WHITE HOUSE HISTORY



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2	Foreword	William Seale
4	A Special Space Lost and Found: Images of Abraham Lincoln's White House Stables	Clifford Krainik and Michele Krainik
10	Secret Spaces at the White House?	William Seale
14	A Room of Their Own: The Solarium	Mary Jo Binker
26	Caroline Harrison's 1891 Music Room: The First Lady Makes the Green Room Her Own	Keith D. MacKay
38	In a White House Passageway: Evidence Survives of James Hoban's Building Skill	James A. Jacobs
44	The East and West Wings of the White House: History in Architecture and Building	Travis McDonald
88	About the Authors	

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The East and West Wings of the White House History in Architecture and Building

TRAVIS MCDONALD

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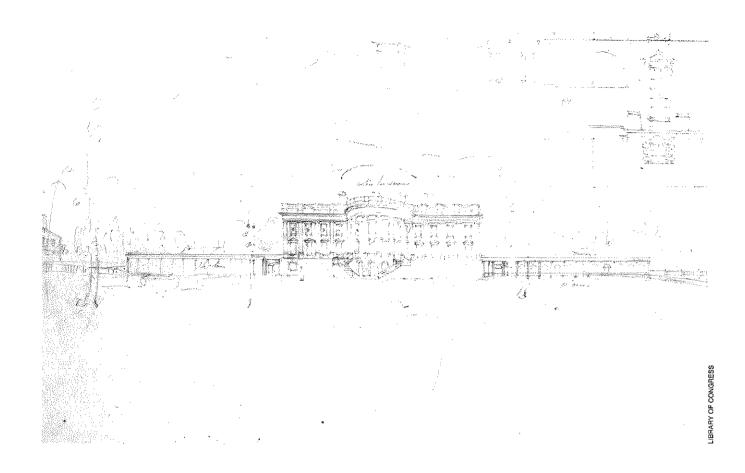
Jefferson paid the ferryman \$1 to take him and his carriage across the Potomac River at Georgetown and headed south toward retirement. What he left behind at the President's House were unfulfilled dreams of remodeling the still-unfinished mansion and completing its partly built domestic service wings, which were entirely his idea. It is ironic, in retrospect, that these wings, with their zigzag roofs and flat terrace platforms, would become his physical heritage there, because they have been mostly forgotten.

If the White House is, as the historian William Seale has written, "an American Idea," it includes one of Jefferson's most tenacious architectural ideas—domestic service wings. Jefferson did not invent the concept but borrowed it from those seen attached to Renaissance villas in Andrea Palladio's Four Books of Architecture (1570). Domestic service wings appear in Jefferson's earliest drawings for his bookish Palladianstyle home, Monticello, built in the early 1770s. Placing

domestic outbuilding functions in wings gave order to what would have been the typical scattered backyard arrangement of necessary buildings; more important for Jefferson, it saved the space for ornamental landscaped gardens. He adapted the same ideal for the White House.

Urban houses of pretense needed the same domestic services as large country houses. In America those functions were squeezed into backyard spaces as connected or detached buildings, while in Europe they filled the lowest floor and continued into connected wings or were separated and grouped as service courts. The overall service requirements of the White House amplified those of even large urban American houses on small lots like the ones George Washington and Jefferson had used in Philadelphia. Pierre Charles L'Enfant, in his famous plan for the Federal City, had, in fact, indicated a palace-derived solution for the White House with greatly extended wings and terraced ensembles. Washington, however, especially liked James Hoban's Irish Georgian house design and declared it the winner of the architectural competition for the President's House in 1792.2 Historians have indicated that Washington and Hoban actually discussed wings on the house, but details are not known and Hoban confined the immediate service needs to the basement story of the White House.3 He probably rationalized that typical food-related functions could be supplemented through daily trips to the local meat and produce market, as indeed happened.

1. Drawing of the White House from the north by John Rubens Smith, c. 1833. Recