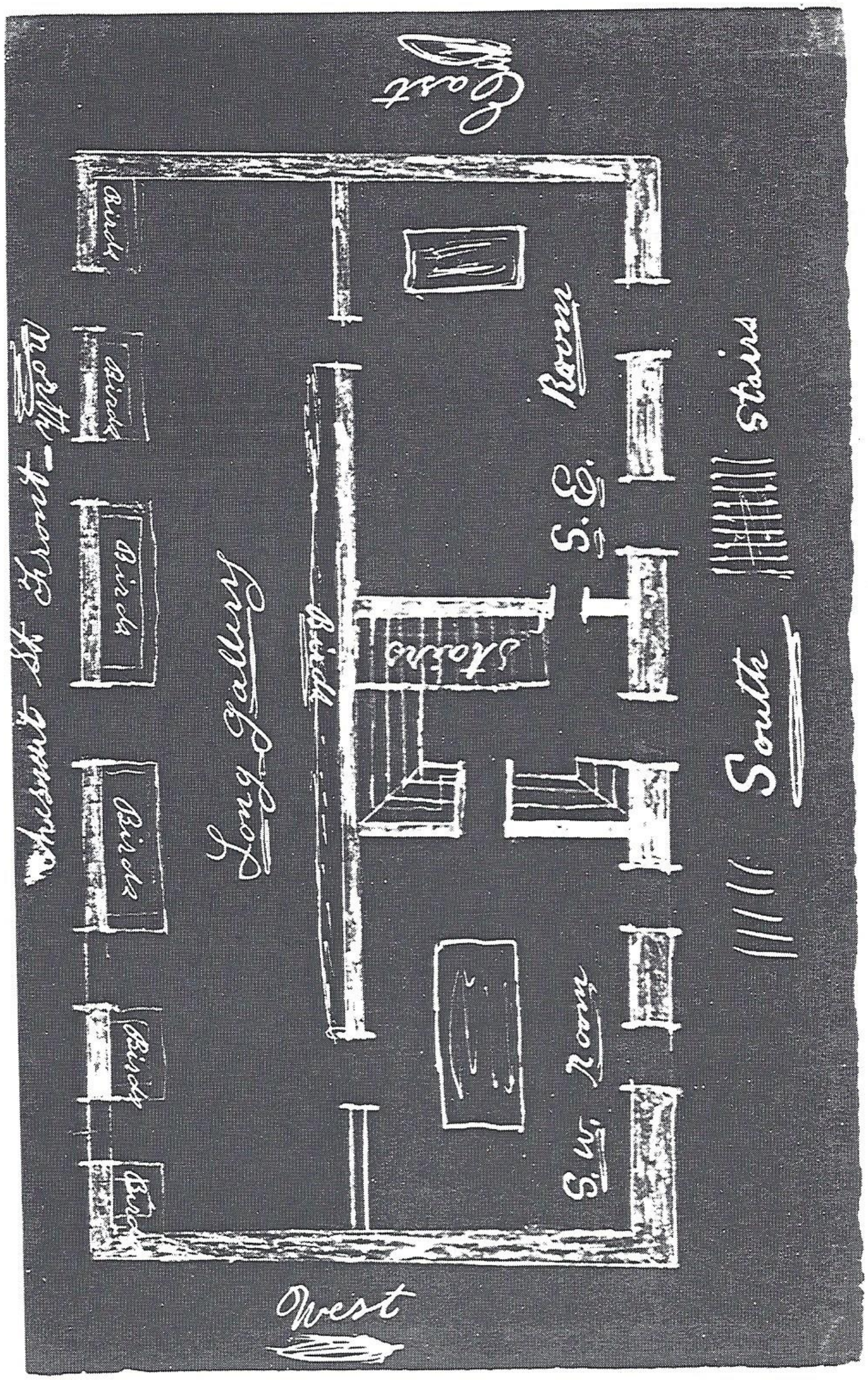


Illustration 11

Graphic records of the arrangement of the second floor of Independence Hall are so far non-existent for the period between C. W. Peale's Museum and the major alteration made for the 1854 City of Philadelphia Select and Common Council Chamber occupancy. Here, from COHEN'S PHILADELPHIA CITY GUIDE, published in 1860, along with an account of the history of "The State House", was this PLAN OF COUNCIL CHAMBERS (INHP photostat 1082).

With the 1854 consolidation of the City and its surrounding districts the Councils increased in members and needed larger meeting rooms. The second floor of Independence Hall was completely renovated to house the Common Council in one large room at the west end and the Select Council in a somewhat smaller room at the east end.

The purpose of these plans was to report who the Councilmen were, the members' ward numbers, and the relationship of their desks to each other at that time.

If one took this representation literally one would expect the President of the Common Council to be seated along the center of the north wall of their large west room, and the President of the Select Council to be at the center of the north wall of their east room.

A Nov. 29, 1854 Public Ledger article wrote of a portrait of Washington being placed behind the President of the Select Council's chair, and "a handsome niche" in the rear of the President of Common Council. Both these features can be seen in 1890s photographs of these chambers (Illustrations 13, 17, 18, 21, 22 and 25) at the east and west ends of the building. Thus in 1854 the chambers were oriented east-west, with the Presidents' desks at the east and west end walls, not as shown in these furniture plans.

PLAN OF COUNCIL CHAMBERS.

* The Number is the Member's Ward.

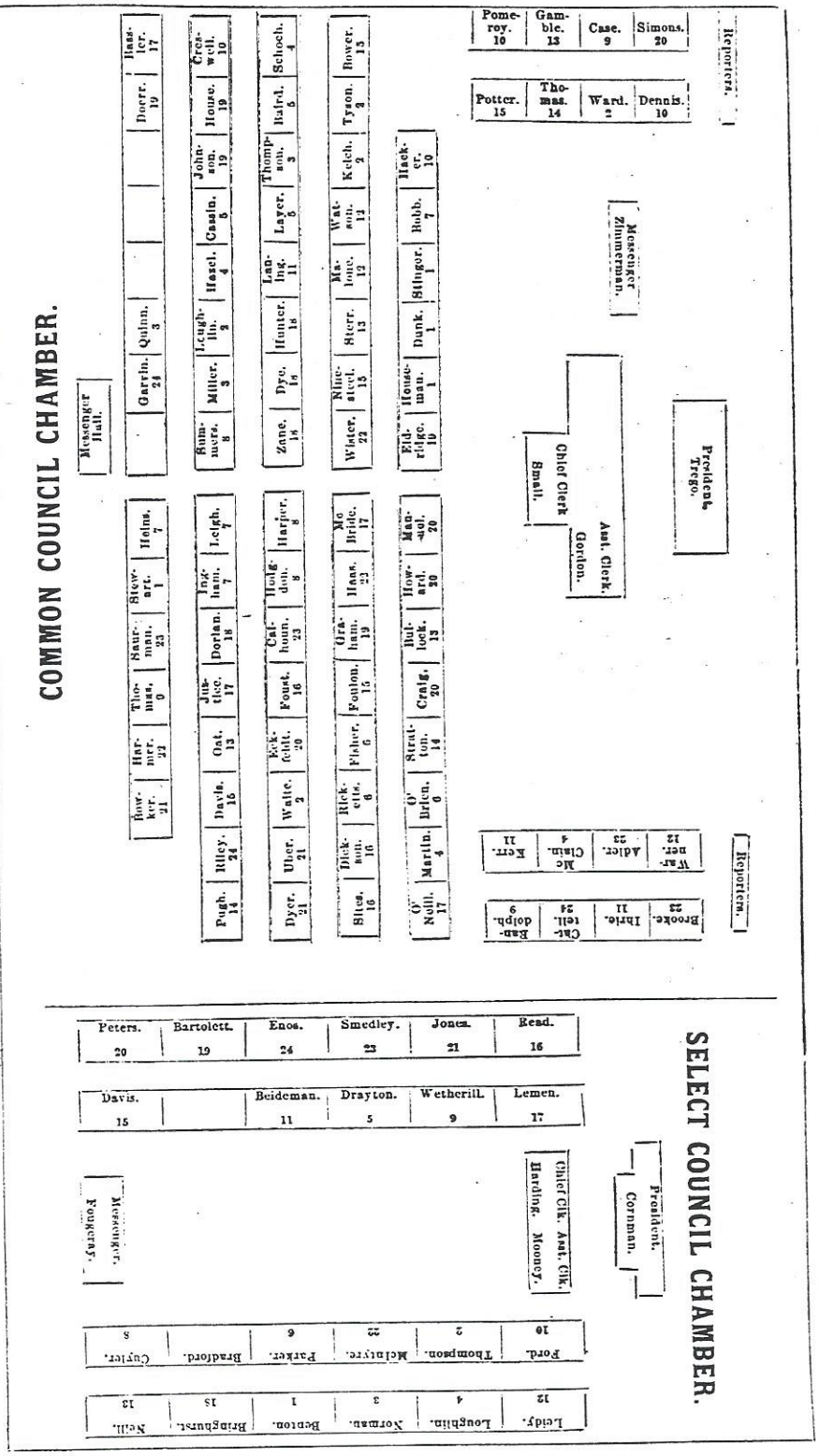


Illustration 12

The 1854 renovations of the second floor included the most up-to-date heating methods:

"The New Council Rooms ...are to be heated and ventilated by the Chilson & Emerson apparatus which will secure a healthy atmosphere for the city fathers during their deliberations, and prevent the safety of this time-honored edifice being endangered by the ancient method of heating rooms with stoves as heretofore." Public Ledger, Aug. 29, 1854.

"Improvements at the State-House...in the basement, two of Chilson's furnaces have been introduced, for the purpose of warming the building. One is under Independence Hall, and the other the Common Pleas Room..." Public Ledger Dec. 9, 1854.

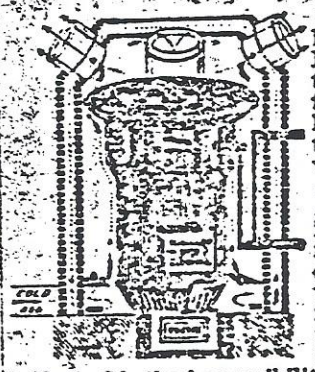
"CHILSON'S PATENT Air Warming and Ventilating Furnace" is here advertised in The Boston Almanac For the Year 1851, Damrell & Moore and George Coolidge, Boston. Copy in the collection of Penelope Hartshorne Batcheler.

Illustration 12

CHILSON'S PATENT

Air Warming and Ventilating Furnace,

The Final Improvements Patented Nov. 19th, 1850.



We have four sizes of the above Furnaces, adapted to all classes of Buildings, for Coal or Wood. The thorough practical tests to which these Furnaces have been subjected, have proved them to be far superior to all other plans for warming and ventilating *Dwellings, School Houses, Churches; Court Houses; Hospitals, Stores*, &c., in this, and it is believed in any other part of the world. The following are some of its superior qualities:—1st, the admission into the rooms of an abundant supply of pure, fresh, healthful warm air, free from the burnt odor common to red-hot iron pots or plates; 2d, great economy in fuel; 3d, the impossibility of the escape of gas into the rooms; 4th, the substantial construction of all its parts, ensures great durability, beyond every thing of the furnace kind heretofore made; 5th, the ease and facility of management, it not being complicated, but easily accessible in all its parts; 6th, the shortness of time required to warm the apartments; 7th, the prevention of the escape and waste of heat through the brick walls into the cellar; 8th, the impossibility of firing buildings, there being no chance of getting the smoke pipe red-hot; 9th, the peculiar construction of the Furnace, as it requires no repairs to be made, the fuel being burned in stone or brick.

ALSO, THE BOSTON SCHOOL VENTILATING STOVE, Dr. Clark's Patent,—five sizes,—for thoroughly warming and ventilating School Rooms, Dwellings, Halls, Railroad Cars, &c., with fresh, healthful air.

Also, five sizes of a superior *Portable* VENTILATING FURNACE.

CHILSON'S PATENT PORTABLE FUEL-SAVING AND VENTILATING OPEN GRATE; three sizes, of a new and beautiful design, on an entirely new principle, securing all the heat from the fuel consumed, combined with a hot-air chamber, which secures a healthful circulation of warm air in the rooms for ventilation.

CHILSON'S PATENT PERFECT PARLOR STOVE, the most elegant and perfectly constructed Parlor Stove ever sold. One ton of Coal is calculated to warm a parlor one winter.

Together with the most extensive assortment of the latest patterns of

Cooking, Parlor, Chamber, Hall, and Store Stoves,

for Coal or Wood, ever found in any one establishment.

Also a full assortment of Parlor and Chamber FRAME GRATES, of elegant patterns; a full assortment of the new and beautiful Mirror Marble Chimney Pieces. Tin, Sheet Iron, and Copper Work. Particular attention given to Warming and Ventilating Buildings in any part of the Country.

CHILSON, RICHARDSON & CO.,

51 & 53 Blackstone St., Boston.

Illustration 13

"CHAMBER OF COMMON COUNCIL OF PHILADELPHIA, Session April 11, 1893" from the book Government of Philadelphia 1892, by George Vickers (INHP neg. 6256).

This group portrait of the almost completely mustachioed Common Council members shows the west wall of the room with the President's niche in the center. It is hard to believe that the cameraman is standing in what was once the Long Gallery, and the windows at left once lighted the southwest room used by the Provincial Governor and his Council.

The bookcases in the northwest and southwest corners are likely those referred to in a November 29, 1854 Public Ledger article saying of the Common Council "there will be in this room two handsome bookcases for the Library."

The second floor west end was opened up into one large square room for the first time in 1829-30, to house the U.S. District Court. For this change the original 1733 west center truss partition was removed, and the floor of the new Court Room supported from below by four columns. These columns continued to support the second floor throughout the rest of the nineteenth century when the Common Council met here.

Illustration 13



CHAMBER OF COMMON COUNCIL OF PHILADELPHIA. Session April 11, 1893.

Illustration 14

"CHAMBER OF SELECT COUNCIL OF PHILADELPHIA, Session April 11, 1893" from the book Government of Philadelphia, 1892, by George Vickers (INHP negative 6154).

The window at right once lit the southeast provincial government Committee Room, and the photographer was standing in what would have been the Long Gallery. The contrasts of this view and Illustration 13 with those of Charles Willson Peale's Museum, Illustrations 5 and 6, exemplify the enormous changes that the second floor of Independence Hall has undergone over time.

This east end space was first opened into one room in 1778-9 for the use of the Pennsylvania Assembly; Charles Willson Peale in 1802 divided it again to recreate the original plan with the Long Gallery. Here we see a second large room created in 1854, for the use of the City's Select Council, by removing the Long Gallery partition which Peale had put back.

To support the Select Council floor, four hangers from the garret trusses were introduced, two of which are seen here.



CHAMBER OF SELECT COUNCIL OF PHILADELPHIA. Session April 11, 1893.

Illustration 14

Illustration 15

This c. 1895 photograph, stamped "R. NEWEL & SON, PHILA.", recorded the approach to the second floor City Council Chambers (collection of the Atwater Kent Museum, copy negative INHP 157.5312A).

One walked up the original staircase of the Tower Stairhall with its original Corinthian cornice, passing on the left one of the two 1828 steeple clock weight chutes, and upon arrival at the top landing, faced a small stair which led up to the steeple and garret; in a closet beneath it was a toilet for use of the Councils (note vent pipe in NE corner).

The hand rail, balusters and carved tread-end brackets of this small stair had been part of the original 1750s second floor Lobby stair, having been moved to this location in 1854 as part of the major renovations to make way for the City Council chambers.

The original 1750s archway leading to the second floor rooms has here been closed with a transom bar and fanlight, and a pair of octagonal panel double doors which are believed to have been installed in 1854. Each door has a glass panel with gold lettering announcing "Council Chambers", possibly later additions.

Illustration 26

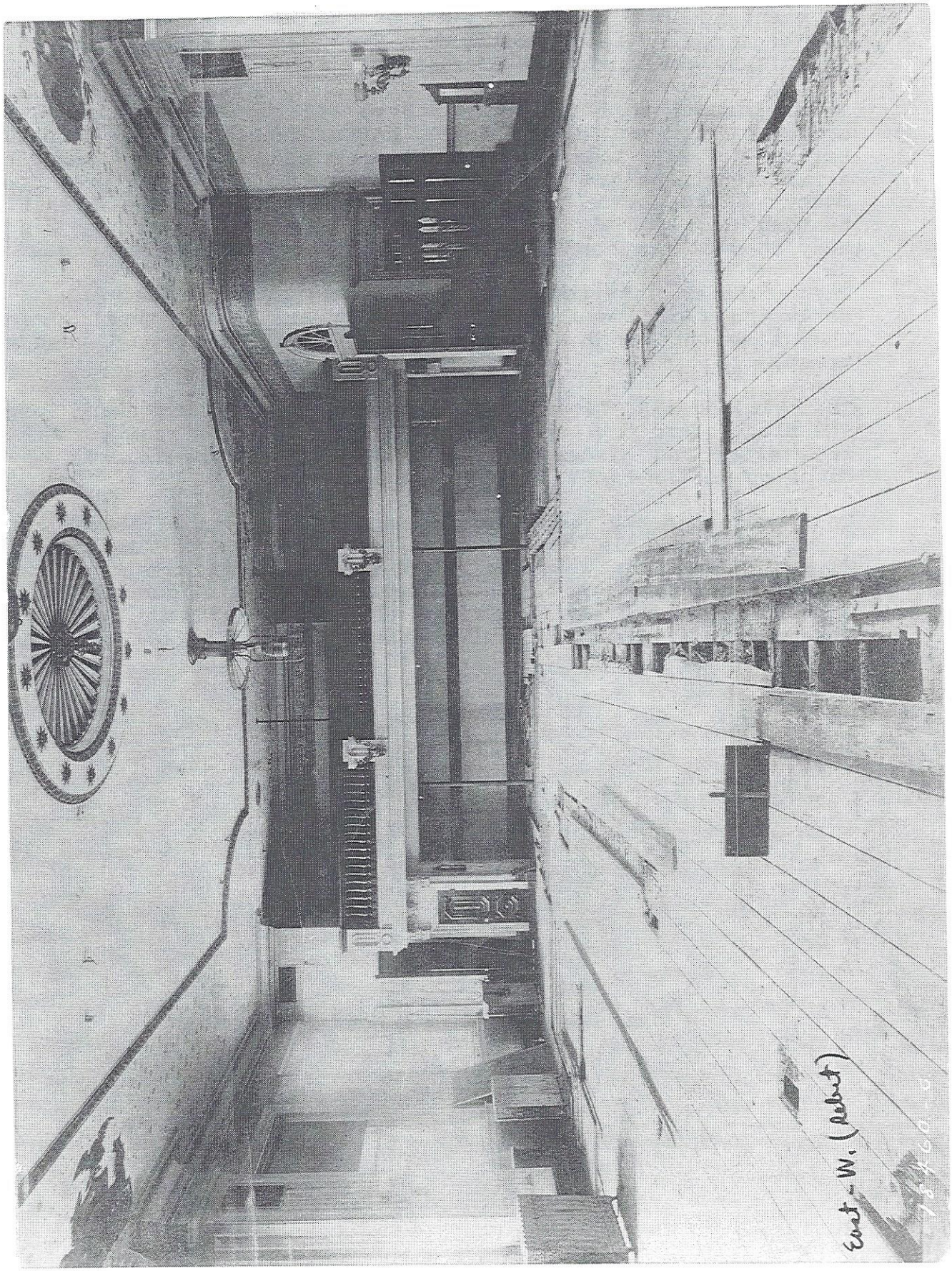


Illustration 27

Independence Hall second floor east end looking east. Photograph for engineering report of Wilson Bros. & Co. taken c. April 10, 1896 (INHP copy negative CN-18460-B).

The Select Council furnishings have all been removed except the octagonal paneled, curved front, corner cupboards, the Cornelius, Baker & Co. wall sconces and a safe which had been concealed behind a full length portrait of George Washington behind the President's desk. At the outer corners of the east wall chimney breast are heating duct outlets. The original flooring apparently was cut away to meet the configuration of the President's platform.

The engineers stretched a north-south level line to show the deflected floor resulting from the numerous structural changes. They also uncovered the bottom chord of the 1733 east-west wall truss.

The original 1733 flooring shows boards of great width and length. The floor board pattern was recorded in the 1960s from evidence on the joists and girders, despite the unfortunate removal of the flooring in the 1920s (see Illustration 50).

Uncovered upon the removal of bookcases shown in Illustrations 21 & 22, we are able to see here probably 1854 wall decoration. Either painted or wallpaper, the heavy molded octagonal raised paneling relates in style to the octagonal paneled cupboards in the corners here, and the bookcases, doors, and gallery rail of the Common Council shown in Illustrations 25 and 26, all believed to date from 1854.

Illustration 27

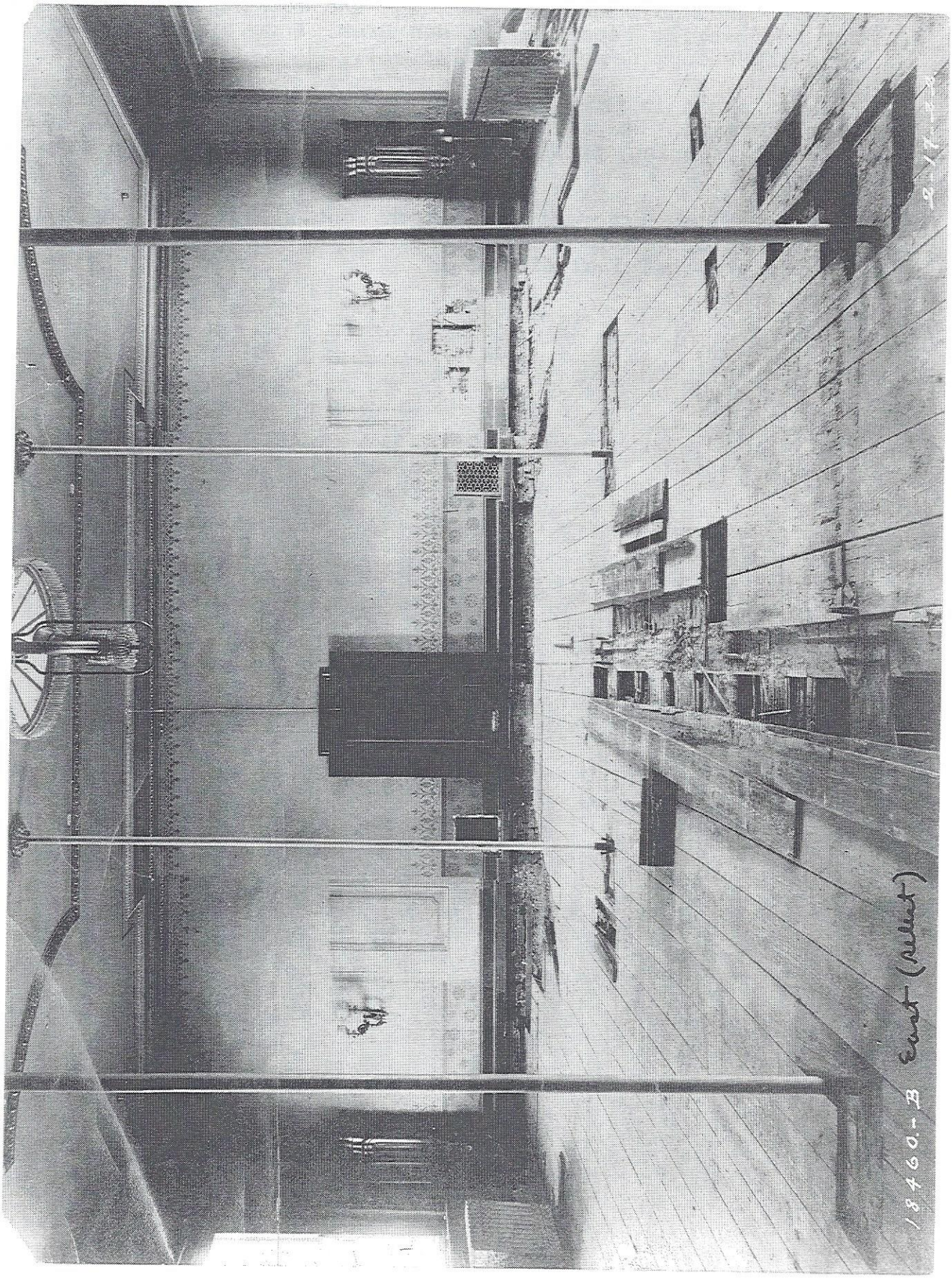


Illustration 28

Independence Hall second floor east end looking west. Photograph for engineering report of Wilson Bros. & Co. taken c. April 10, 1896 (INHP copy negative CN-18460-A).

Clearly shown in this photograph are the remaining 1854 furred-up floor boards, on sleepers, which apparently had covered the original flooring, providing level floors for the Common and Select Councils.

For the 1960s restoration research, one wishes that the National Park Service architects could have had the benefit of the encapsulated original flooring.

Illustration 28

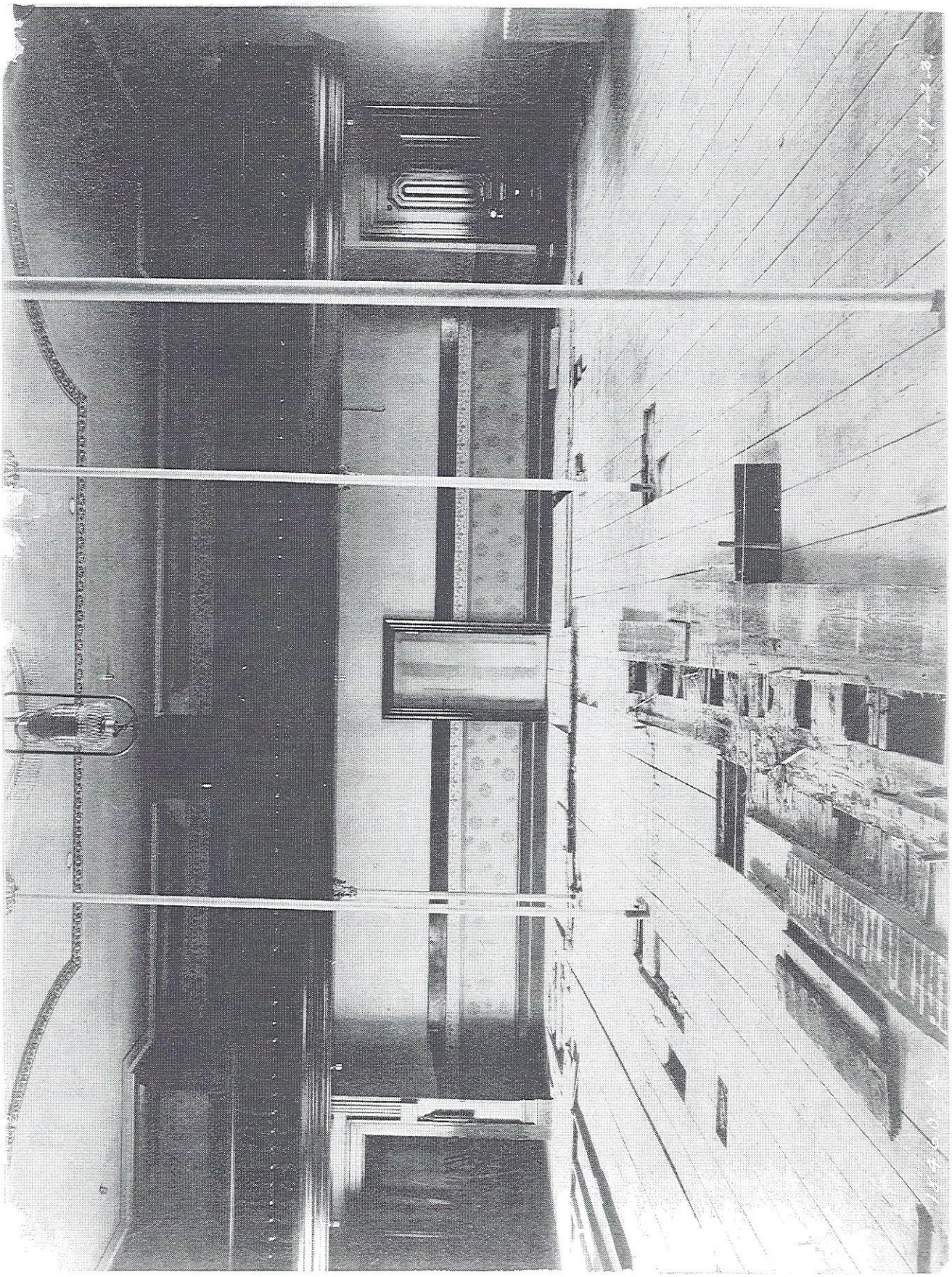
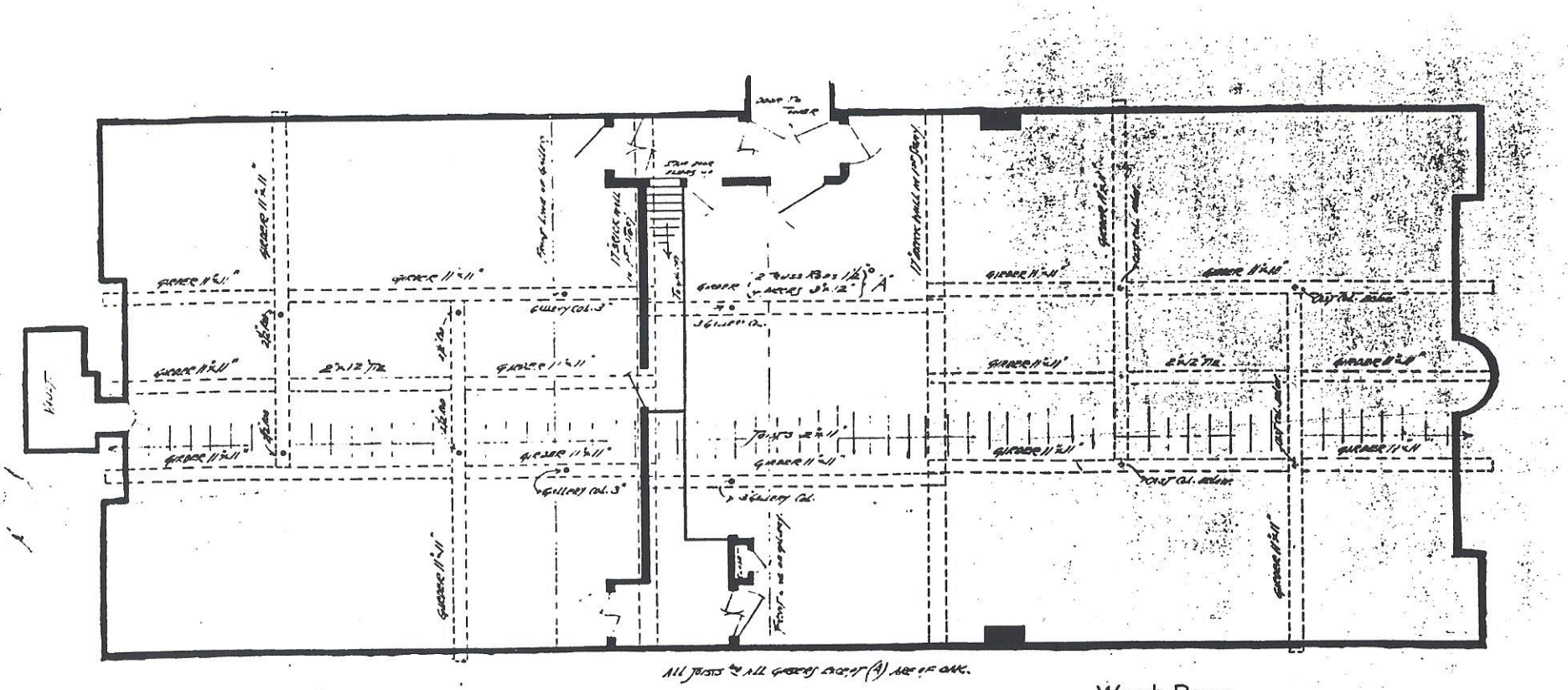


Illustration 29

"Plan of Second Floor of INDEPENDENCE HALL PHILADA." by Wilson Bros. & Co. Civil Engineers & Architects (INHP photostat 1089). This survey plan was sent to Alfred S. Eisenhower, Chief of the Bureau of City Property, along with a letter dated April 25, 1896 (Horace Wells Sellers Collection, INHP Cat. 4301).

Although not to scale, the plan records the partitions, etc. of the Common and Select Council Chambers from 1869-1896. The plan successfully recorded the status of the second floor structural framing, including the 1733 hand-in-hand floor framing system and the surviving original 1733 east-west center wall truss bottom chords, which were made up of three members, two 11" x 11" timbers connected by 2" x 12" plates. (The NPS recorded these plates as being 2" x 11").

The preceding Illustrations 25-28 will be better understood with reference to this plan.



Plan of Second Floor of

INDEPENDENCE HALL PHILADA.

Scale $\frac{1}{8}$ inch per foot

Approved Wm. M. Meredith

Approved Wm. C. Haddock

Approved A. C. Eisenhower

No. 24024
Wilson Bros. & Co.
Civil Engineers & Architects
Drexel Building Phila

Illustration 29

Illustration 30

The 1896-7 "restoration" of the Independence Hall second floor; view looking from the Long Gallery south through the Lobby toward the 1750s original archway, here filled with a transom, fanlight and double doors. Photograph by F. Cousins Art Co., Salem, Massachusetts, undated, INHP H. W. Sellers Collection, copy negative INHP 7350.

Architect T. Mellon Rogers volunteered his services for this 1897 restoration funded by the Daughters of the American Revolution. He and his advisors relied on the 1732 preliminary drawings found at the Historical Society of Pennsylvania for several details, particularly the wide opening to the Lobby (see Illustrations 1 and 2).

Rogers looked at the original flooring uncovered by the engineers Wilson & Bros. Co. (Illustrations 25-28) to approximately locate the doorways to the southeast and southwest rooms, but, if he saw any, he did not accept the evidence for the center opening to the Lobby.

Rogers was inspired to frame this center opening with paired columns when shown by Mrs. Chew a similar composition at her 1760s house, "Cliveden", in Germantown. The broad triangular pediment with fanlight is completely a Rogers creation. The fanlight was no doubt meant to echo the one at that time in the 1750s archway leading to the Tower Stairhall. The resulting design of this wide opening soon came under criticism by Philadelphia architects saying that it wasn't even an accurate copy of "Cliveden's".

Illustration 30

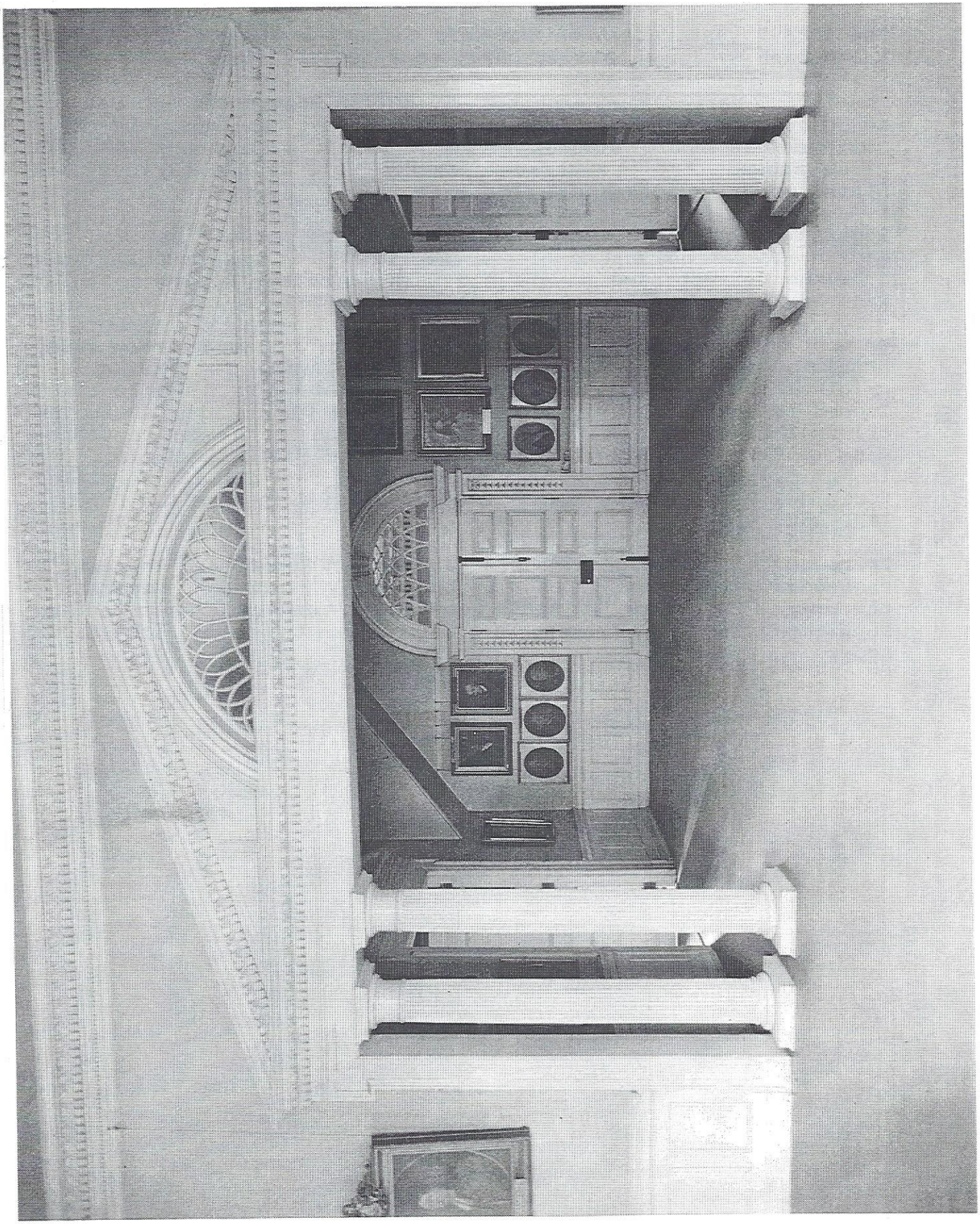


Illustration 31

The 1896-7 restoration of the Long Gallery looking east c. 1898. Photograph by James Stokley, Jr., copy negative INHP 7352.

The 1896-7 restoration architect T. Mellon Rogers did not see, or he ignored the evidence for the original cove ceilings, the chair rail and baseboard without wainscot paneling, and the evidence which showed that the chimney breasts were originally enclosed behind paneling across the room ends.

Rogers was quoted: "As, step by step, the workmen removed the modern alterations and disclosed the old work it was found that our drawings corresponded to the old work." (Letter Rogers to Ellen Waln Harrison, Harrison Papers, INHP cat. 4260.)

We must give Rogers credit for retaining the original window sash, architraves and splayed jambs, and continuing to protect the original flooring beneath his new narrow board furred-up flooring. Indeed this view shows his response to the DAR's interest in the original flooring. At left you see centered in the length of the Long Gallery a chained off section of the floor which, for its ingenuity, rated a sketch in a newspaper of Feb. 20, 1897 entitled "Original Floor Boards Under Glass" (Ellen Waln Harrison Papers, INHP cat. 4260).

In restoring the original second floor plan Rogers and the City's engineers reinstalled trusses in the center partitions separating the Long Gallery from the south rooms. They understood the need to supplement the floor framing in order to span the large first floor rooms.

Illustration 31

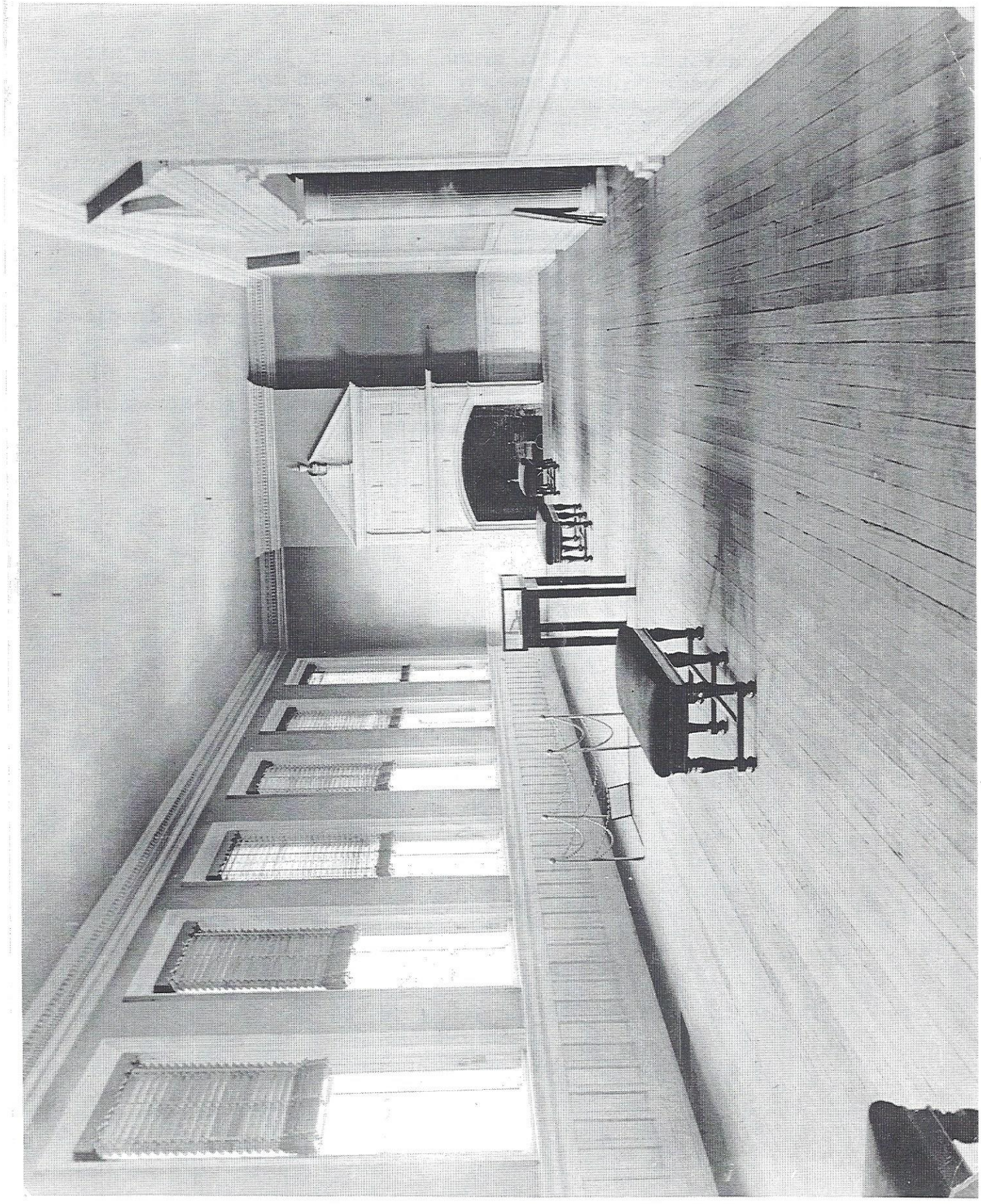


Illustration 32

The 1896-7 restoration of the second floor of Independence Hall, Long Gallery, west chimney breast. Photograph by F. Cousins Art Co., Salem, Massachusetts, undated, INHP H. W. Sellers Collection, copy negative INHP 8684.

T. Mellon Rogers' designs for the chimney breasts had no stylistic relationship to the original Independence Hall woodwork, nor did he recognize evidence that indicated the chimney breasts originally stood behind end wall paneling. Instead, Rogers and his advisors depended on the 1732 preliminary drawing (Illustration 1) which showed projecting chimney breasts.

His arched fireplace openings could also have been wrongly inspired by the preliminary drawing (Illustration 1) which shows its fireplaces in plan with a concave curved line in front.

Rogers,however, did find the fireplace hearths with some remaining square hearth bricks, which he correctly reproduced.

Illustration 32

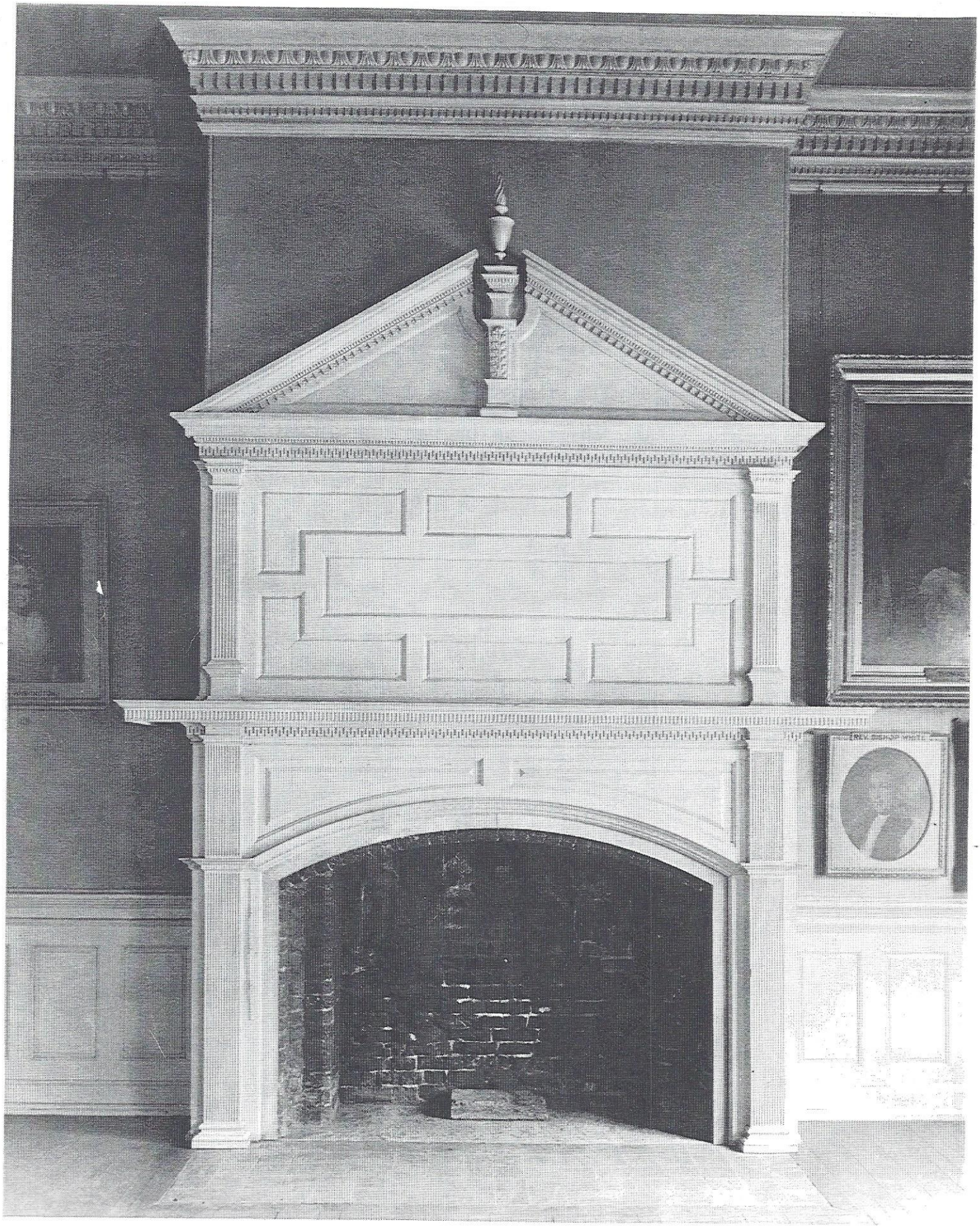


Illustration 33

"The Scene at Independence Hall" on February 19, 1897, at the completion of the second floor restoration by T. Mellon Rogers and the Daughters of the American Revolution. This sketch, in the Gibson Girl era, shows the well-intentioned, patriotic sponsors as they "turned over" the restored rooms to the city government. (Philadelphia Inquirer, Sat., Feb. 20, 1897, clipping in the Harrison Collection, INHP catalogue 4260).

The article began:

> "If George Washington, Thomas Jefferson or any of the famous men who had to do with affairs of state a century and a quarter ago were to climb the broad stairway to the second floor of Independence Hall to-day they would probably turn to each other and say: "Well, things haven't changed much up here since we took our departure have they?'"

The ceremony opened with "inspiring strains of "The Star-Spangle Banner." Speeches were accompanied with "the orchestra" playing "Hail Columbia." And the occasion was concluded by "A historical address by Charlemagne Tower and the singing of 'America'."

IN COLONIAL DAYS

Rooms on Second Floor of Independence Hall Restored to Their Original State.

TURNED OVER TO THE CITY

Daughters of American Revolution Complete Their Self-Imposed Task—Appropriate Exercises Held Yesterday.

THE RESTORATION OF THE ROOMS on the second floor of the old State House having been completed they were yesterday turned over to the city by the Daughters of the American Revolution with simple but interesting exercises participated in by Mayor Warwick and other city officials.

If George Washington, Thomas Jefferson or any of the famous men who had to do with affairs of state a century and a quarter ago were to climb the broad stairway to the second floor of Independence Hall to-day they would probably turn to each other and say:

"Well, things haven't changed much up here since we took our departure, have they?"

The remark would be well founded. Yesterday afternoon, after several months of preparation and several more months of hard work, the long-cherished hopes and plans of the members of Philadelphia Chapter, Daughters of the American Revolution, were brought to a full fruition, and with feelings of satisfaction they turned over to the city the banquet hall and assembly chambers of the venerable old

for the next half hour a continuous stream of others poured into the rooms. Beyond the national colors and the banner of the society, which had the ceremonies in charge, there were no decorations. These were flung to the breeze from the windows of the long banqueting room.

MANY WERE PRESENT.

At 3.30 o'clock the second floor of the building held all the people that could be crowded into it. They included, in addition to the members of the Daughters of the American Revolution, Mayor Warwick, Director of Public Safety Riter, Chief Eisenhower, of the Bureau of City Property, Judges Pennypacker and Sulzberger, several members of Councils, representatives of the Society of Colonial Dames, the Society of Colonial Wars, the Society of Cincinnati and of the Sons of the Revolution.

The inspiring strains of "The Star-Spangled Banner" by the orchestra opened the formal exercises. While the music was still echoing through the rooms Mrs. Charles Custis Harrison, Regent of Philadelphia Chapter, Daughters of the American Revolution, who stood with Mayor Warwick on a little raised platform in the centre of the Chestnut street side of the long banqueting room, began the brief address with which she turned over to the Mayor the keys of the restored chambers. Mrs. Harrison's concluding words were as follows:

"Can you doubt that it is with a just pride in our work, which we believe to be a 'perfect restoration,' that we have the honor to-day to return to the city of Philadelphia, through your Honor, the Mayor, and you, Gentlemen of Councils, the banqueting room of Independence Hall, restored by the Philadelphia Chapter of the Daughters of the American Revolution?"

Mayor Warwick, after the orchestra had played "Hail Columbia," appropriately replied to Mrs. Harrison. In his reply the Mayor expressed on behalf of the city his appreciation of the painstaking and thorough manner in which the organization of which Mrs. Harrison is the head, had carried out its self-assumed task of restoration.

given them by an ordinance passed by Councils a little over a year ago. An ordinance passed a few months previous gave the society the right to occupy the rooms. Immediately after the passage of the second ordinance a committee, with Mrs. Harrison at the head, went vigorously to work to procure accurate data upon which to base the restoration. The services of Architect Mahlon Rogers, who has had charge of the work ever since, were secured.

The partitions which formerly divided the long banqueting room into Select and Common Council chambers were removed and the galleries taken down. This threw the entire front part of the second story into one room, as it was when the building served as the Assembly meeting place. In tearing up the floor which had lain through all the years that the city had used the building the restorers were astonished and delighted to find the original flooring still in place. On it were yet visible the markings of the original partitions, etc., which proved valuable guides in making the restoration accurate.



THE SCENE AT INDEPENDENCE HALL

SMOKE BLACKENED BRICKS.

At each end of the banquet-room there is a fireplace just as there was when the building passed out of the hands of its designer, in 1736. The same bricks are in these fireplaces, and they are stained and blackened with the smoke from the fires which warmed the room 160 years ago. At the southeast corner of the second floor is the room used by the clerks of the Colonial Assembly, while occupying a similar position at the west end of the floor is the room of the Governor and the Council of the Assembly.

Illustration 34

Members of the Philadelphia Chapter of the American Institute of Architects had been quietly watching the T. Mellon Rogers work progress. Eventually they informed the city officials their lack of faith in Rogers' designs, and began to meet as a committee to suggest what they regarded as more in keeping details.

This drawing was signed by Philadelphia architects Frank Miles Day, Edgar V. Seeler and Walter Cope, and dated Dec. 10, 1898 (original print in the AIA collection at the Philadelphia Athenaeum (INHP Photostat 1064).

But even this drawing admits uncertainty on the AIA's part by offering alternatives "A" & "B" for the treatment of the room ends: "A" with projecting chimney breast, "B" with chimney breast behind paneling.

In response to the public derision of T. Mellon Rogers having been inspired by the wide opening at "Cliveden", in Germantown, and not even copying it correctly, this AIA committee presents a faithful copy of "Cliveden's" entry hall opening, but even they did not study if such an opening was originally at the second floor of Independence Hall.

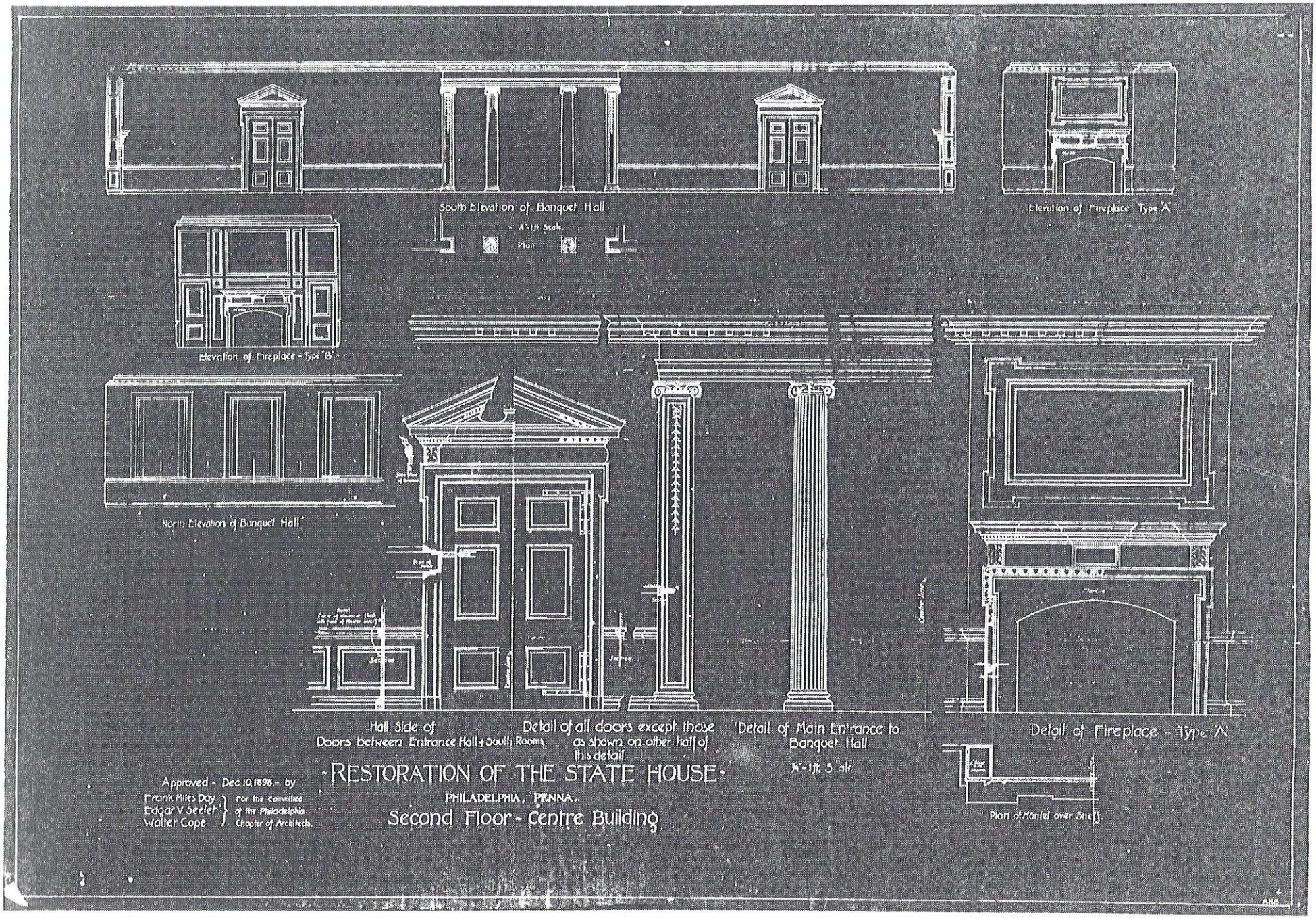


Illustration 34

Illustration 35

The southwest room, looking west, in 1922, as the American Institute of Architects, Philadelphia Chapter, Committee on Preservation of Historic Monuments started to dismantle the T. Mellon Rogers 1897 restoration (INHP negative CN-18935 A).

With Rogers' chimney breast still intact, a portion of his furred-up flooring is removed showing the considerable space between the furred-up floor and the sagging original floor boards below.

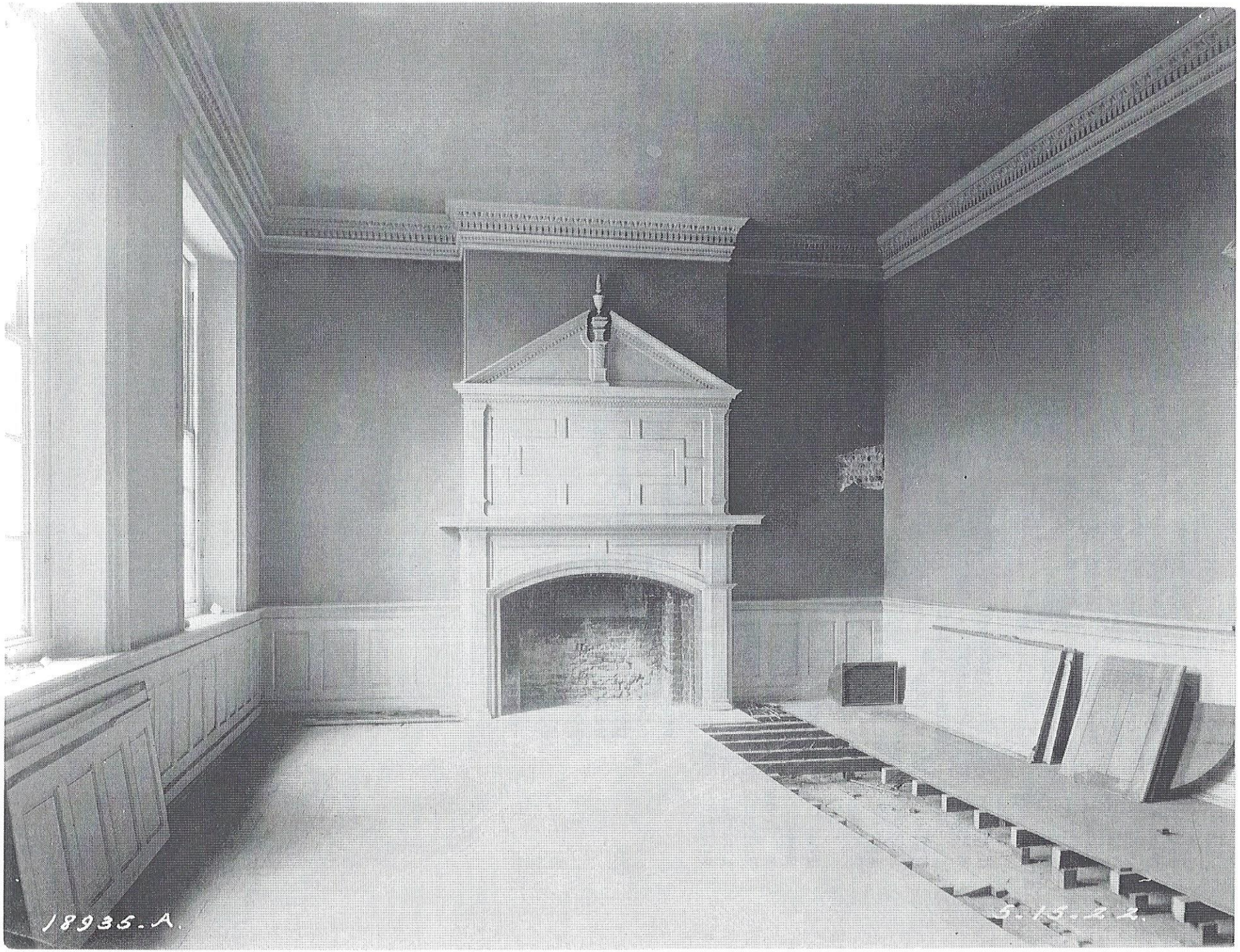


Illustration 35

Illustration 36

The Long Room, looking east in 1922, after the American Institute of Architects, Philadelphia Chapter had removed the T. Mellon Rogers 1897 east chimney breast woodwork (note the lower portion standing to the right against the south wall). Rogers' dado wall paneling has been taken down and holes punched in the plaster partitions and ceiling to examine the hidden structure. Much of Rogers' furred-up flooring has been removed revealing the sagging and patched original flooring (INHP negative CN-18932).

The AIA, Philadelphia Chapter, Committee on Preservation of Historic Monuments, had started their volunteer effort to re-restore the second floor. They recommended on March 1, 1922 that "the entire top flooring should be removed as we would then know exactly what new flooring is necessary if any of the old material is found suitable for reuse." (Letter H. W. Sellers AIA to J. P. B. Sinkler, City Architect, March 1, 1922, Typescript, INHP.)

The City Bureau of Surveys examined the "structural supports to the second floor," and on February 23, 1923, the Bureau of Surveys sent a drawing, report and recommendation to Harry T. Baxter, Chief, Bureau of City Property (H. W. Sellers Collection, INHP cat. 4301, folder 14). They generally found the 1897 reinforced structure of sufficient capacity, but cautioned:

> "Under no consideration permit the plumbers or electricians to cut recesses, for wires or passages of pipes in the floor members. This was done in the past without regard to weakening the floor supports or joists."

Illustration 36

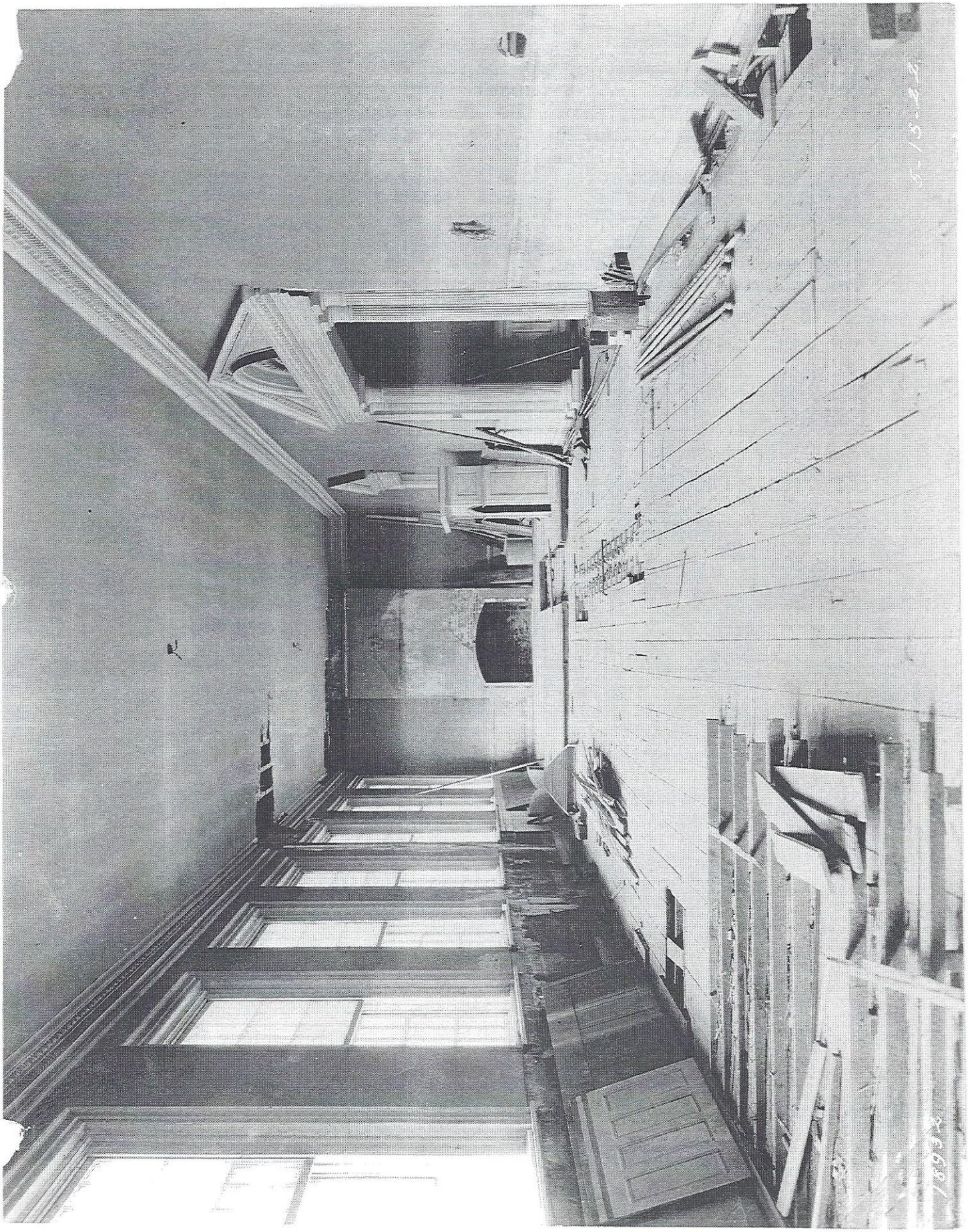


Illustration 37

The southwest corner of southeast room, showing T. Mellon Rogers' individual treatment of pedimented double doors that he believed led to the Lobby, and a closet in the corner which was under the 1854 stair leading from the Tower Stairhall landing up to the garret and tower (INHP negative CN-18934, c. May 15, 1922).

Here the AIA restoration committee was examining not only evidence on the original floor boards (see Illustration 40), but also evidence on the south wall at left. They had the opportunity here, but did not find the evidence of the partition which enclosed the 1733 stair to the garret at this west end of the southeast room. The National Park Service recorded this evidence, and it is discussed in this report in Appendix F.

Illustration 37

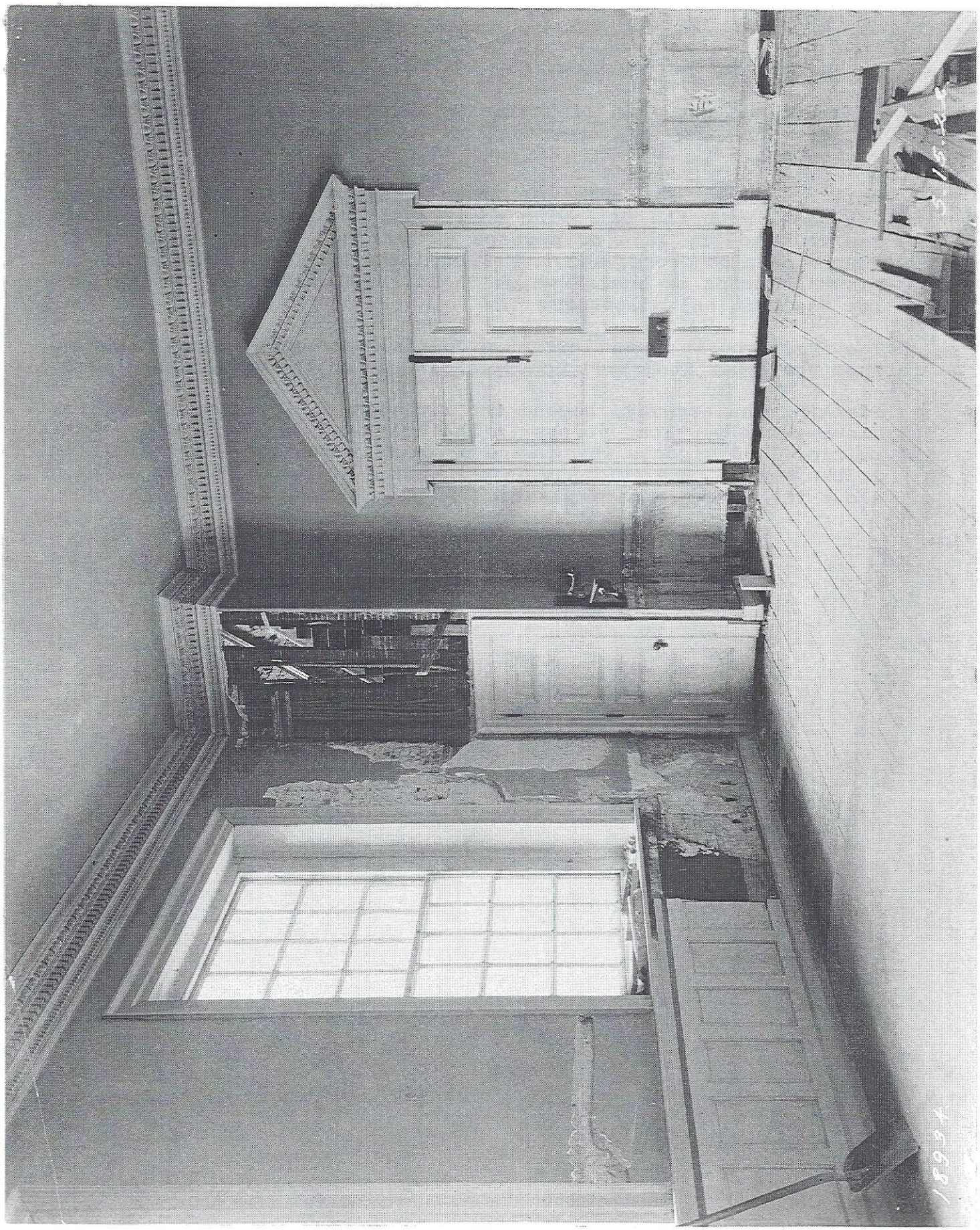


Illustration 38

The Lobby, facing south, c. May 15, 1922 (INHP negative CN-18937).

The evidence noted in Illustration 39, by Architect Horace Wells Sellers of the AIA restoration committee, relates to this photograph.

Note at center the original 1750s archway leading to the Tower Stairhall with the following additions: a Gothic fanlight which was in place by 1854 or perhaps earlier; T. Mellon Rogers' 1897 double paneled doors; and T. Mellon Rogers' cast imitations of the missing "draps of husks" which Samuel Harding had carved in 1755 for the original pilasters.

The stair run at upper left is a continuation of the stair leading from the Tower Stairhall upper landing up to the garret and tower.

Flanking the archway, beyond the two vertical electric conduits, one can see vertical joints in the brickwork which relate to the pair of 1733 windows which were bricked up for the 1750s addition of the tower. The evidence on the west side is at the window head above the large area of plaster.

Illustration 38

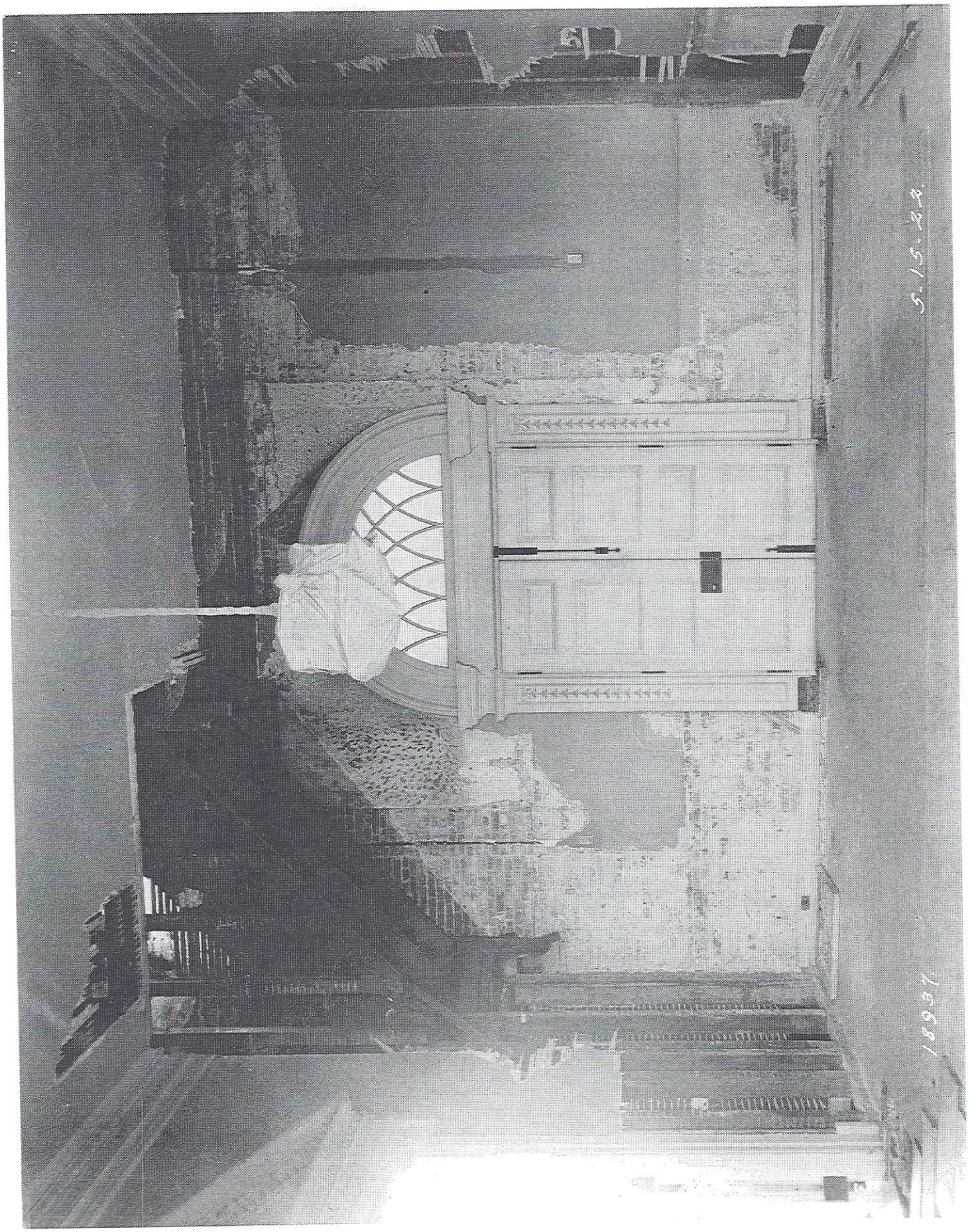


Illustration 39

Sketch of evidence at the south wall of the Lobby made by the AIA restoration committee chairman, architect Horace Wells Sellers, while researching for the re-restoration of the second floor, c. May 1922 (Horace Wells Sellers Collection, INHP catalogue 4301, folder 5).

This sketch and Illustration 40 are the best of Sellers' evidence sketches.

Significant in this sketch is the extent of "original plaster unpainted" and the "iron anchor" at its east edge, 2'-8" east of the archway. This establishes the plane of the Lobby stair paneling. Near the ceiling this plaster area clearly met the sloped soffit of the original Lobby stair as it approached the top landing and garret.

Illustration 39

Lib. Am. Philosophical Society
HORACE WELLS SELLERS COLLECTION
dep. by National Park Service

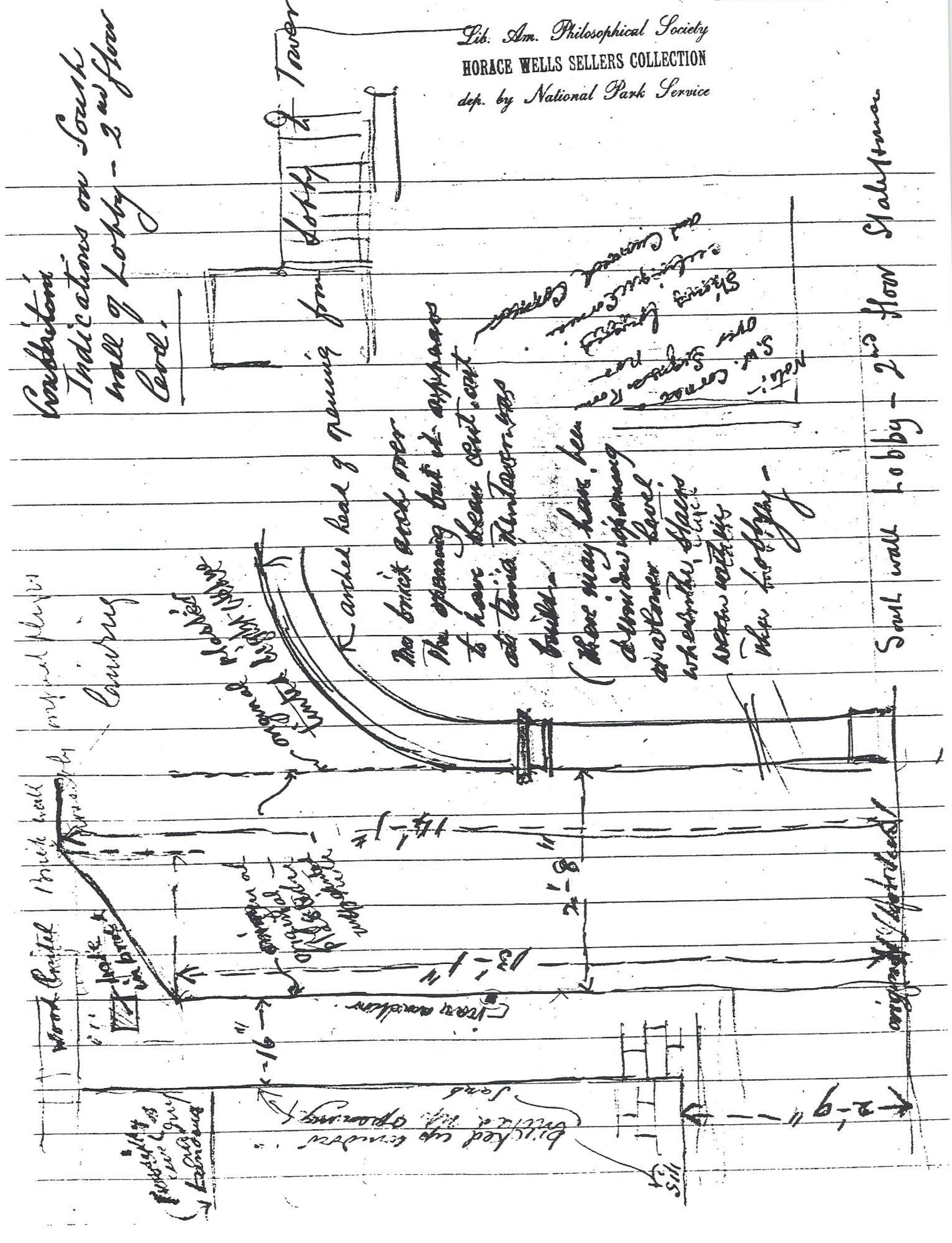


Illustration 40

Sketch of floor evidence at the southeast corner of the Lobby and the southwest corner of the southeast room, made by Philadelphia architect Horace Wells Sellers while researching for the re-restoration of the second floor, c. May 1922 (Horace Wells Sellers Collection, INHP catalogue 4301, folder 14).

The most significant evidence shown here are the dimensions for the Lobby stair width of 40", and the 5′-9" north-south width of the passage leading from the Lobby to the southeast room under the Lobby stair.

The evidence indicating the 40" stair width includes: on the south wall "old plaster stops here," showing where the stair paneled partition met the south wall; and "indications on floor of stair spandrall partition corresponding to width of stairs;" and as well the evidence of the brick north-south partition: "floor boards cut at faces of brick."

The passage width of 5′-9" was evident by "floor shows wear of traffic through floor Lobby to East room."

Illustration 40

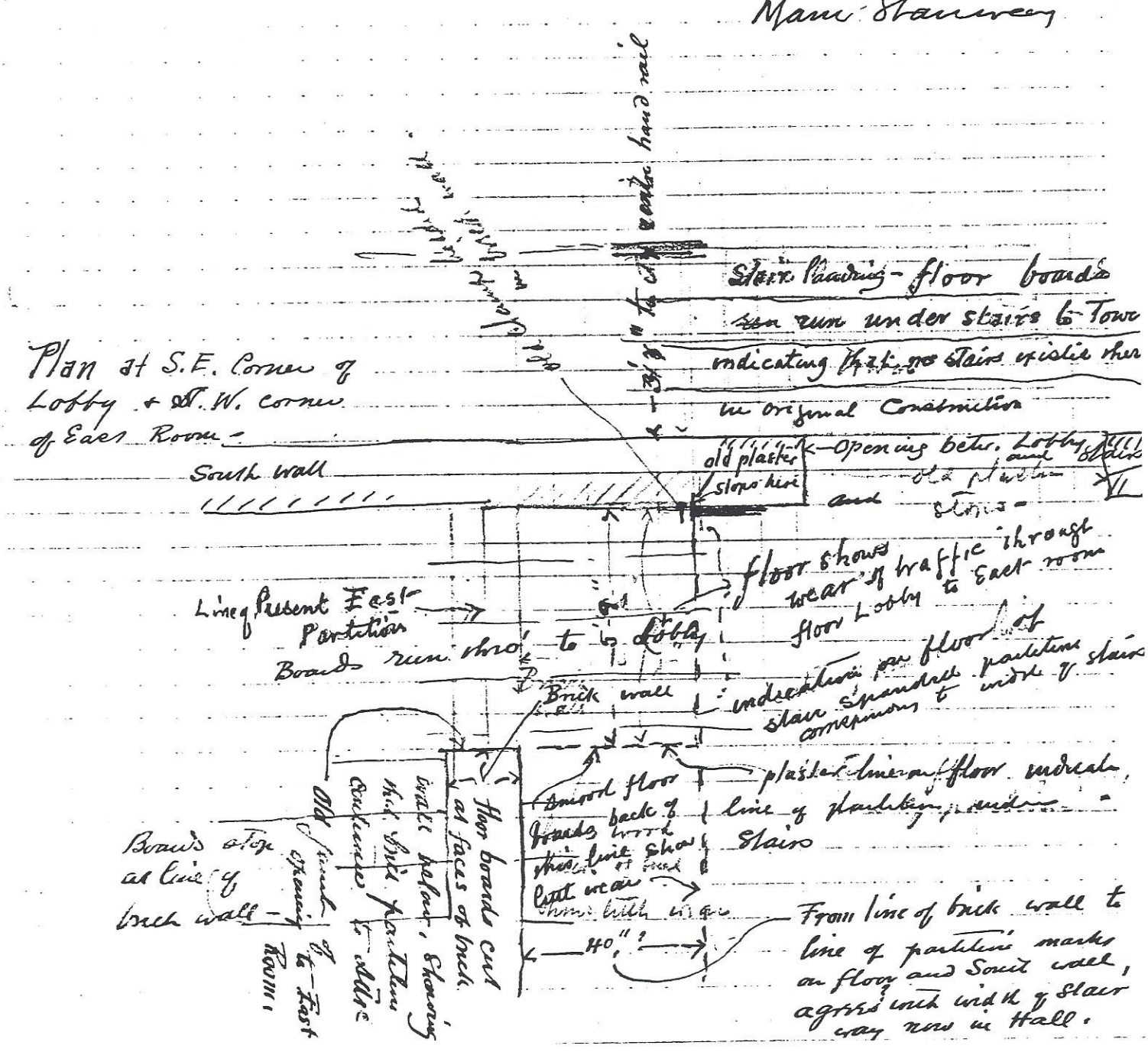


Illustration 41

The Long Gallery looking west, as restored by the American Institute of Architects, Philadelphia Chapter, Committee on Preservation of Historic monuments, January 8, 1924 (INHP negative 21047).

Recognizing that the 1897 restoration had correctly reconstituted the Long Gallery, the AIA retained the 1896-7 trusses within the south partition of the Long Gallery.

Probably due to more knowledge of architectural styles and to better mental discipline, this volunteer committee of architects was able to more accurately restore the second floor than did the 1897 restoration. The following elements were more accurate: the cove cornices, the archway to the Lobby, the end wall chimney breast faced with paneling, baseboards and chair rails without dado paneling.

The details which have since been proven inaccurate are as follows: the architectural order of the Long Gallery proved to be Ionic whereas here the paneling is the most basic use of a Doric crown molding; the NPS found no evidence for closets in the Long Gallery; there is precedent in the building for pediments to have been used above the south room double doorways; the trim paint color originally was not white; and no attempt was made by the AIA to reproduce the original floor in material or board pattern placement.

Illustration 41

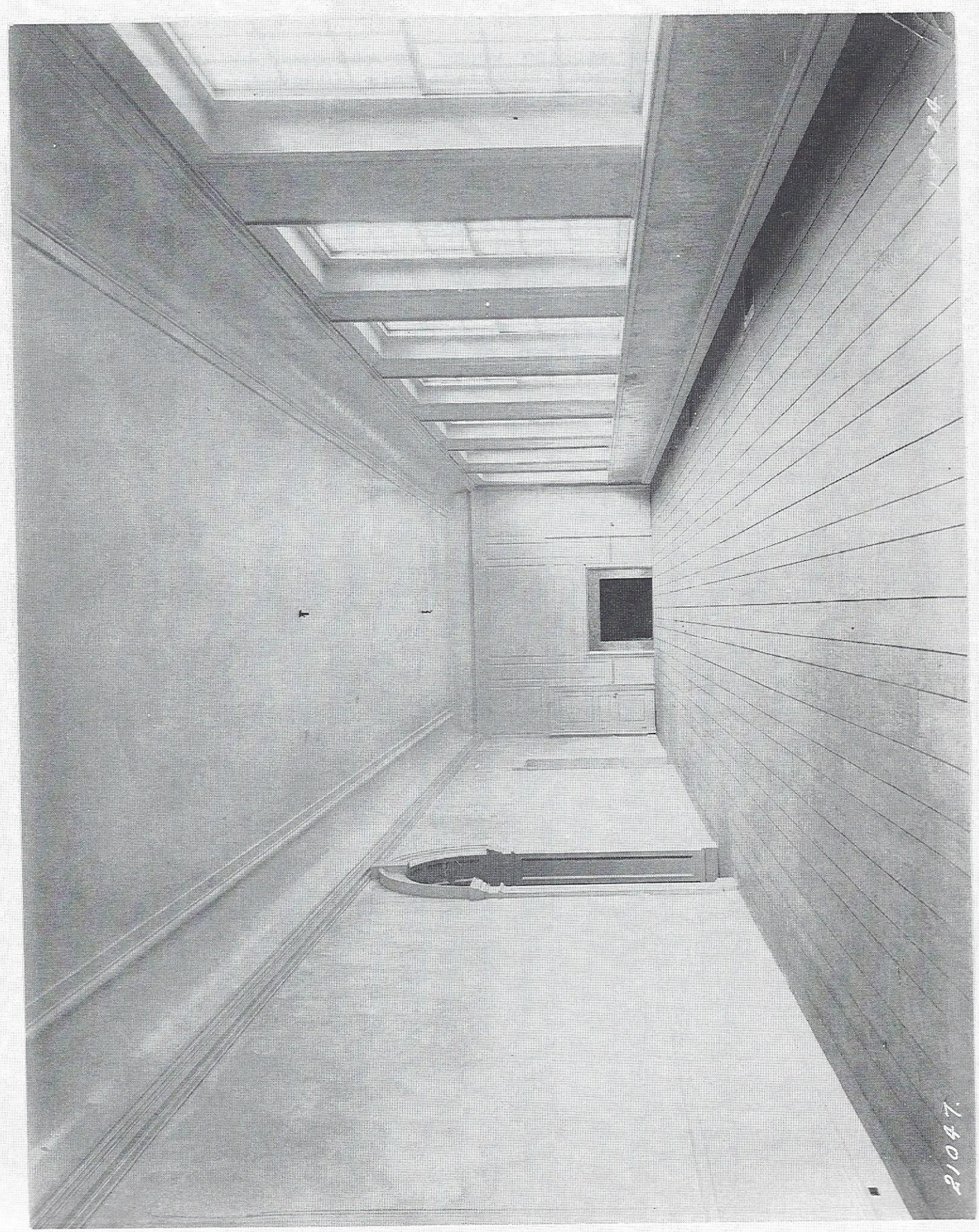


Illustration 42

The southwest room looking west, as restored by the American Institute of Architects, Philadelphia Chapter, Committee on Preservation of Historic Monuments, January 8, 1924 (INHP negative 21046-A).

Besides those comments on inaccuracy observed in Illustration 41, the major inaccuracy here is that the NPS found this room originally was treated with a full Corinthian entablature and not as shown here with just a Doric crown molding.

The other major problem with the AIA restoration is that they discarded most of the original floor boards of the second floor, and assembled here in this room, out of context, those boards felt to be in the best condition. Alas, this was done without recording the original board pattern or intrusion evidence from later changes.

Illustration 42

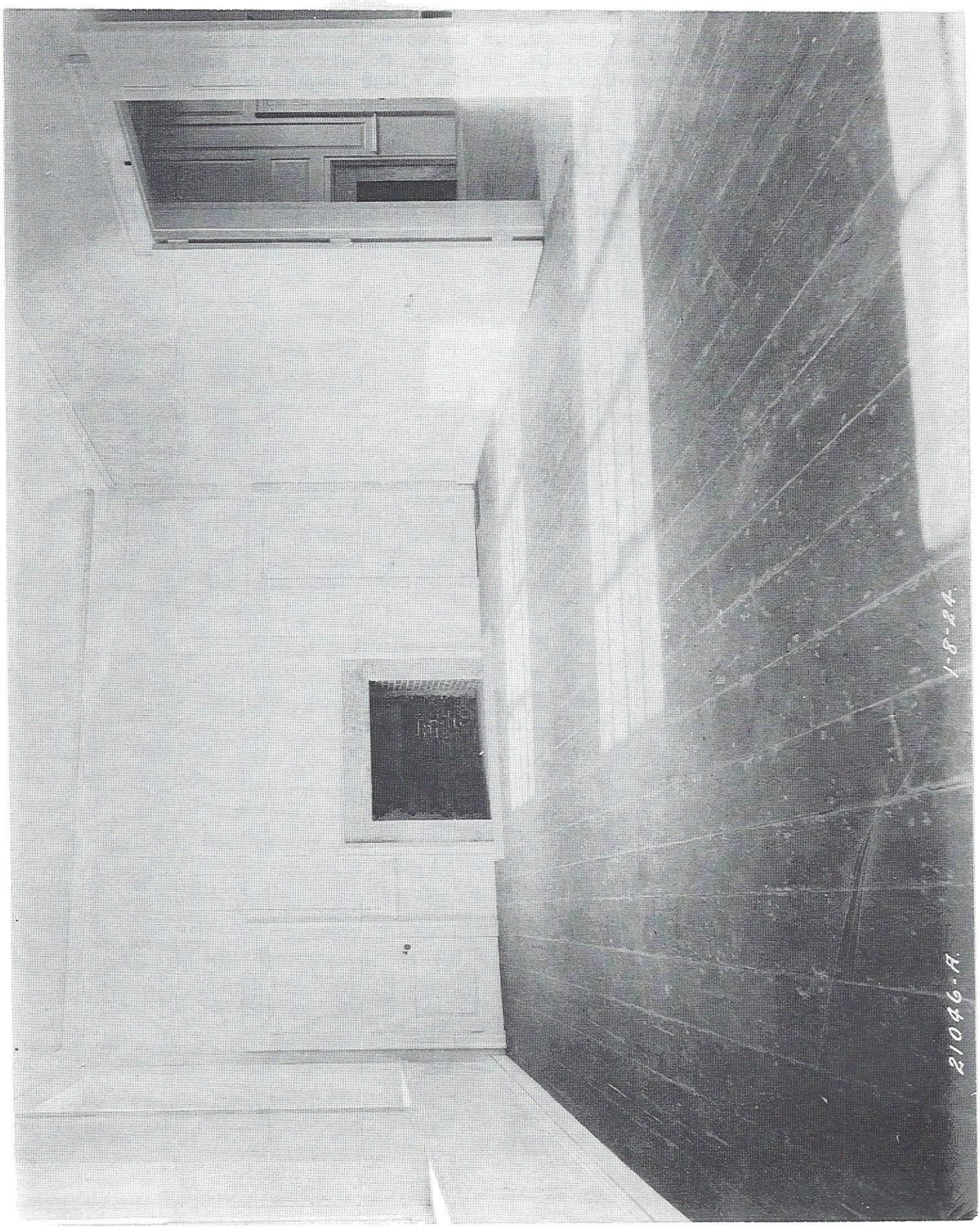


Illustration 43

The Lobby looking northeast, as restored by the American Institute of Architects, Philadelphia, Chapter, Committee on Preservation of Historic Monuments January 8, 1924 (INHP negative 21045).

In addition to the inaccuracies of this restoration listed for Illustrations 41 and 42, the AIA in reconstructing the Lobby stair to the tower and garret completely ignored the fact that Edmund Woolley in the 1750s installed this stair with a "ramp and twist" at its start; and they ignored the evidence the NPS found at the head of the stair for paneled wainscoting along the walls (see Illustration 56).

Illustration 43



Illustration 44

Detail of Lobby stair as restored by the American Institute of Architects, Philadelphia Chapter, Committee on Preservation of Historic Monuments, Photograph by Philip B. Wallace, April 1924 (INHP Library Photo Collection, INHP negative 157.5562).

Of the five carved tread-end brackets photographed, the fourth from the left is an original, carved in 1753 by Samuel Harding: "to 21 brackits for the uper stairs at 5s pr. peice." Although not visible here fifteen of the original balusters were also incorporated in this railing.

Unfortunately the AIA in this restoration ignored an 18th century standard detail: the plinth size of the balusters is usually echoed in the width of the plinths of the tread-end brackets below. Here the bracket plinths are narrower, having been cut down in order to shorten the treads to meet the steeper stair slope of the 1854 stair on the Tower Stairhall top landing. The tops of the balusters were cut off to meet this steeper slope also. The AIA accepted these altered details and thus their reconstructed stair was too steep.

Illustration 44

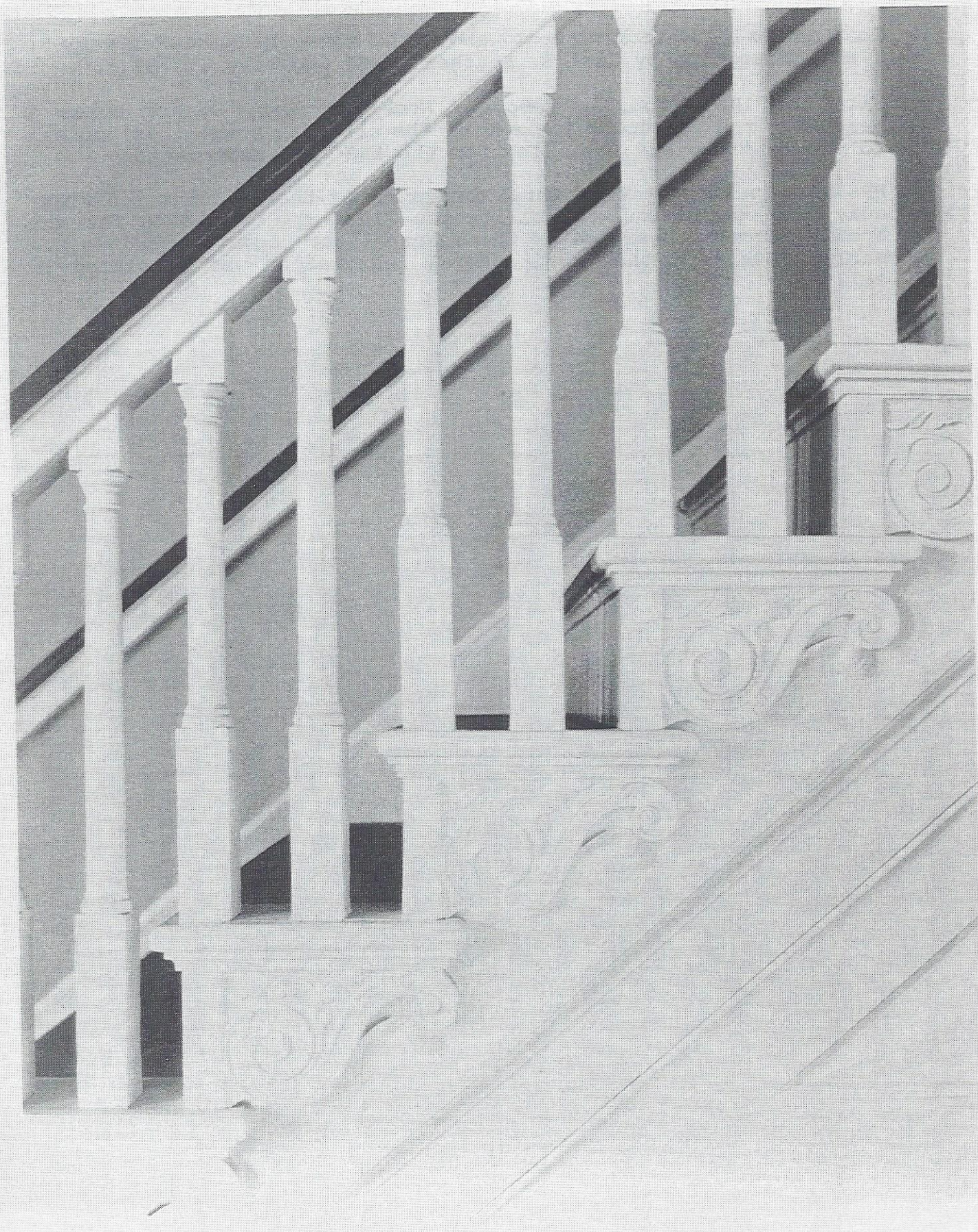


Illustration 45

The Long Gallery looking east, above the Assembly Room, February 5, 1962, photograph by Jack E. Boucher (INHP negative 157.877).

With the 1924 flooring removed, architect Gary Dysert holds a measuring rod to record the sag of the original framing as opposed to the level joists installed for the 1924 AIA restoration.

NPS concern for the structural integrity of the building led right away to a structural rehabilitation (1962-3). Research for the architectural appearance of the second floor rooms started in the early 1960s, and the architectural restoration was completed in 1972.

Illustration 45



Illustration 46

View of second floor of Independence Hall; photograph by George Eisenman for James L. Dillon Inc., November 4, 1964 (INHP negative 157.1737).

The photographer was standing in the area of the original Lobby with his camera aimed at the west end wall, showing the fireplace flues of the southwest room and the Long Gallery.

The photograph was taken to record the steel plate girder supported at its ends by columns bearing on the first floor brickwork. The hangers between support the original second floor structural members and its more modern reinforcing.

Installed in December 1962 this plate girder and its mate at the east end of the building are enclosed within the partitions separating the Long Gallery from the southeast and southwest rooms, just as trusses were enclosed in partitions at these locations in the 1733 construction.

The workmen are installing supplemental joists in the spaces between each original joist onto which the new flooring will be nailed.

Illustration 46

Illustration 47

Closeup views of the second floor southwest and northwest fireplace backs and flues. Photograph By George Eisenman for James L. Dillon Inc., January 7, 1963 (INHP negative 157.555 & .558).

The original joists and girders survive indicating the space headed off for the chimney breasts and hearths.

The fireplace back bricks, deteriorated due to the extreme heat of the fires, are original. Above the backs are sloped smoke shelves which conducted the smoke into the large flues.

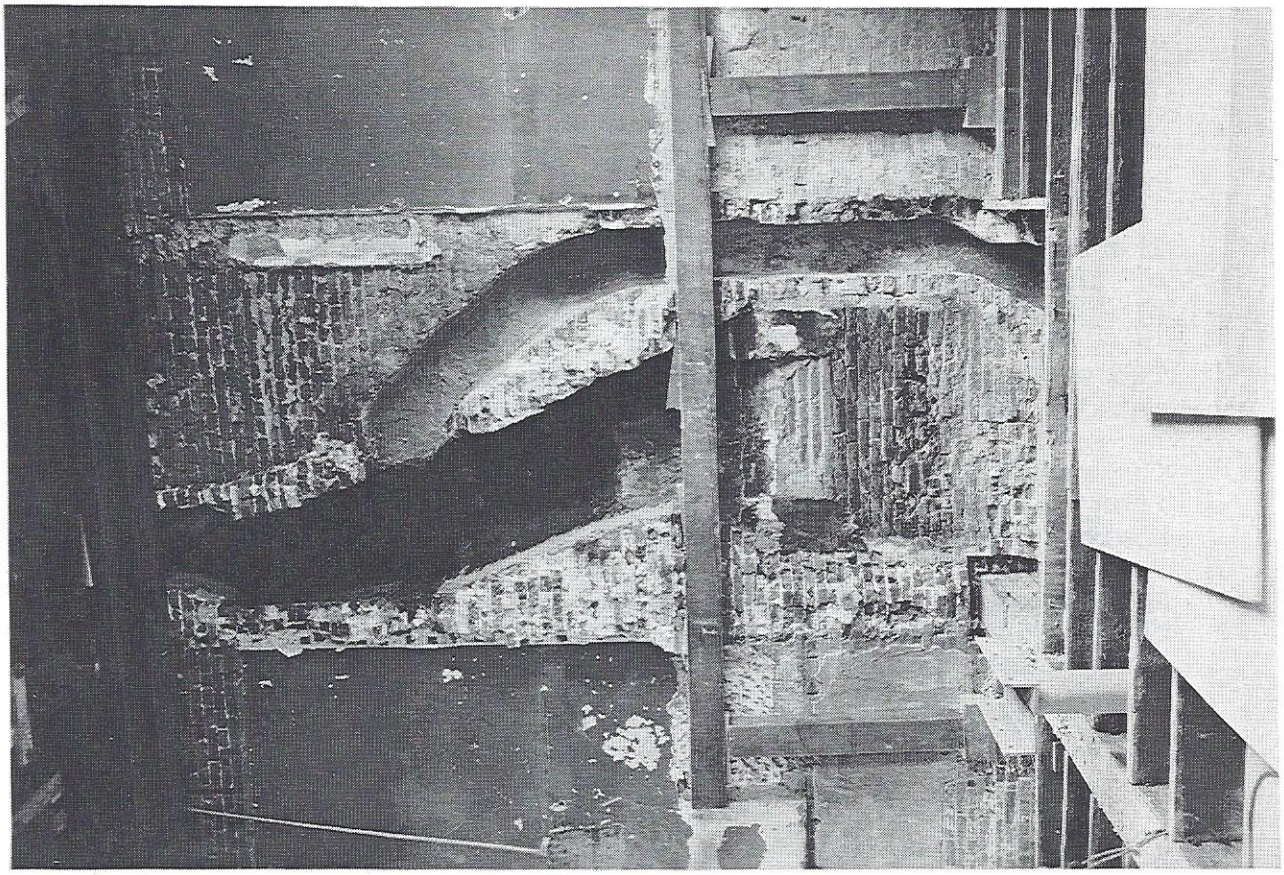
At the outer sides of the chimney breasts hot air ducts have been cut into the brickwork:

> "The United States Court Room in the State House, upstairs is now undergoing alterations for the introduction of flues in the walls, for conduct of hot air from a furnace which is to be erected in the cellar."
>
> Public Ledger Feb.5,1847

There were never any fireplaces or chimney breasts at the first floor west end (Supreme Court Room). Therefore the smoke flue and hot air ducts from the 1847 furnace were chased into the masonry wall behind the Supreme Court Room paneling. At the second floor level, the smoke flue cut through one of the brick trimmer arches which supported the fireplace hearths and chimney breasts (see Illustration 49). The smoke thus entered one unused fireplace and vented through its old flue. Above the second floor level, the two hot air ducts were chased into the chimney breasts, with outlet grilles into the Common Council, near the floor (see Illustration 25). The hot air ducts then merged with the smoke flues above, perhaps to enhance the draft of hot air, although much of it would be wasted in the atmosphere.

In 1854 a similar hot air system was installed at the east end of the building for the Select Council Room.

Illustration 47



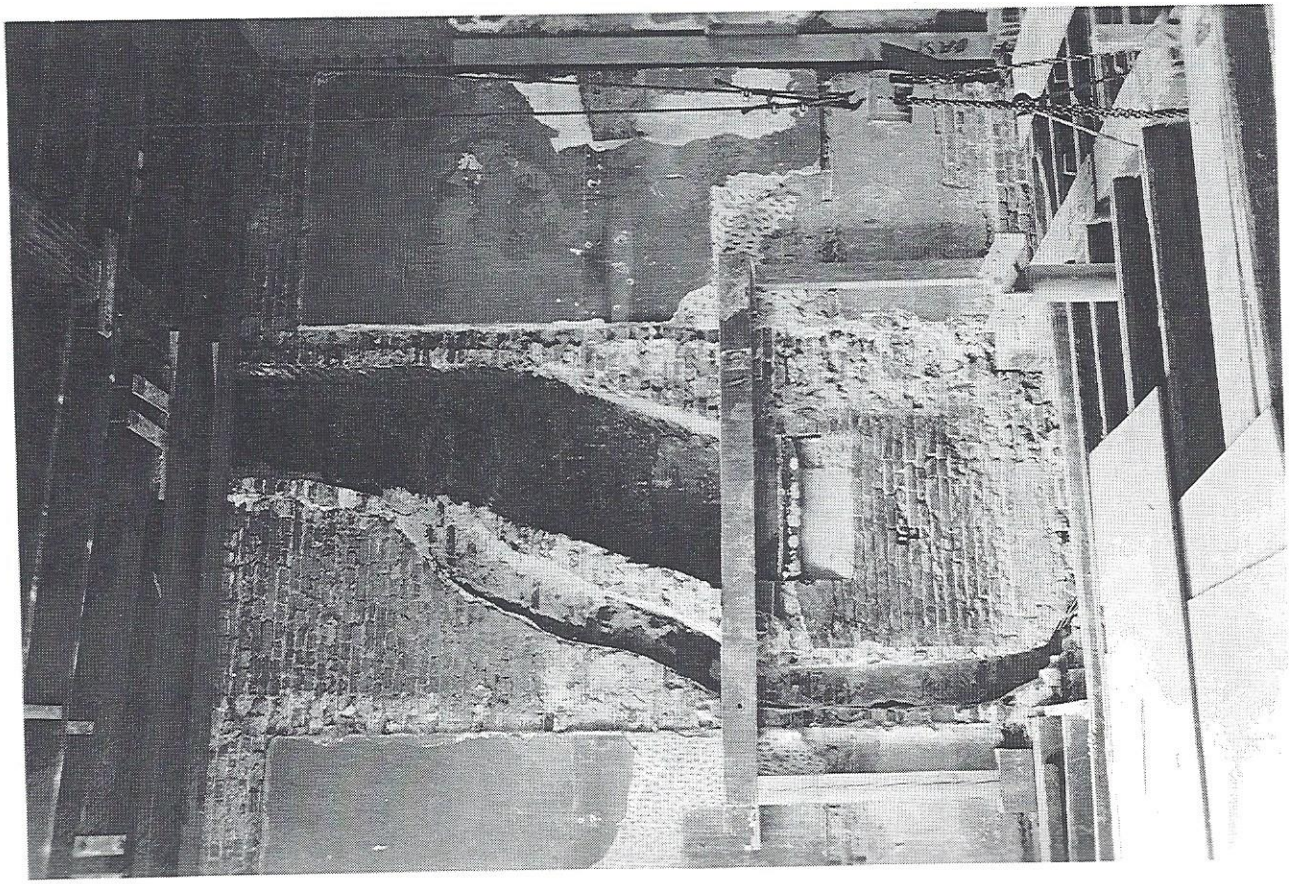


Illustration 48

View of evidence for the second floor southwest room chimney breast, fireplace back, smoke shelf, flue and hearth. Photograph by George Eisenman for James L. Dillon Inc., December 4, 1968 (INHP negative 157.2321).

The broken bricks in a vertical line at right mark the north return of the chimney breast. The fireplace itself was as wide as the blackened back brick area.

Two white arrows on the floor girder to the right point to a notch cut in the girder to receive the north end of the hearth.

The small white arrows in the foreground point to pairs of wrought iron nails, or nail holes, indicating where the original floor boards abutted the hearth.

Appendix B of this report explains how this and similar evidence at the other chimney breast locations determined the dimensions and positions of these important elements.

Illustration 48

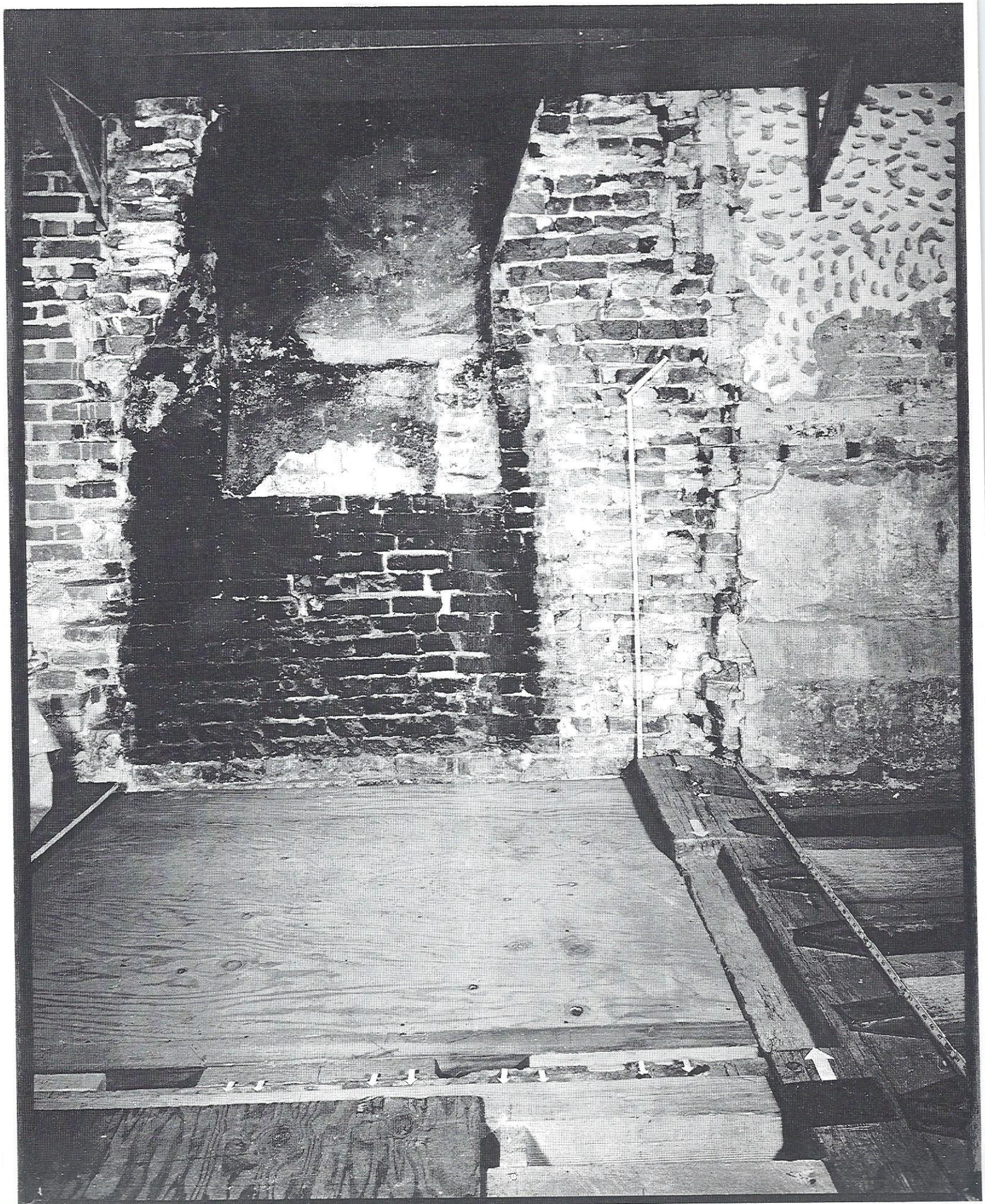


Illustration 49

View of evidence for the southwest room hearth trimmer arch. Photograph by George Eisenman for James L. Dillon & Co. Inc., October 2, 1964, INHP negative 157.1662.

Arrow 1 on the brick wall at lower right points to the start, or spring line, for the trimmer arch which supported the chimney projection and the inner and outer hearth of this fireplace. Arrow 2 points to the soffit line of the brick trimmer arch, its mortar having left white stain on the adjacent framing header. A wedge-shaped ledger, fastened to the hearth front framing member at left, supported the trimmer arch (see drawing 391/94000, sheet 29 & 29A).

Similar evidence was found at the Long Gallery west chimney breast. In both cases the extended trimmer arches sprang from the west wall as no chimneys were in the Supreme Court Room below to support the chimneys above.

These trimmer arches probably were first disturbed in 1847 when furnaces were installed in the cellar and flues and hot air ducts were chased into the west wall as they rose to heat the U.S. District Court at the second floor west end.

Illustration 49

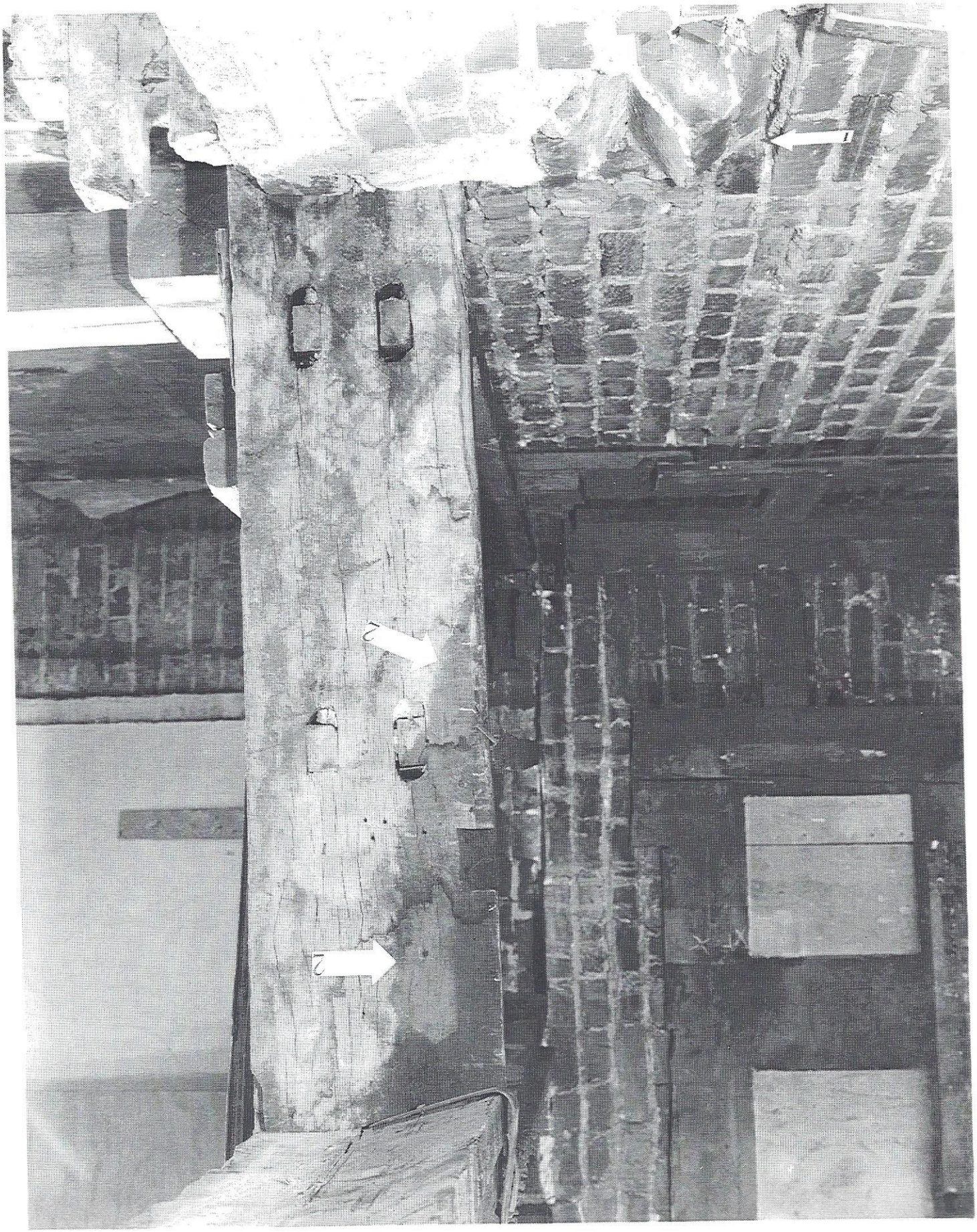


Illustration 50

View of top surface of a 1750s girder within the second floor Lobby area, taken principally to illustrate floor board evidence. Photograph by George Eisenman for James L. Dillon & Co. Inc., April 7, 1965, INHP negative 157.1795.

The floor boards laid for the 1750s Lobby were butt jointed as opposed to the tongue and groove flooring laid elsewhere in the 1733 era. Because the Lobby flooring was butt jointed there are heavy accumulations of dirt on the top surfaces of this girder and adjacent joists resulting from the cracks between the floor boards. The white arrows point to the dirt accumulations which indicate the width of the floor board at this location.

The original nails were hand wrought L-headed, 3"-3 1/2" long. There is only one set of nail holes in the original framing as the original flooring survived in situ until the 1920s and all subsequent flooring has been nailed to intermediate joists.

The floor board evidence of the rest of the second floor, which had tongue and groove boards and little dirt accumulation, was obtained from the nailing patterns.

Illustration 50



Illustration 51

End view of some of the original floor boards. Photograph by Jack E. Boucher, September 1964, INHP negative 157.1783.

The original flooring remained in situ until the 1920s when it was taken up. Some of the boards in best condition were salvaged and relaid out of context in the second floor southwest room.

This relaid flooring was again removed for the 1962-3 structural rehabilitation and put into storage. The surviving boards were studied for their grain density and pattern when writing the specifications for the reconstruction of the second floor original flooring. You can see here that some boards were as wide as 11". Others were even wider. Thus they all had flat grain along the center of the boards. Their outer widths were edge grain and very dense as they were of slow, old growth, yellow pine.

The text and Appendix J elaborate on the present day extreme difficulty in finding replacement flooring to meet the quality of the original, and therefore the need to preserve even the 1969 reconstructed flooring.

Illustration 51

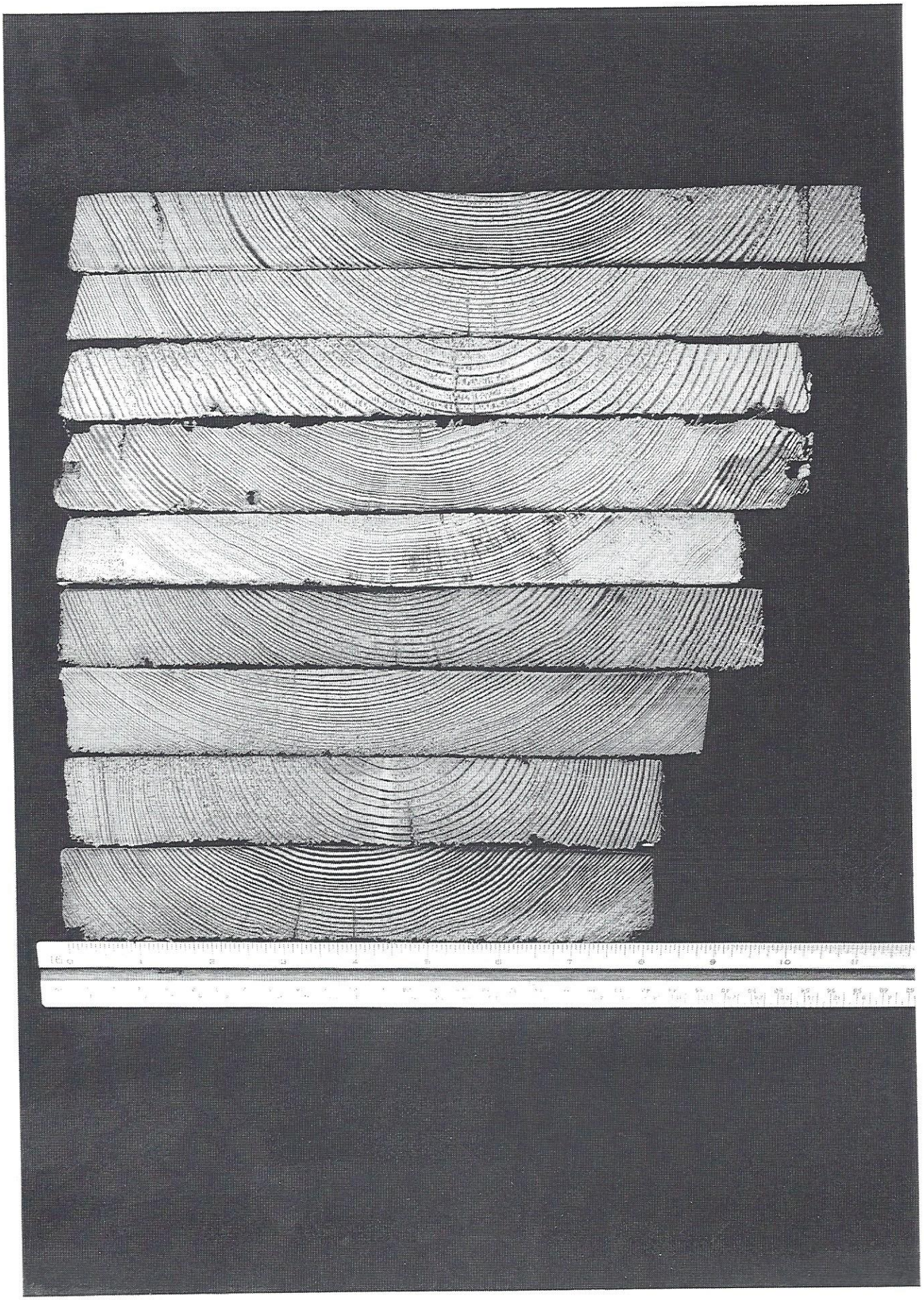


Illustration 52

Recorded here is an area of original plaster below the center window of the Long Gallery. Photograph by George Eisenman for James L. Dillon & Co., Inc., December 4, 1968, INHP negative 157.2319.

Arrow 1 points to the sharp edge where the plaster originally met the bottom of the original chair rail. Arrow 2 points to a similar sharp edge where the plaster met the top of the original baseboard. Arrow 3 points to a wrought nail which originally fastened the chair rail skirt board to the sill.

Note that the original architrave above had been cut short to meet a later, higher window sill, perhaps as early as 1854, but definitely for the 1897 and 1920s windowsills.

This portion of original plaster very likely survived because a partition was installed abutting and protecting it. See the floor plans of the 1854-1896 period.

Illustration 52

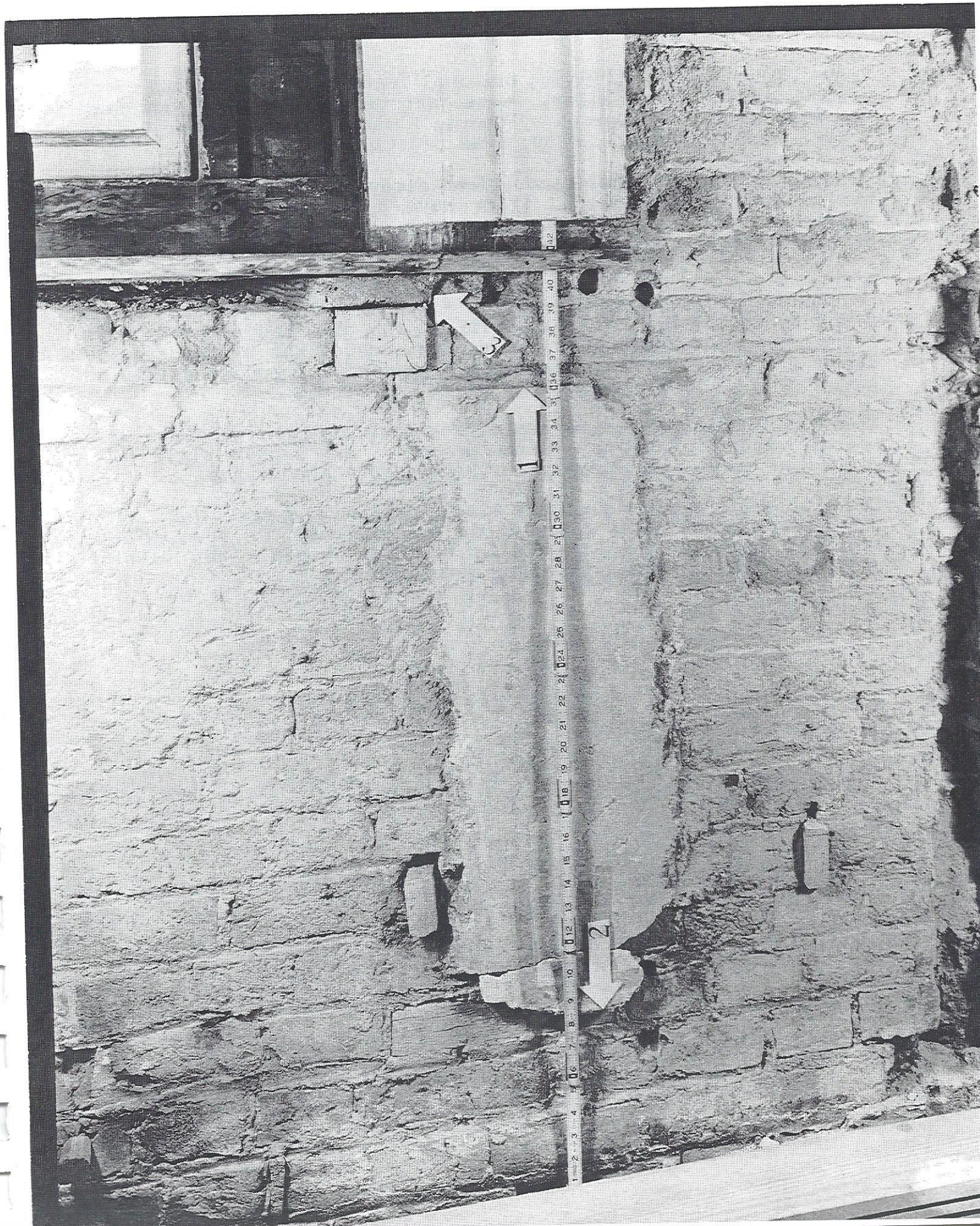


Illustration 53

View of the typical surviving original features of the second floor windows at the Long Gallery, west jamb of the second window from the west wall. Photograph by George Eisenman for James L. Dillon & Co., Inc., January 6, 1969, INHP negative 157.2340.

In contrast to the major renovations elsewhere in the building all the windows of the second floor have a considerable amount of original fabric: window frames, sash, splayed jambs and head, architrave trim (removed here) and the windowsills.

Arrows 1 and 2 point to grooves in the splayed jamb and sill which originally received the tongues of the frame cover boards. Arrow 3 points to the original windowsill. The sill has not only been cut back in projection but its finish surface has been partially cut away in the process of adding higher sill boards possibly as early as 1854, definitely in 1897 and the 1920s.

When the higher sills were added they protected the original sill boards with their early paint layers. The higher sills also protected early paint layers on the splayed jamb boards.

The eighteenth century painters wisely painted the sills dark brown but also brought this color about one inch up the face of the adjacent trim so that the sills could be wiped clean without dirtying the adjacent trim color (see Appendix A).

Illustration 53



Illustration 54

View of the southwest room, west window, during the procedure developed to continue protection of the original windowsills (see Illustration 53). Photograph by George Eisenman for James L. Dillon & Co., Inc., June 30, 1970, INHP negative 157.2412.

At left the original chair rail has been reconstructed, its finish profile based on the chair rail of the Tower Stairhall "Venetian" (Palladian) window. The front of the original windowsill has been built out to meet the chair rail profile.

To protect the original sills with as thin a cover as possible, a thin plastic sheet has been laid on top of the original windowsill. Above the plastic sheeting a filler paste was used to level the area, a piece of galvanized sheet metal put down, and cemented to this was a plastic laminate sheet 1/16" thick, bottom side up (see Illustration 55).

Illustration 54

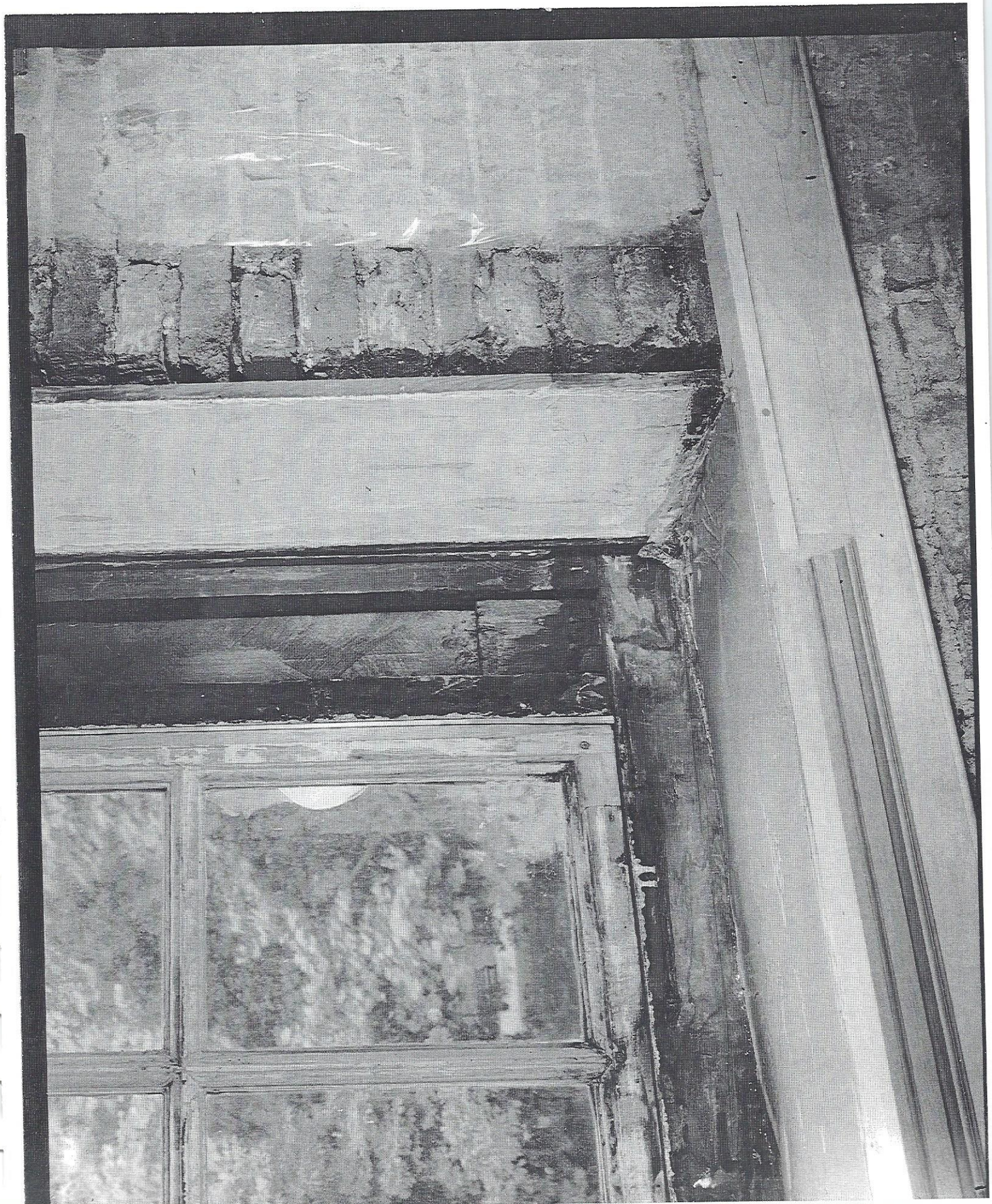


Illustration 55

View of the completed restoration of the west jamb and sill of the Long Gallery fifth window from the west wall. Photograph by George Eisenman for James L. Dillon & Co., Inc., March 9, 1970, INHP negative 157.2383.

The tight fit of the dutchman repairing the original architrave attests to the high level of craftsmanship of the NPS Day Labor carpenters.

The dark area of the windowsill is the back side of a 1/16" thick sheet of plastic laminate used to preserve in place the original windowsills (see Illustrations 53 and 54, and Appendix H).

Illustration 55

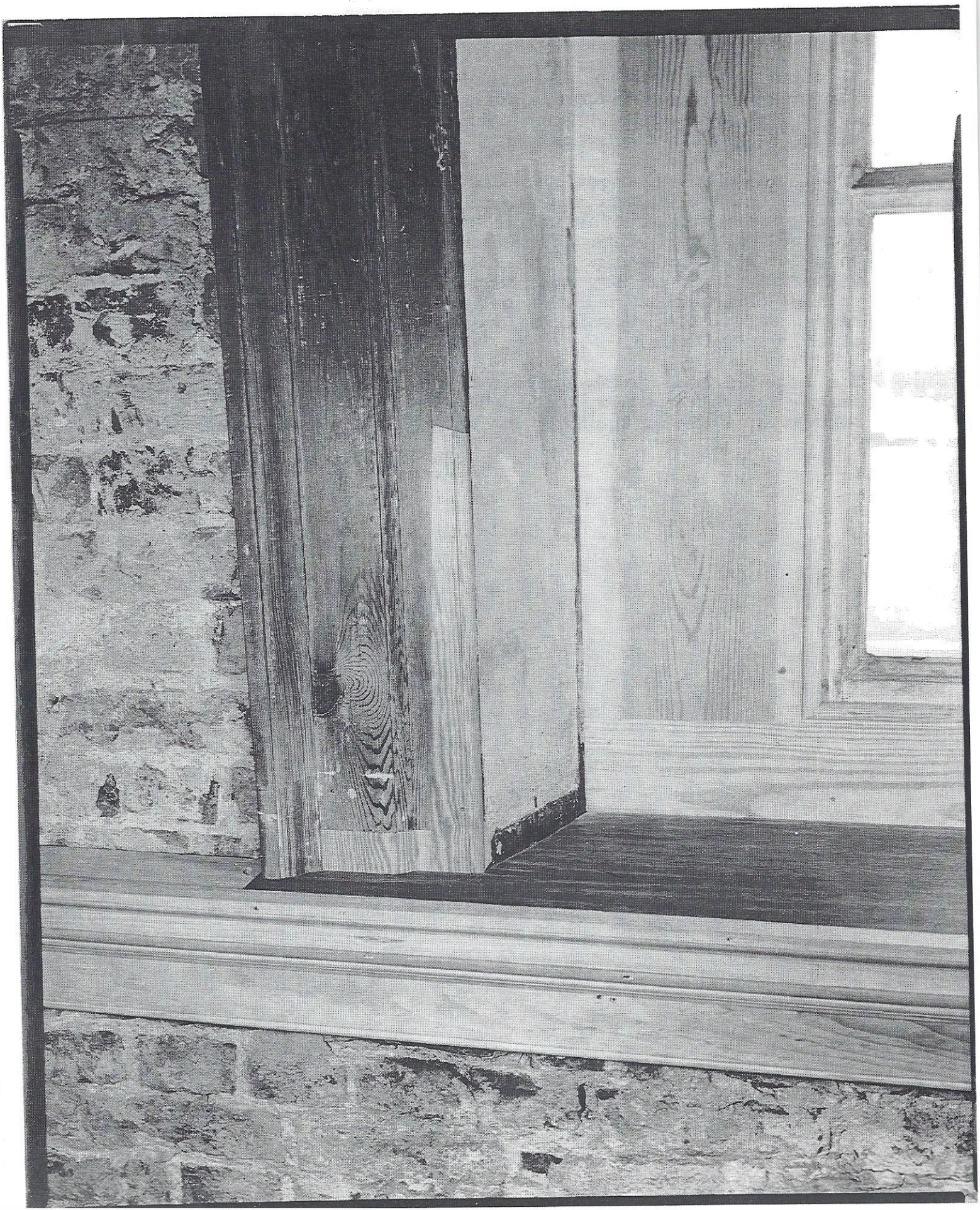


Illustration 56

Evidence at the head of the Lobby stair to the garret showing the difference between the 1920s stair restoration and the lines of the 1750s original stair. Photograph by George Eisenman for James L. Dillon & Co., Inc., September 7, 1965, INHP negative 157.1939.

Drawing 391/94000, sheet 17A, Section A, and sheet 39A record this evidence of the 1750s original stair found on the south wall at the head of the stair. The white arrow points to the sharp edge of original plaster where it met the horizontal line of the stair wainscot at this landing. The black arrows point to the sharp edge where the plaster met the ramped rail and three wrought iron anchors which fastened the original wainscot paneling and the ramped rail. See Appendix G for a full explanation of the history of this Lobby stair.

The three filled joist holes, within the top six brick courses below the white arrow, once held 1733 roof rafters which were removed c. 1750 for the addition of the tower and this Lobby stair.

Illustration 56

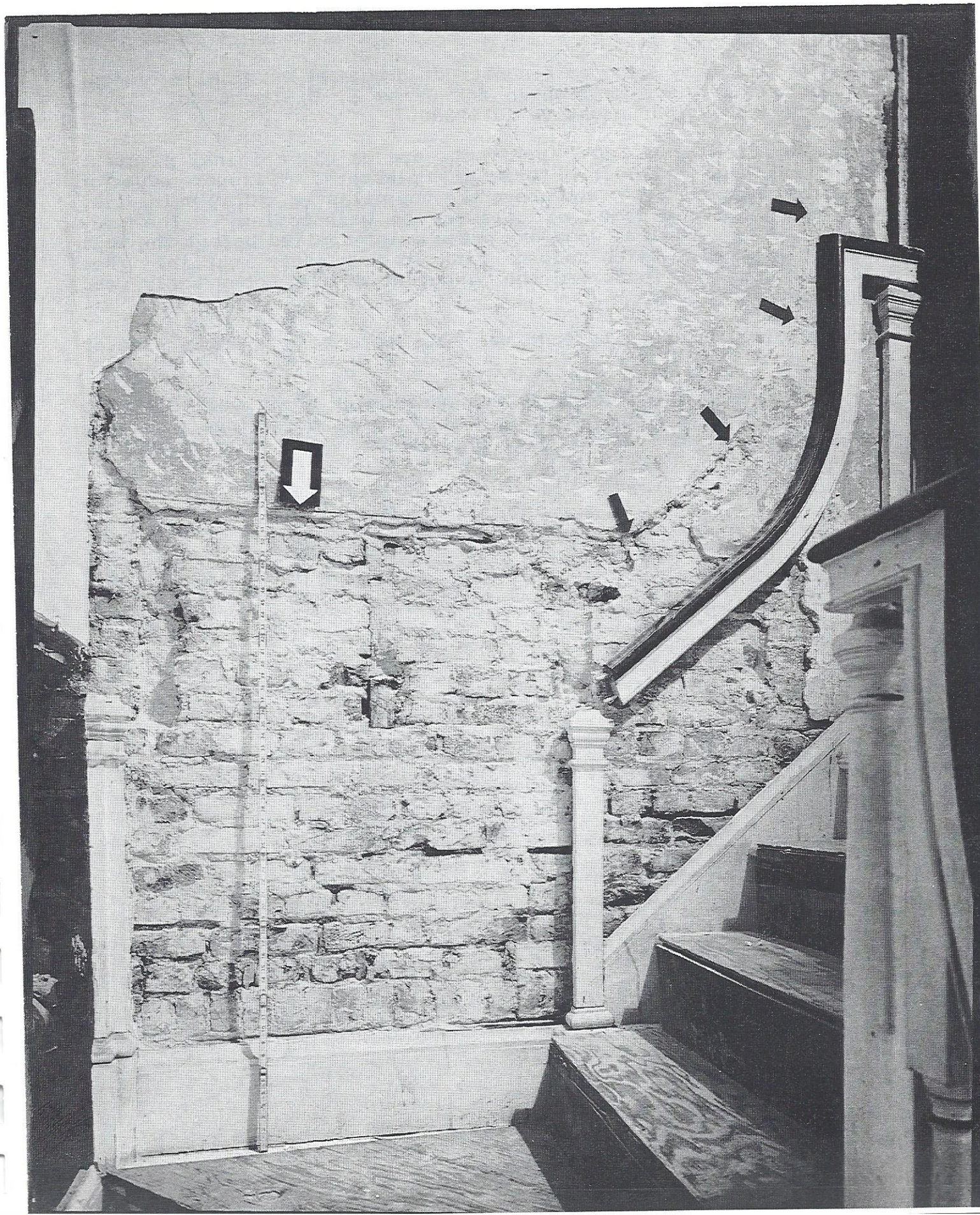


Illustration 57

Head of the Lobby stair as reconstructed to meet original evidence. Photograph by George Eisenman for James L. Dillon & Co., Inc., March 9, 1970, INHP negative 157.2380.

Notes written by the NPS architects are on the original plaster. They read as follows: "Original plaster"; "Plaster edge of original ramped rail"; and above the top pilaster "Gray paint line on bricks is top level of pilaster of wainscoting." The gray paint was the original woodwork prime paint applied before the wall was plastered, which along with the plaster outline (see Illustration 56) indicated the placement of the Lobby stair wood wainscot and pilasters.

The original plaster surface was hacked to bond a later plaster layer.

This NPS restoration woodwork was made under a millwork contract and installed by the NPS Day Labor carpenters (see drawings 391/94000, sheets 39-43 for the Lobby stair reconstruction details).

Illustration 57



Illustration 58

Two of three surviving 1750s Lobby stair tread-end brackets (INHP Accession 2383-3). Photograph by George Eisenman for James L. Dillon & Co., Inc., November 8, 1966, INHP negative 157.2136. See 157.2137 for a photograph of their rear surfaces.

Samuel Harding carved these brackets and listed them in his account in 1753 "to 21 brackits for the uper Stairs at 5s pr. peice" (Norris papers, Historical Society of Pennsylvania).

Fortunately, these brackets survived two moves of the Lobby stair (see Illustrations 15, 43 and 44). They were cut down in horizontal and vertical dimension, but a few hand wrought finish nails were found in the wood (see drawing 391/94000, sheet 18), and despite previous paint removals vestiges of light blue paint matching the Tower Stairhall can be seen under a 7x microscope.

Illustration 58

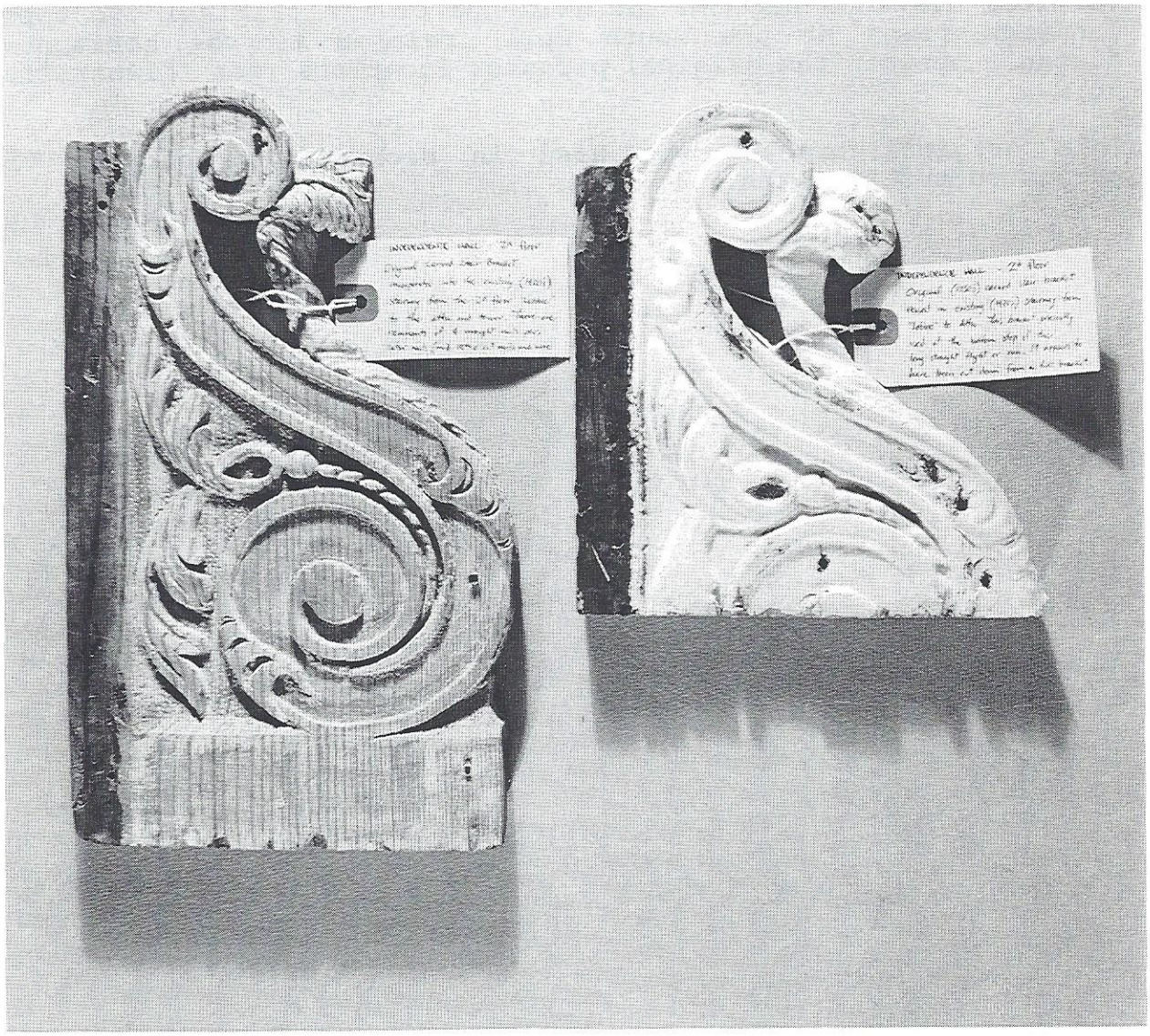


Illustration 59

The Lobby stair reconstructed with an original bracket and fifteen original balusters restored to their original use. Photograph by George Eisenman for James L. Dillon & Co. Inc., INHP negative 157.2379.

The 1753 tread-end bracket in the center was pieced out so that its plinth matched the baluster plinth above, and so that its height and length produced tread and riser dimensions which matched the original stair slope. The stair slope was determined by the vertical distance between the evidence of the original two upper landings found at the south wall, related to the horizontal distance between the original pilaster locations (see Illustration 56).

This original bracket was used in mechanically carving the reconstructed brackets.

Illustration 59



Illustration 60

Corinthian hand-carved modillion from the second floor southwest room entablature. INHP (City Collection) Catalogue 24.022, INHP negative 157.2370 and 157.2371.

Discovered in the garret of Independence Hall in 1917, fortunately this small modillion was added to the City of Philadelphia's Independence Hall collection. It remained there unidentified until the NPS found its paint layers match the second floor south room colors.

Appendix C describes in detail the evidence provided by this significant survival, and the rationale for its assignment to the second floor southwest room, the Governor's Council Chamber. Such acanthus leaf carved modillions are a part of the highest of classic orders, the Corinthian. Appropriately, the profile of such a complex entablature was found in the southwest room on the brick wall in the southwest corner, left by vestiges of the woodwork prime paint applied prior to the application of the eighteenth century plaster.

Illustration 60



Illustration 61

The Governor's Council Chamber in the second floor southwest room of Independence Hall. Photograph by Jack E. Boucher for the Historic American Buildings Survey (PA-1430-121), November 1973.

To avoid the errors of previous restorations the NPS historical architects derived their designs for missing elements from a hierarchy of design sources. The most reliable sources of course were original details from the second floor of Independence Hall itself. Next best were original details from the first floor. And at last resort details came from comparable buildings in the Delaware Valley.

Placing pediments above the closet doors and the main room entrances is based on those at the Tower Stairhall closet doors and the entrance to the Assembly Room. Having a tabernacle frame above the fireplace as the focal point of the room has precedent at the Supreme Court and Assembly Room.

The appendices of this report address the precedents for the molding profiles needed to make up these elements.

Illustration 61



Illustration 62

View of the second floor Lobby stair under construction through the archway of the Long Gallery. The NPS carpenters are Edmond Whitlock and Howard Gliffort. Photograph by W. A. McCullough, December 1969, INHP negative 9834-B.

This view has been included to show that behind the plaster wall finishes are strictly twentieth century construction materials.

The philosophy of the National Park Service restoration of Independence Hall has been to present the visitor with the correct surface appearance as far as possible, but do so with today's construction methods.

At left is a loose panel mock-up for the final appearance of plaster walls with the reconstructed chair rail and baseboard.

At upper left within the stud partition one can see the west end of the 1962 plate girder installed to suspend the second floor above the Assembly Room. Illustration 46 shows the other such girder and its hangers above the Supreme Court Room.

Illustration 62



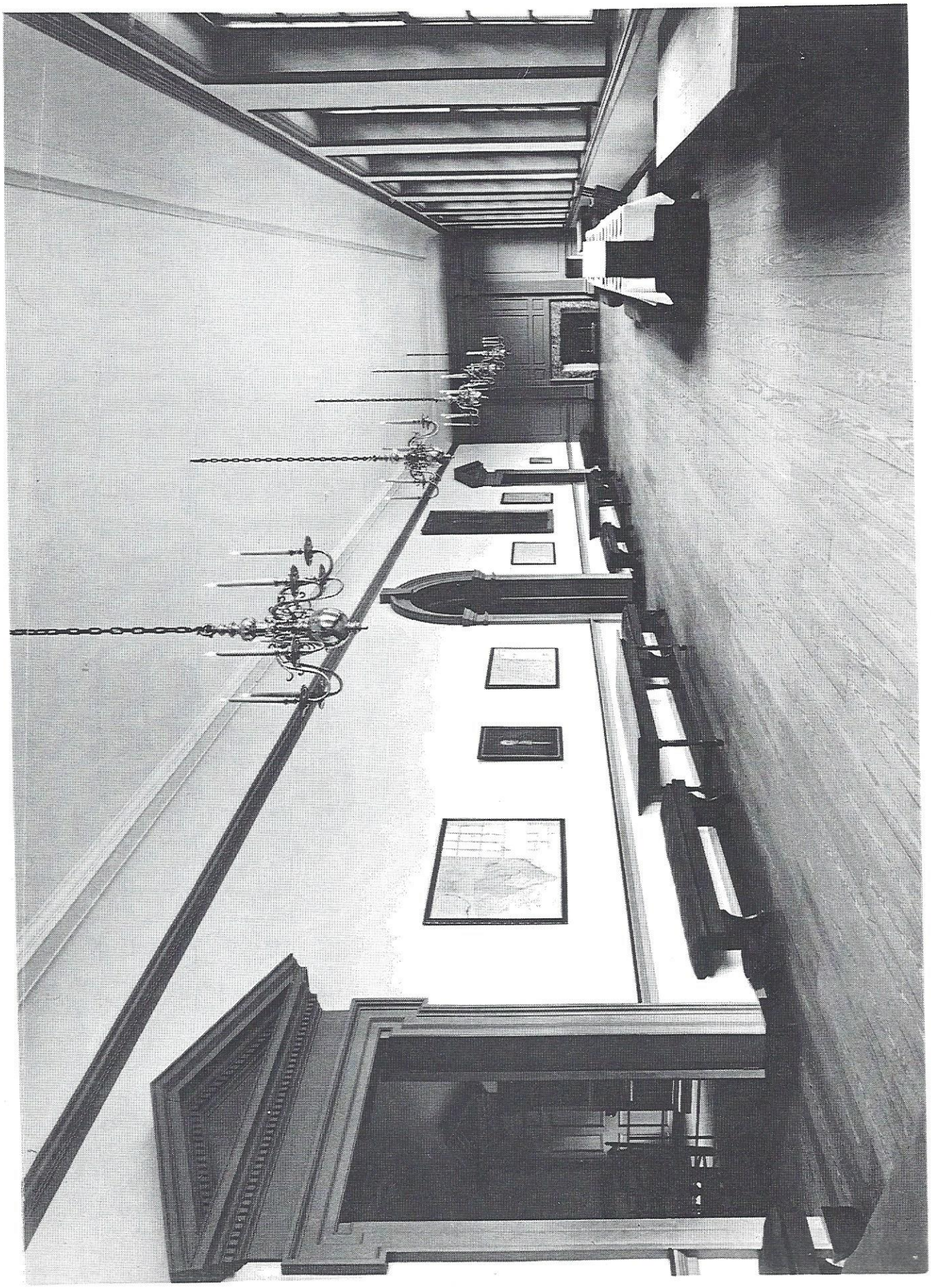
Illustration 63

The Long Gallery facing west. Photograph by Jack E. Boucher for the Historic American Buildings Survey (PA-1430-120), November 1973.

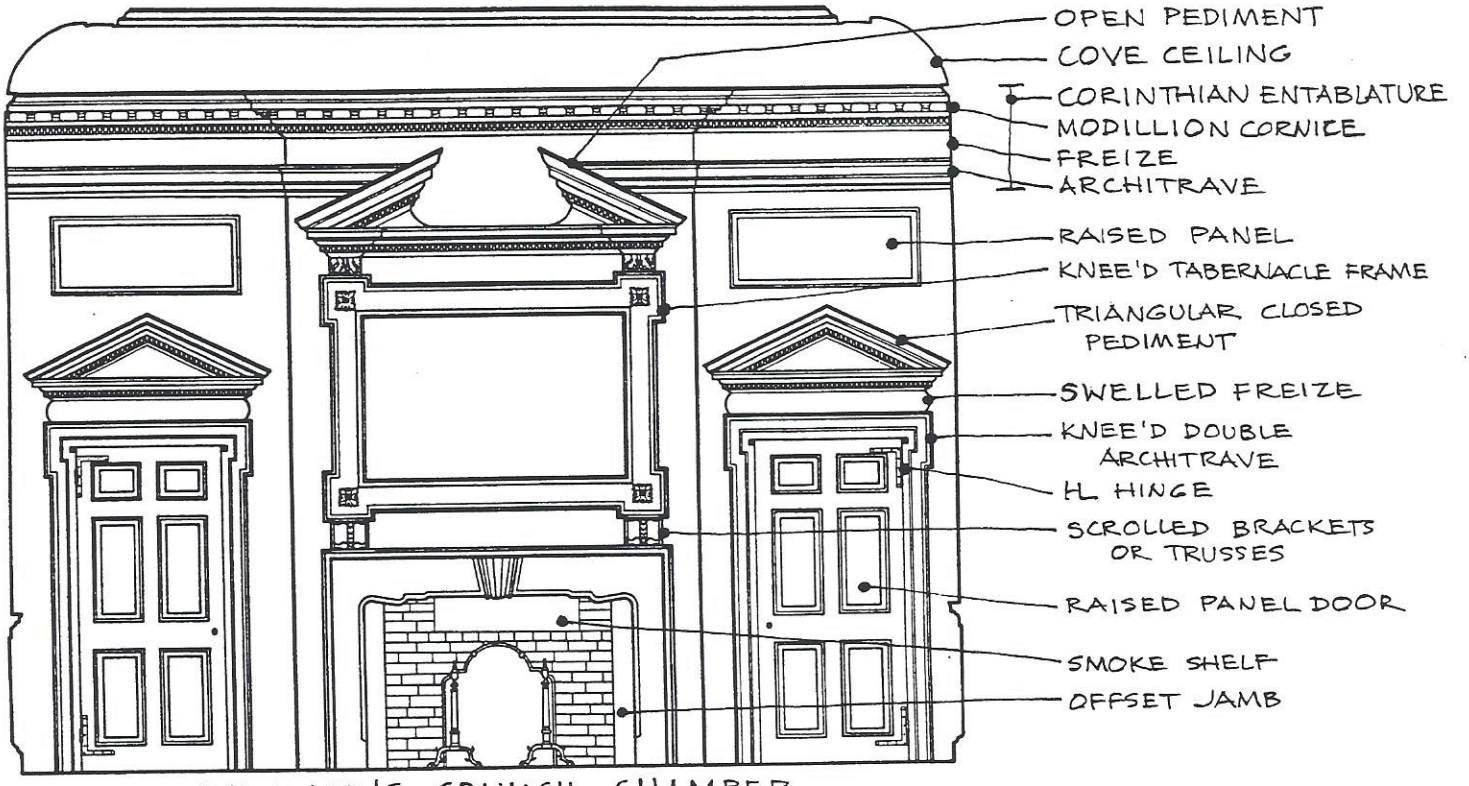
Approximately one hundred feet in length by twenty feet wide, such rooms were called "Gallery" by English architect James Gibbs in A Book of Architecture, containing Designs of Buildings and Ornaments, London 1728, plates 41, 48 and 57. "The Gallery may be divided into three Rooms upon occasion." This suggestion of multi-use would originally have included banquets such as were held numerous times in the Pennsylvania State House Long Gallery. But on a daily basis the Long Gallery no doubt was a scene of informal conversations between meetings, and a waiting room for those to be received by the Governor.

With the original sash, sills, splayed jambs and architraves at the windows, the rest of the room shown here is a reconstruction to the best ability of the NPS historical architects. This report, particularly its Appendices, have been brought together to record the rationales behind each reconstruction decision.

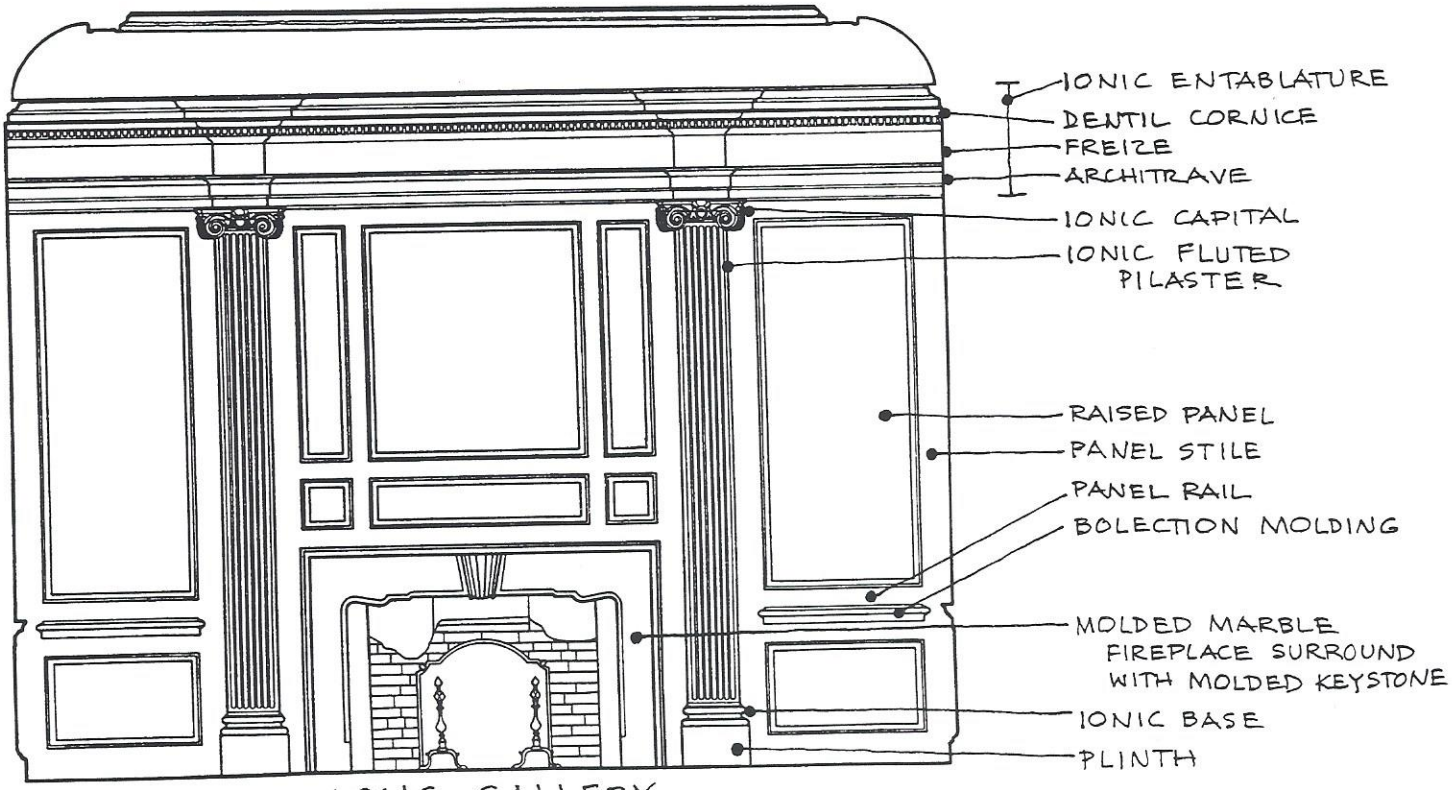
Illustration 63



GLOSSARY

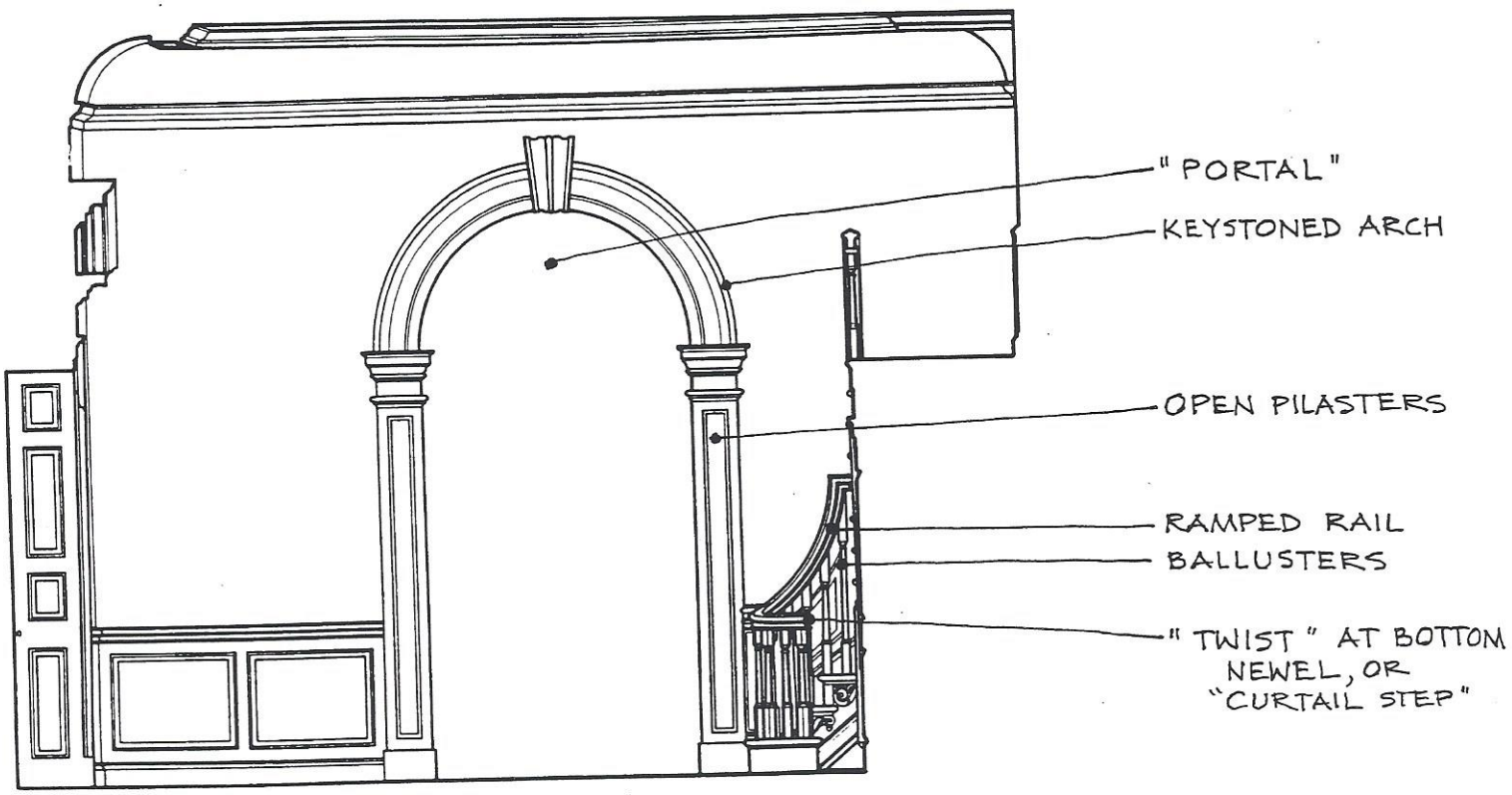


GOVERNOR'S COUNCIL CHAMBER
WEST WALL

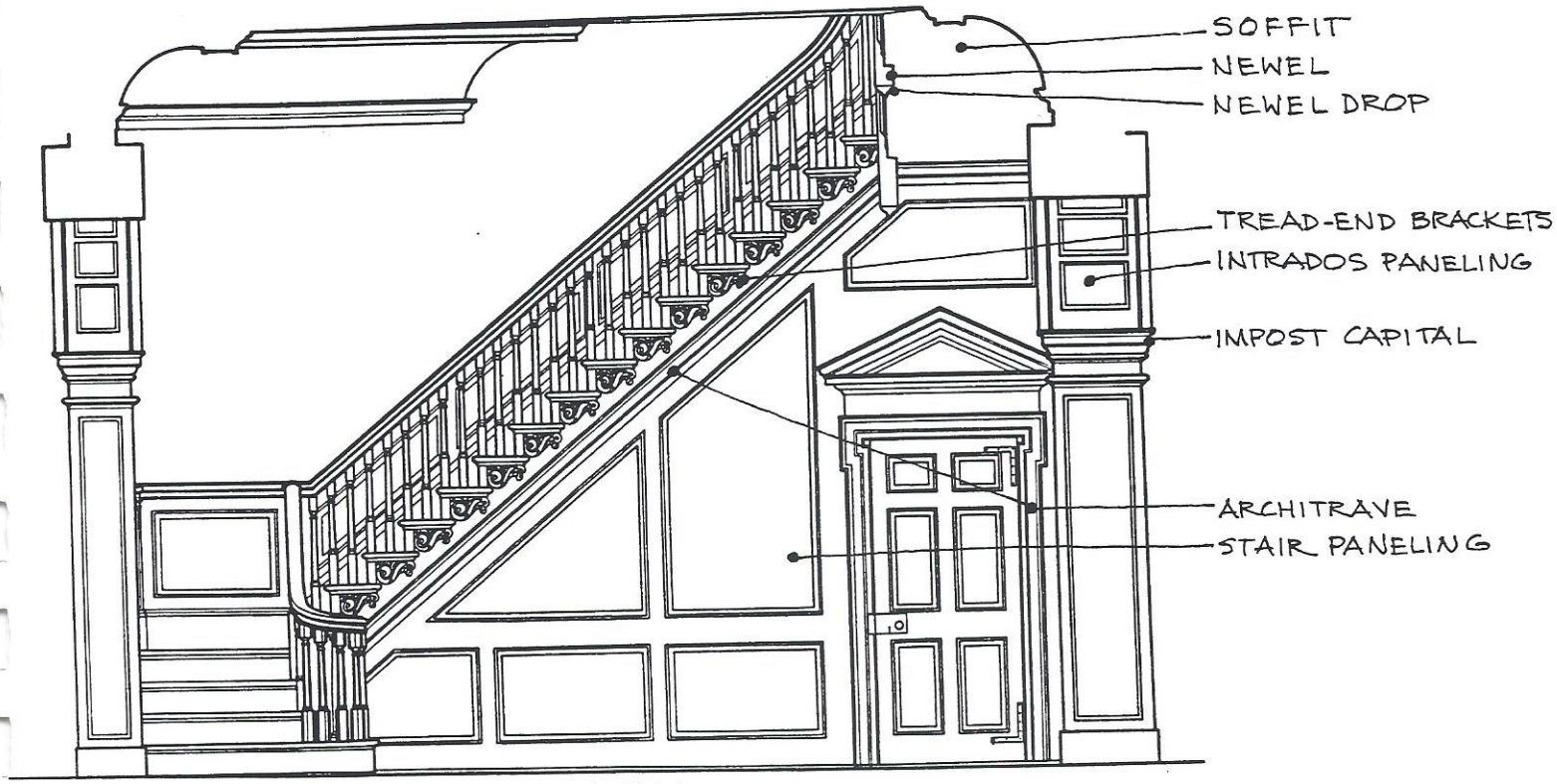


LONG GALLERY
EAST WALL

GLOSSARY

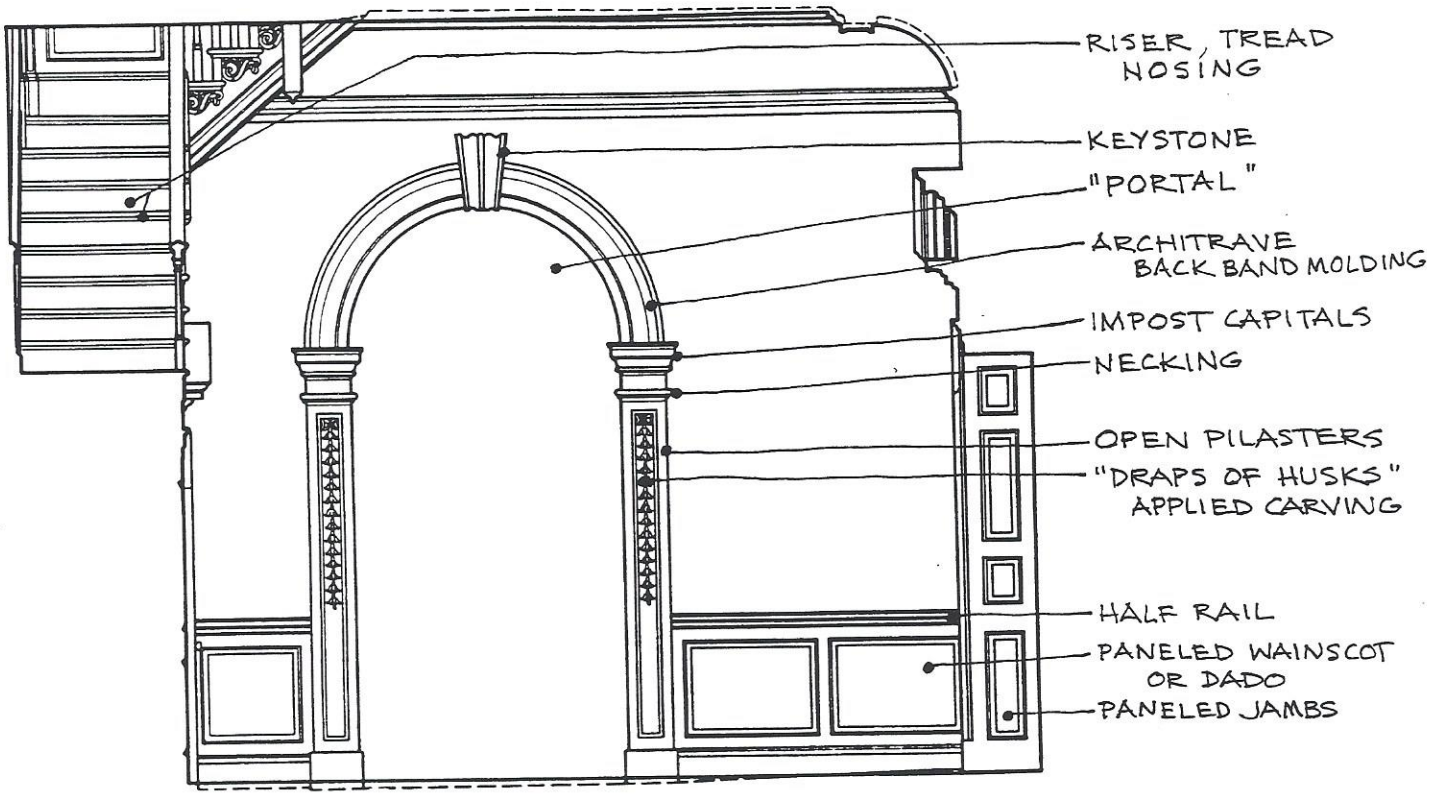


LOBBY
NORTH WALL

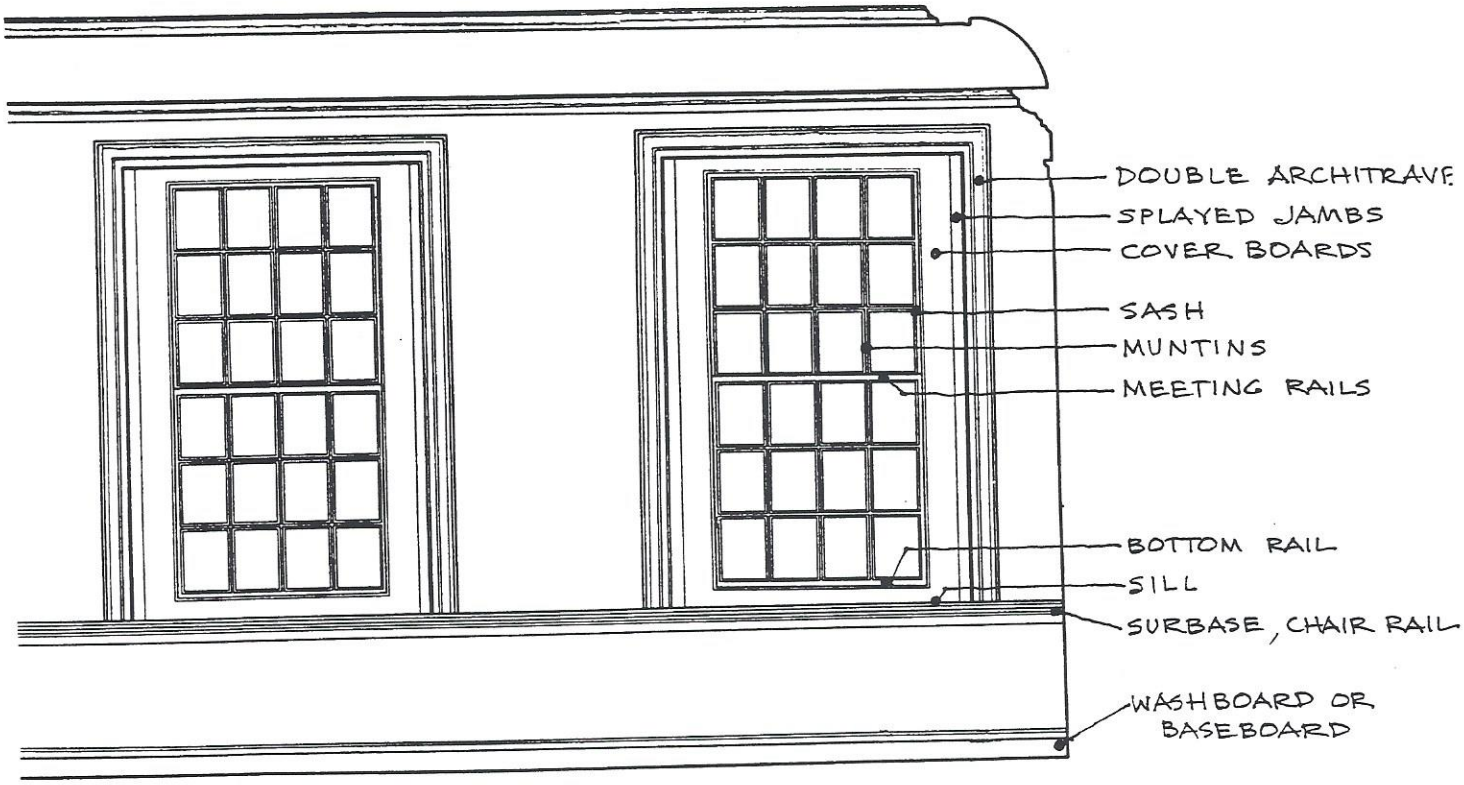


LOBBY
EAST WALL

GLOSSARY

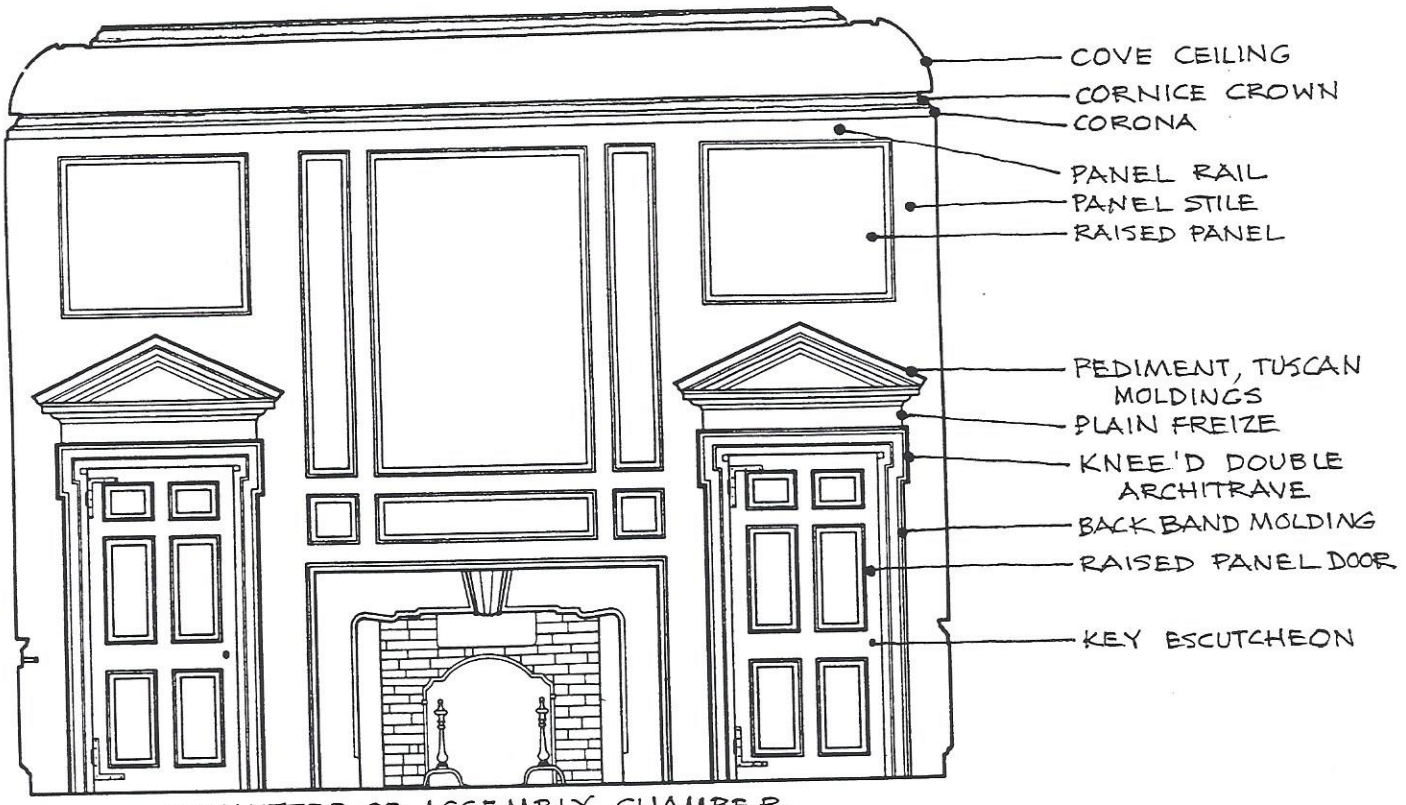


LOBBY
SOUTH WALL

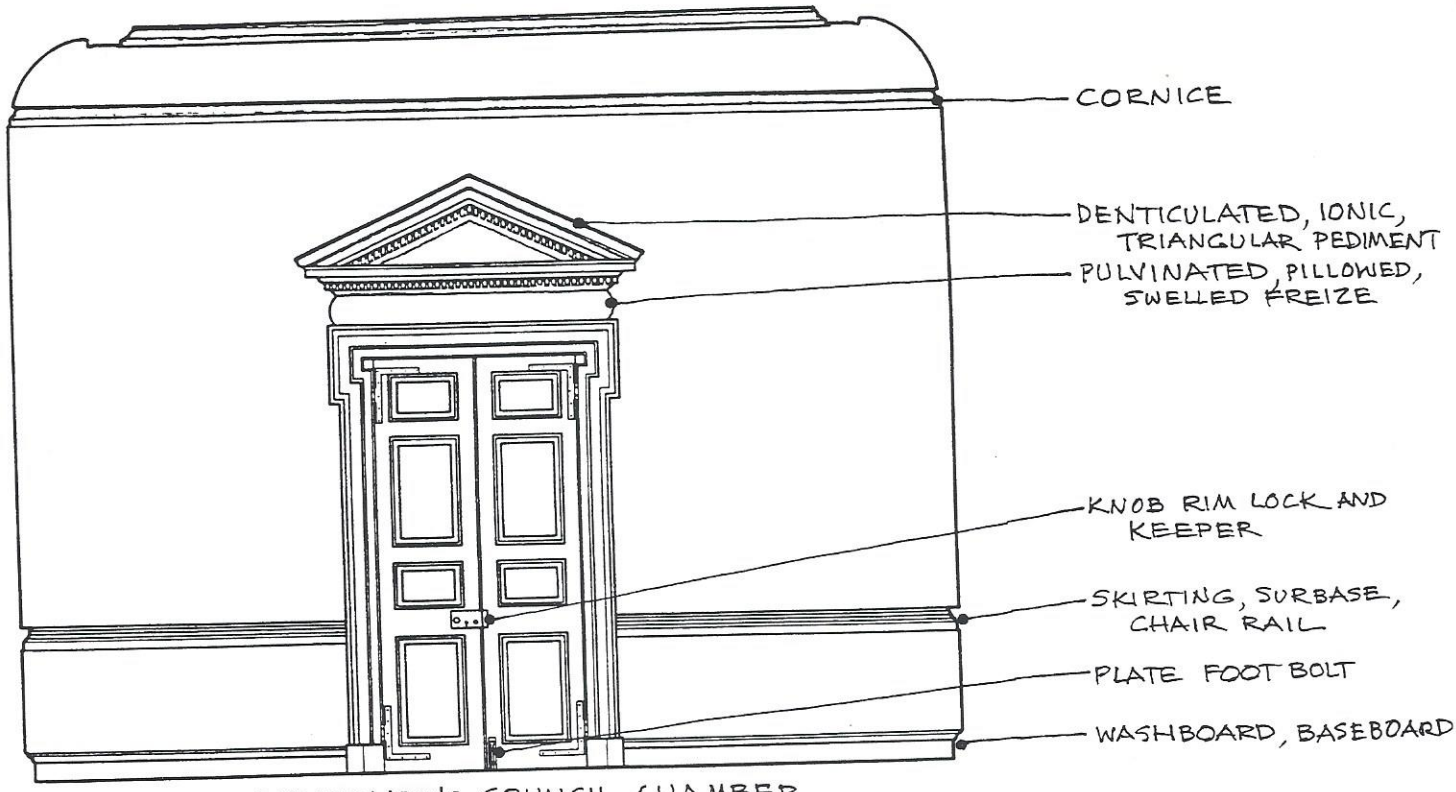


NORTH & SOUTH EXTERIOR WALLS

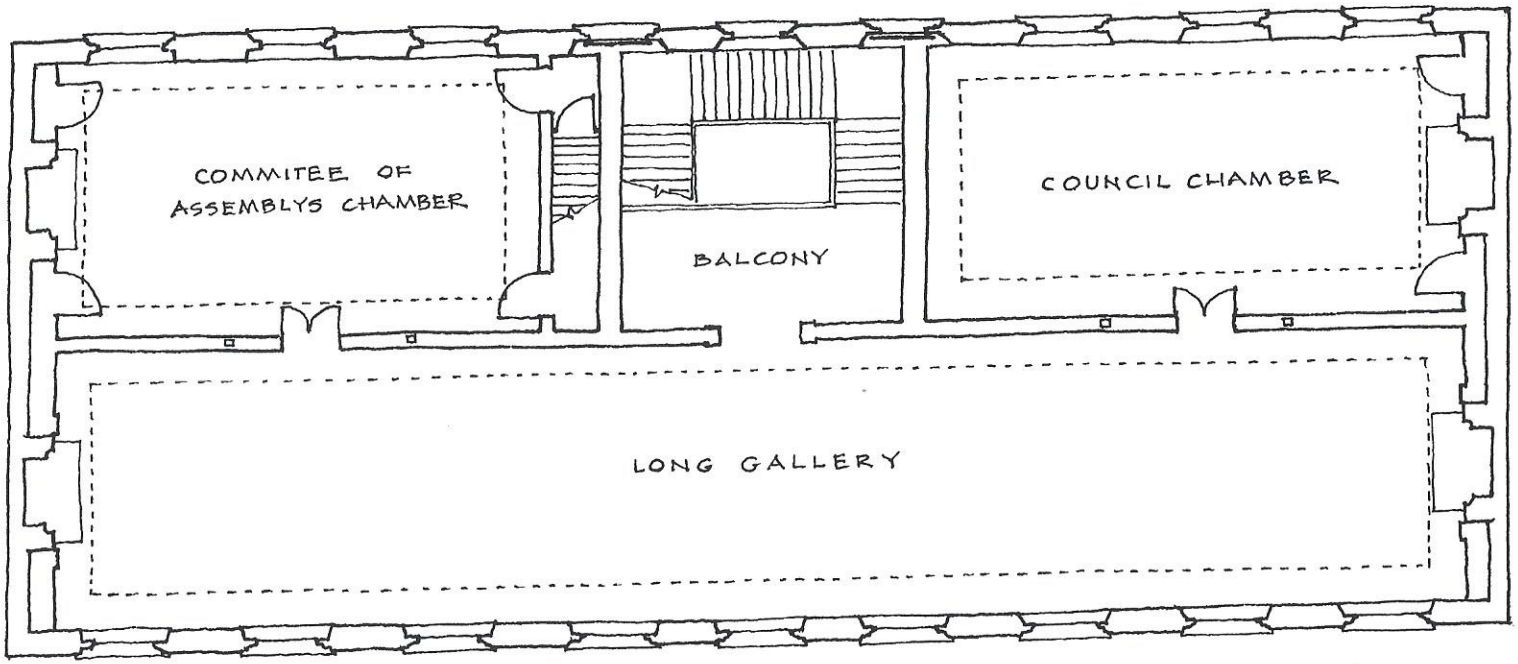
GLOSSARY



COMMITTEE OF ASSEMBLY CHAMBER
EAST WALL



GOVERNOR'S COUNCIL CHAMBER
EAST WALL



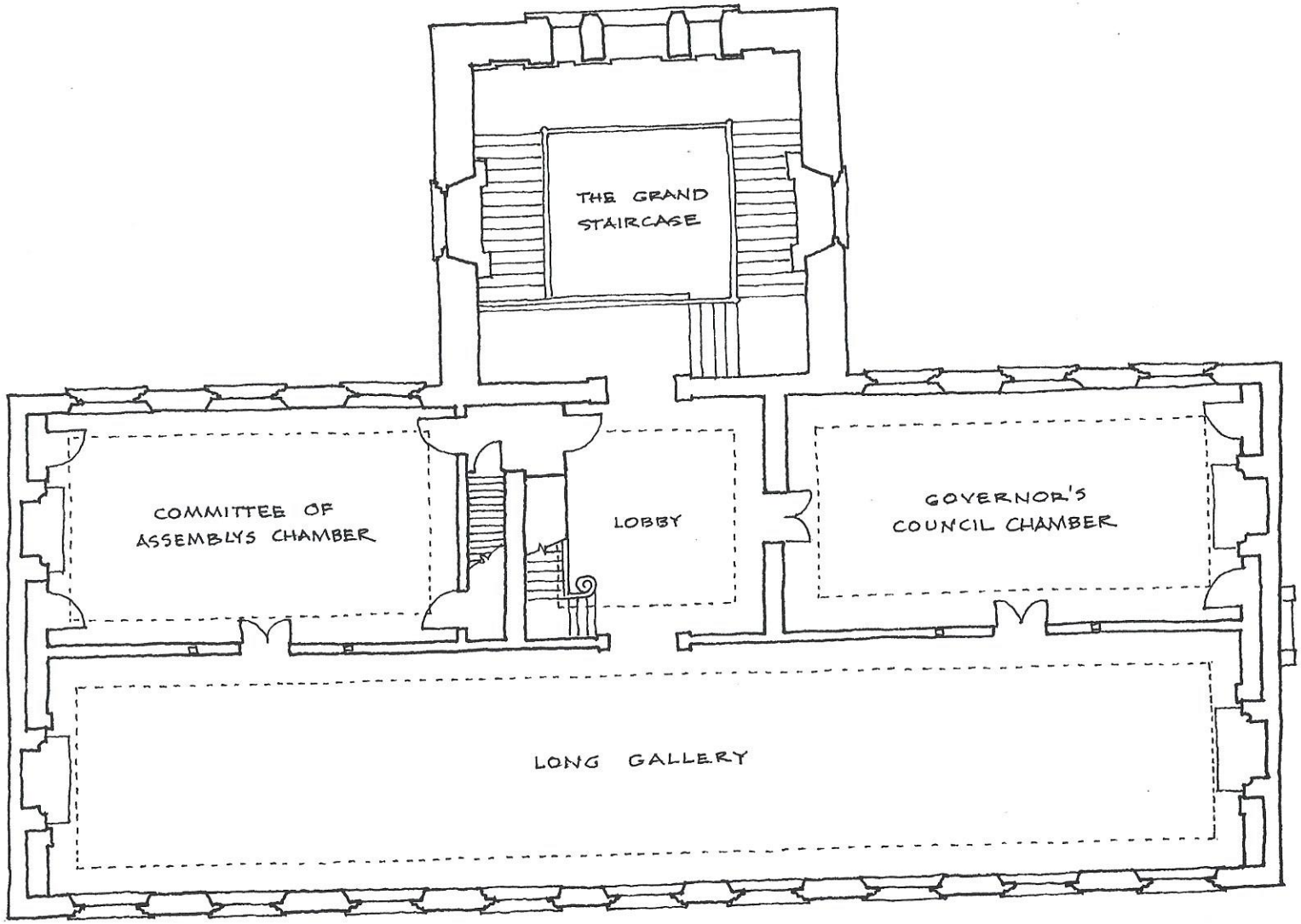
1733 – 1750

SECOND FLOOR PLAN

0 10 20 FT.

0 2 4 8M

PHB '92



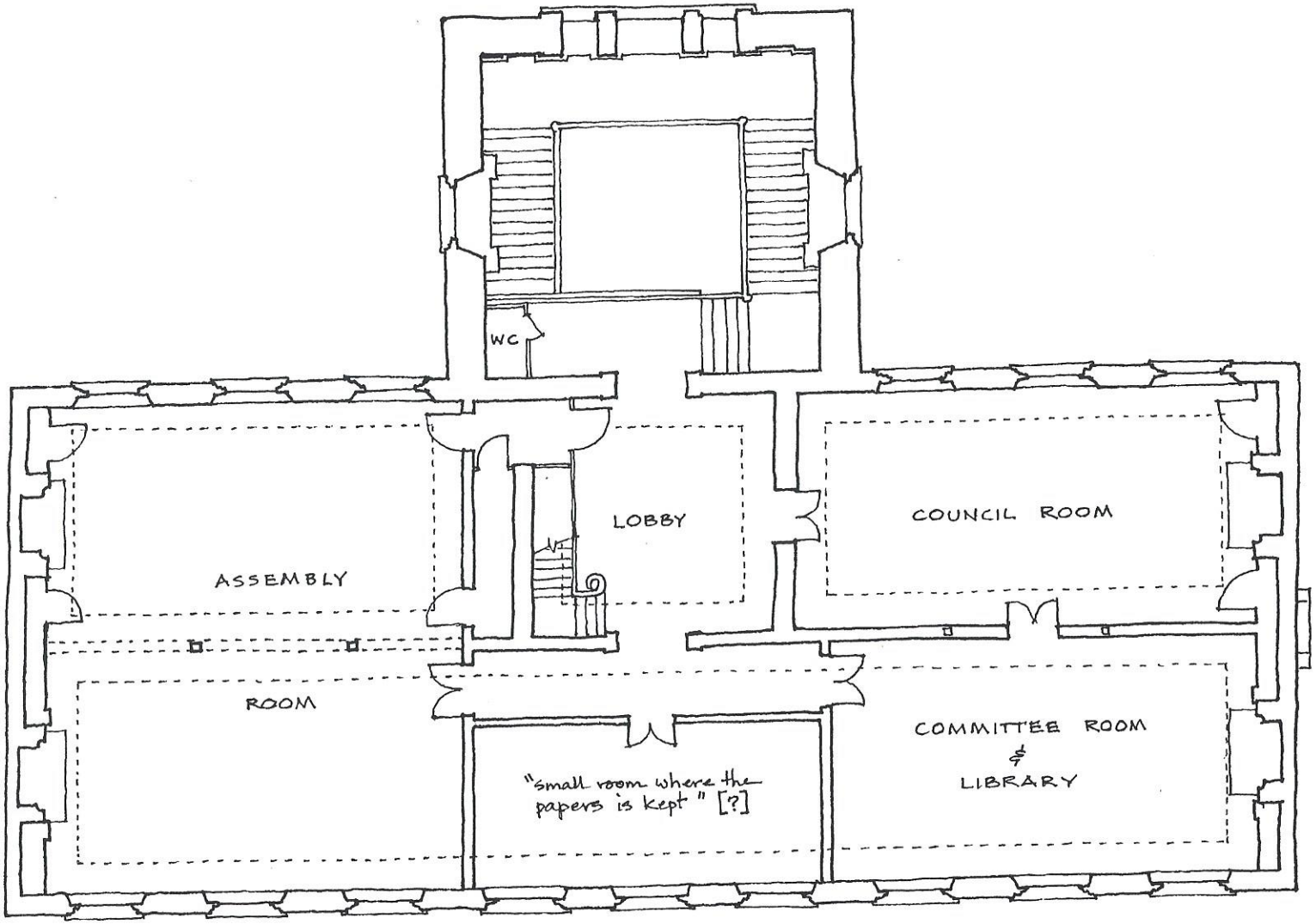
1755 – 1778

SECOND FLOOR PLAN

0 10 20 FT

0 2 4 6 M

PHB '92



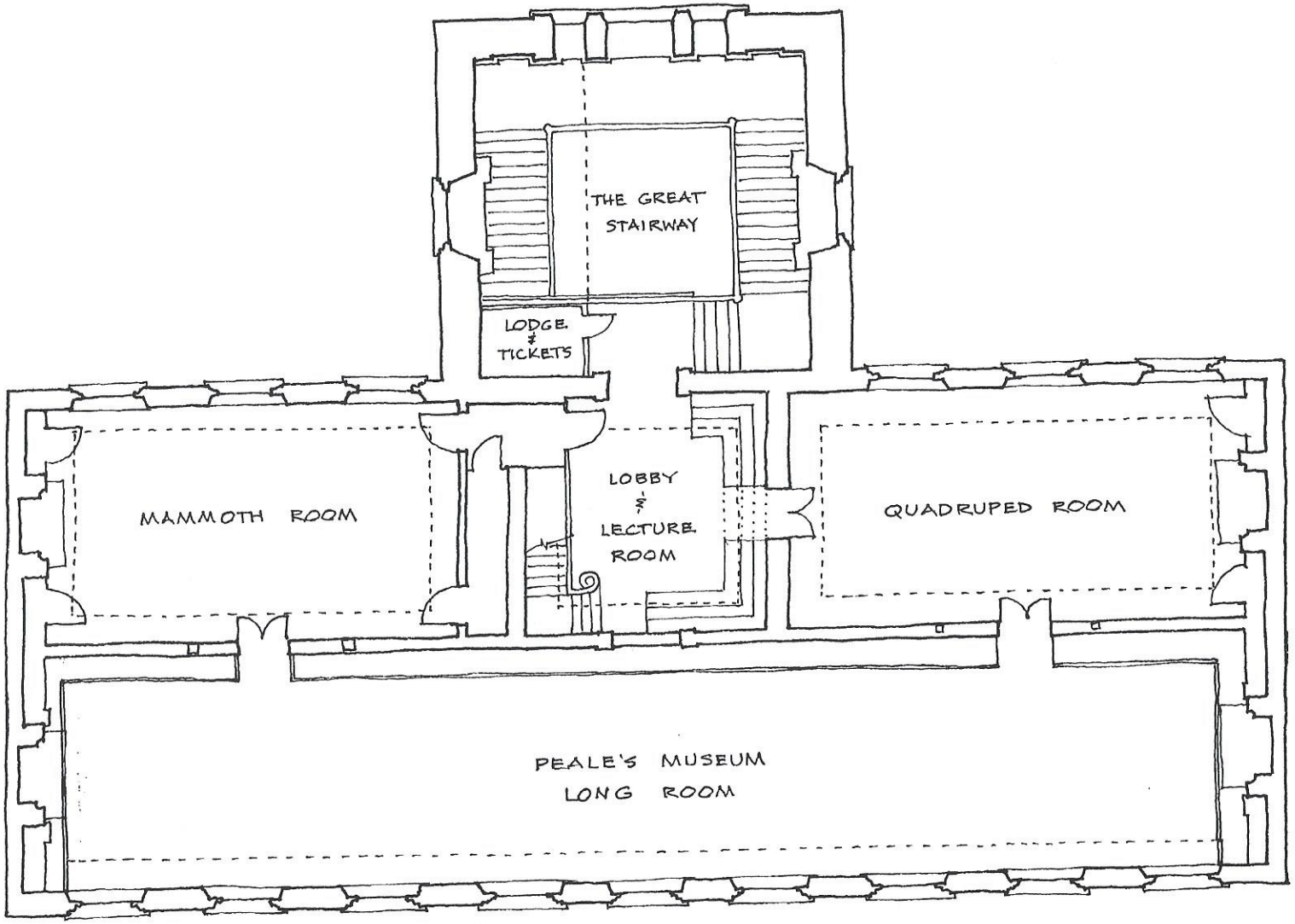
1779 – 1801

SECOND FLOOR PLAN

0 10 20 FT.

0 2 4 8M

PHB '92



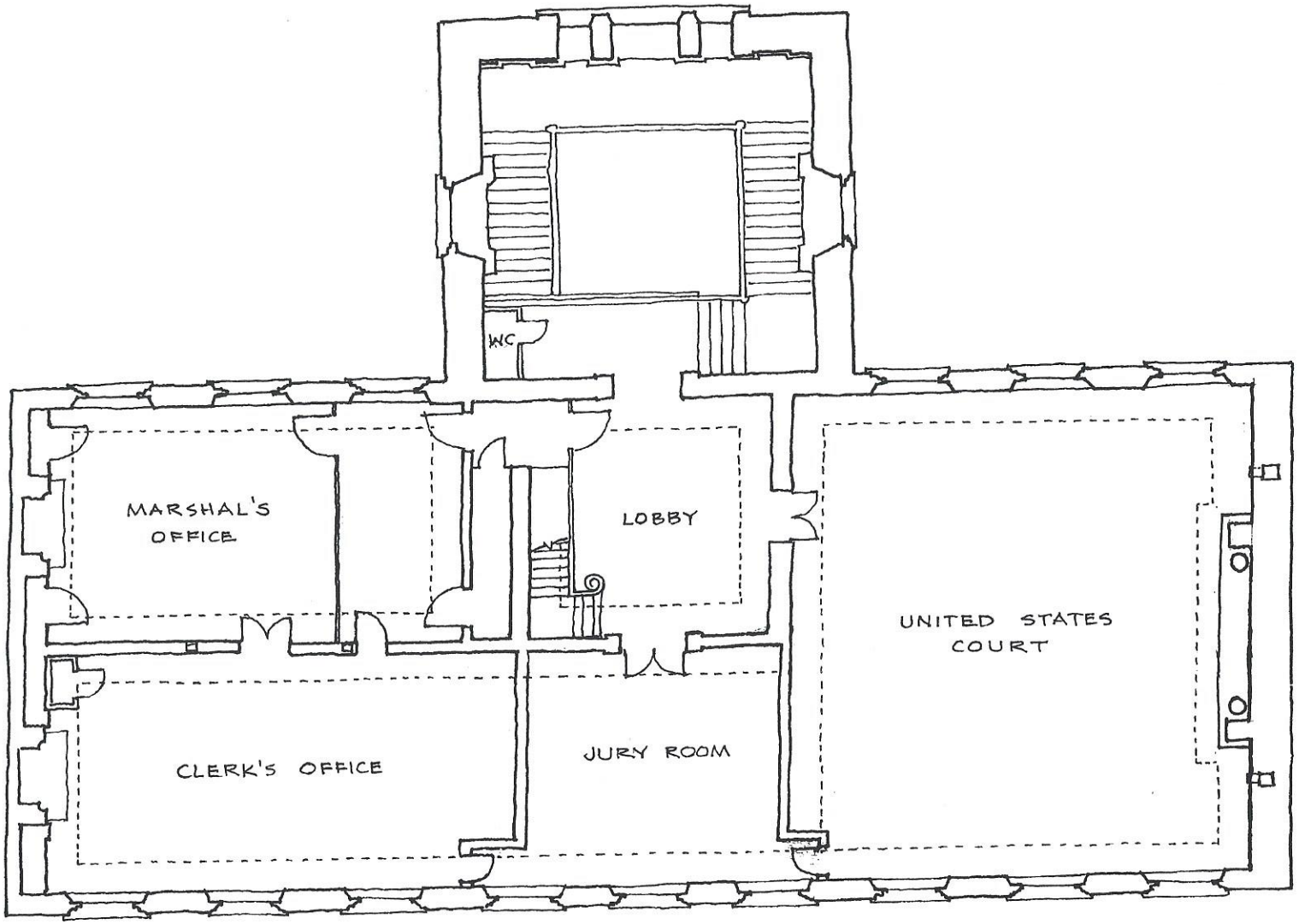
1802 - 1827

SECOND FLOOR PLAN

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0 2 4 8M

PHB '92



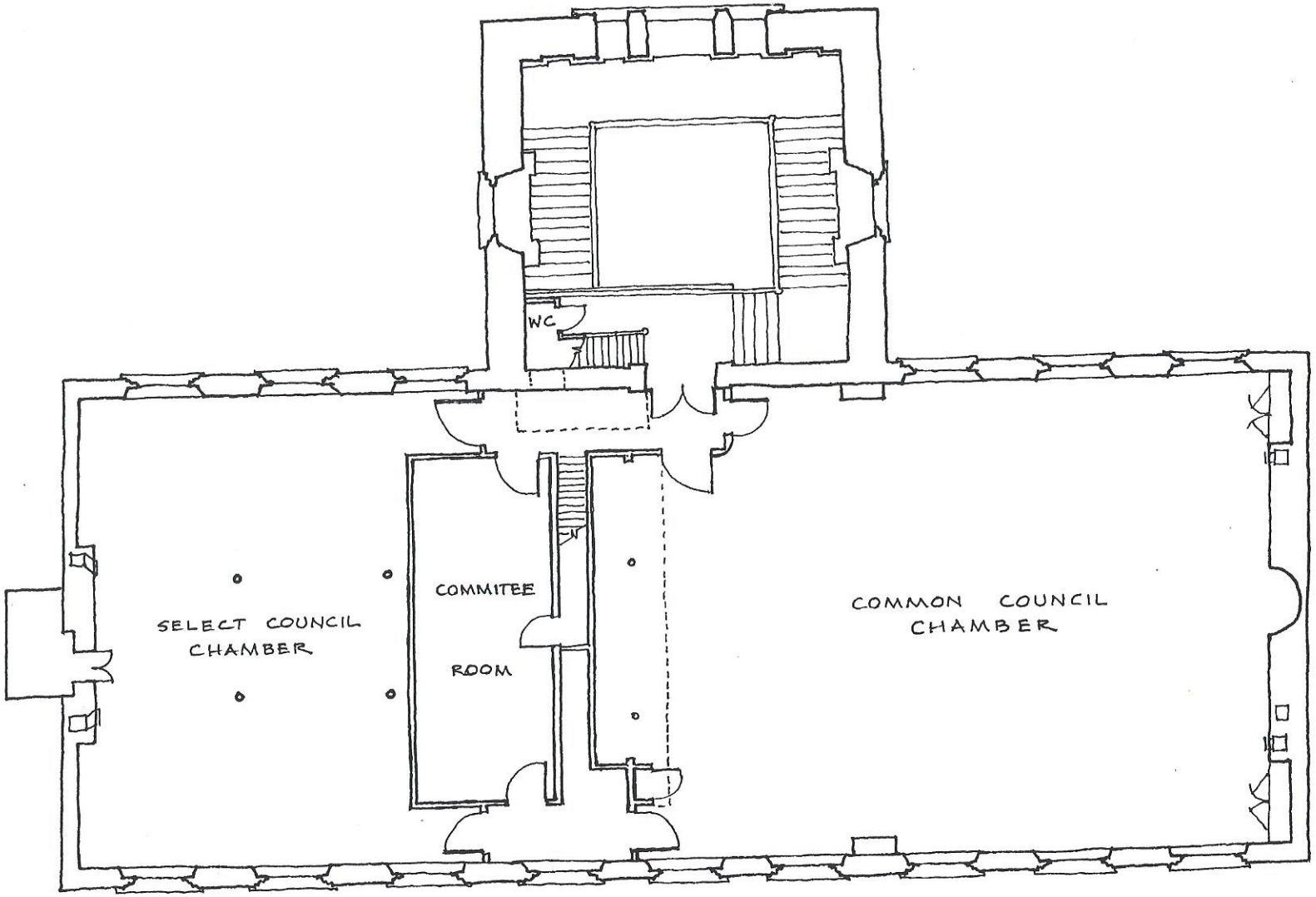
1828 – 1853

SECOND FLOOR PLAN

0 10 20 FT.

0 2 4 8M

PHB '92



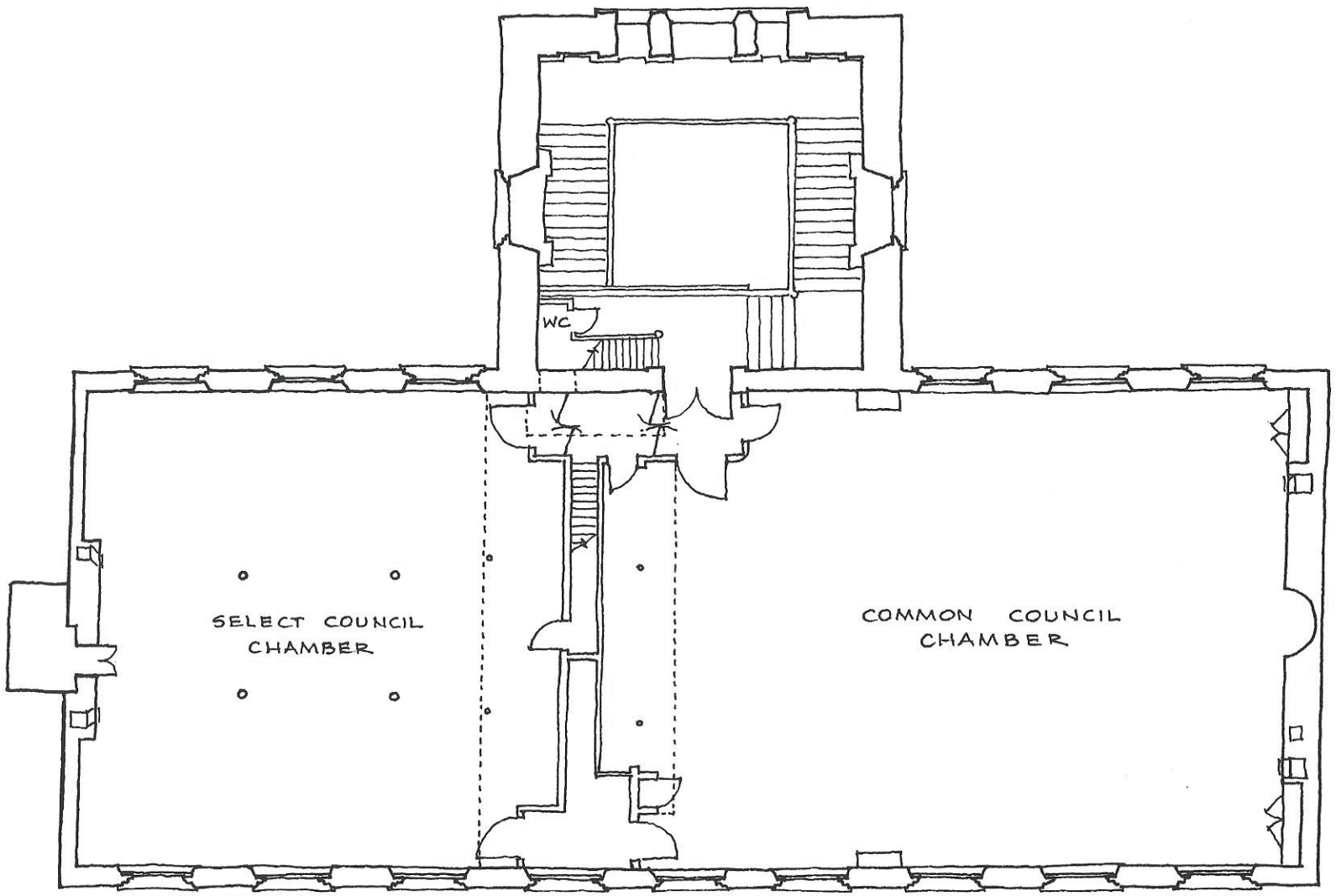
1854 – 1868

SECOND FLOOR PLAN [?]

0 10 20 FT.

0 2 4 8 M

PHB '92



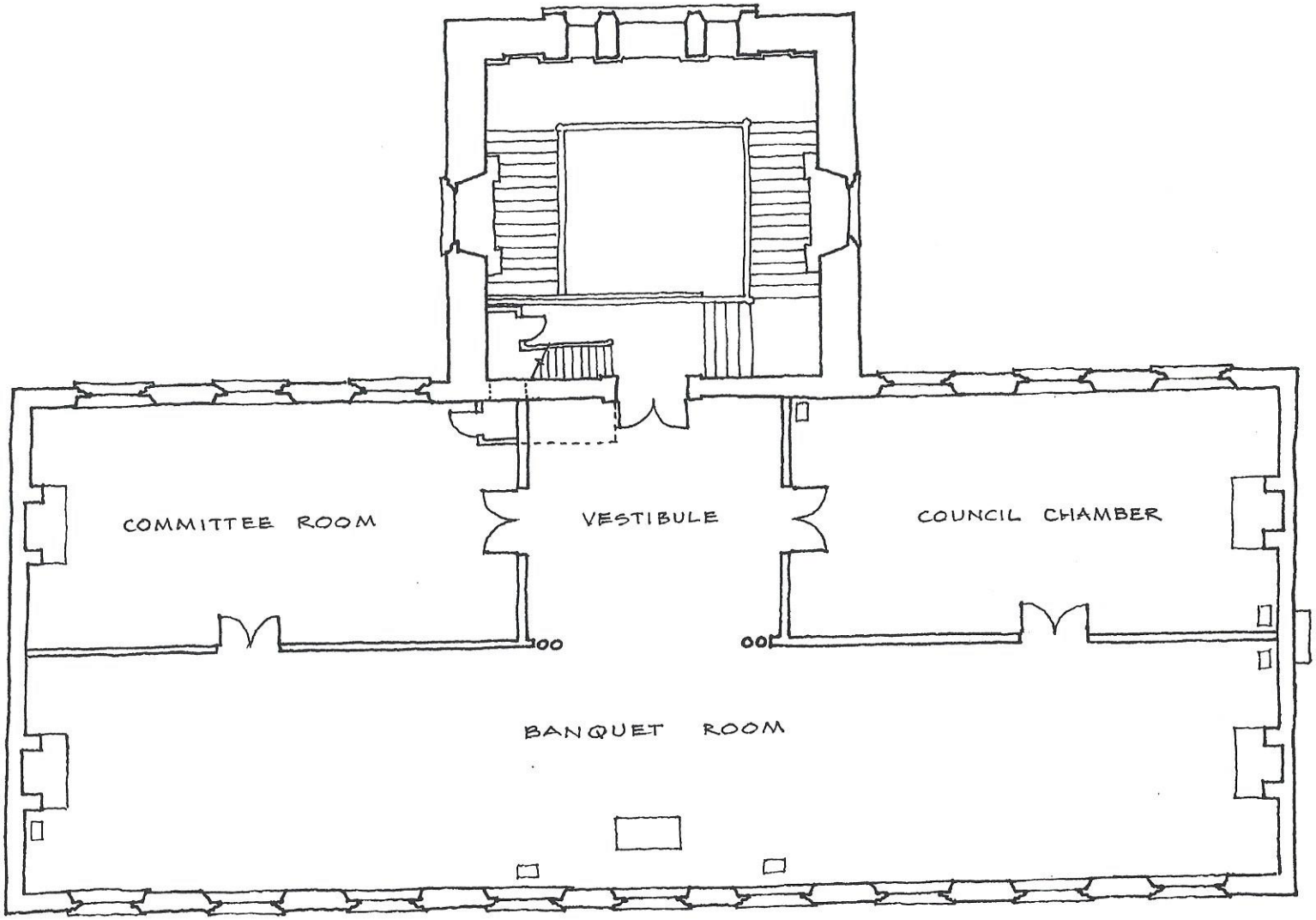
1869 - 1896

SECOND FLOOR PLAN

0 10 20 FT.

0 2 4 8 M

PHB '92



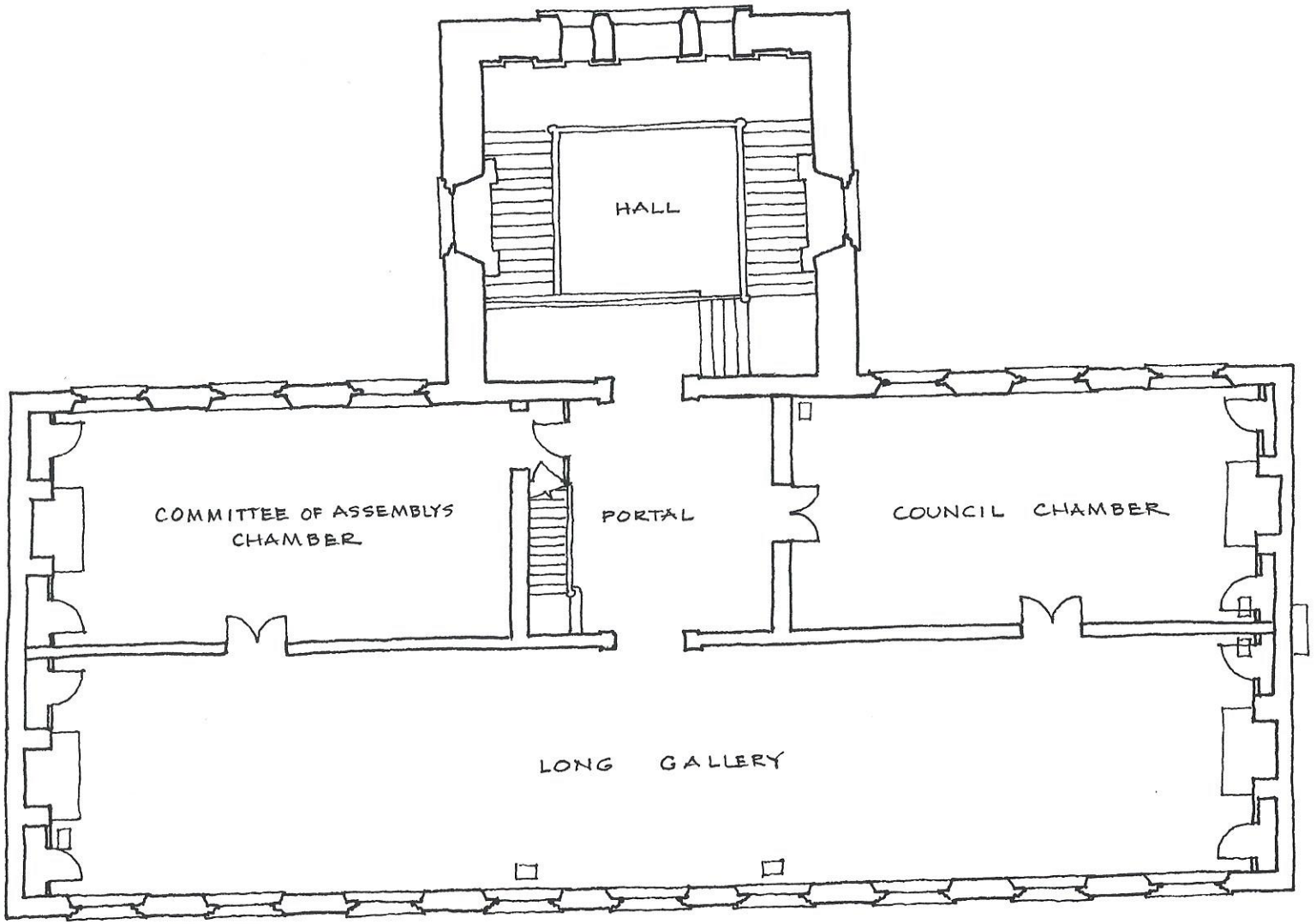
1897 - 1922

SECOND FLOOR PLAN

0 10 20 FT.

0 2 4 8M

PHB '92



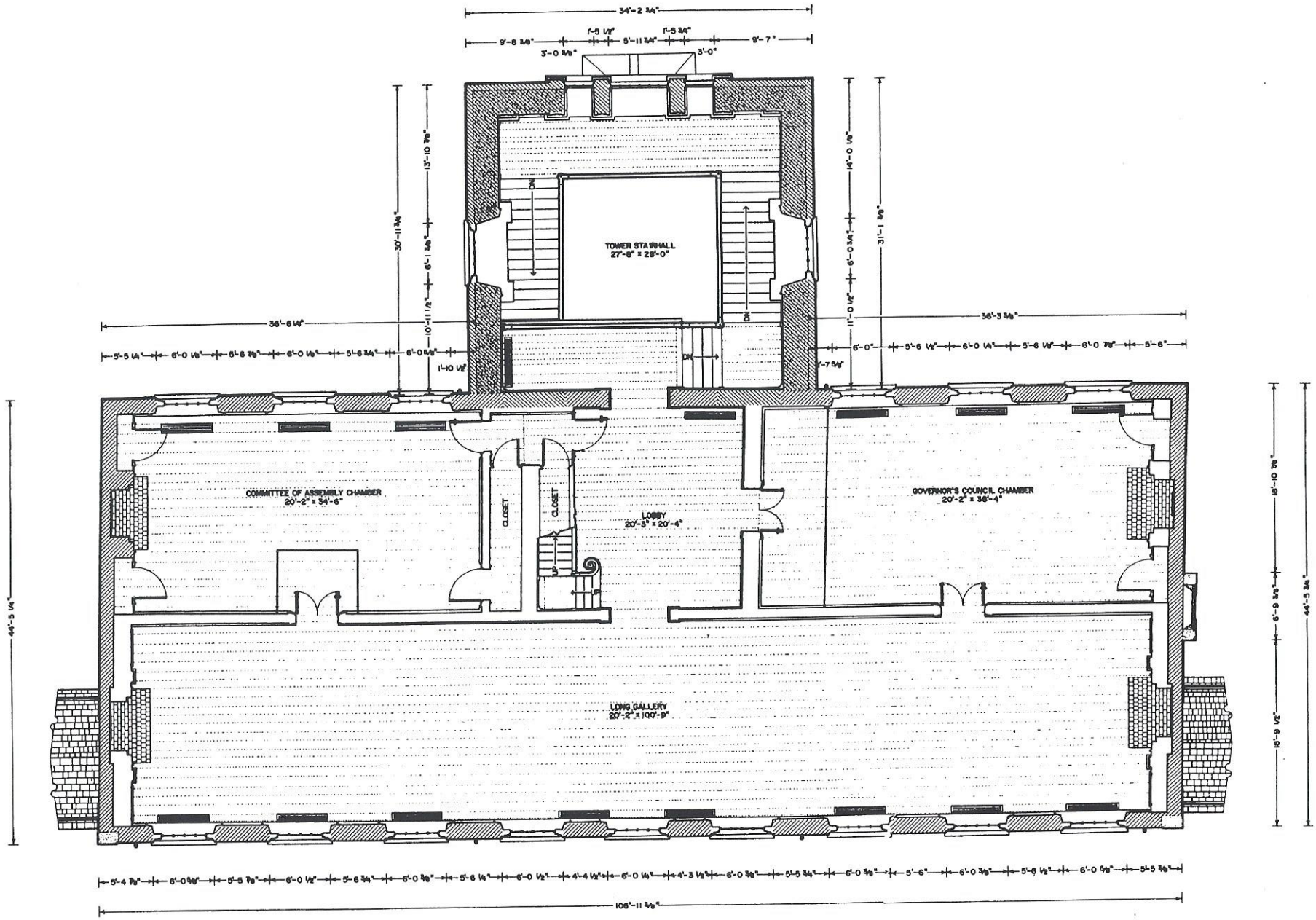
1924 – 1961

SECOND FLOOR PLAN

0 10 20 FT.

0 2 4 8M

PHB '92



1972 –

SECOND FLOOR PLAN

0 10 20 FT

0 2 4 8 M

N

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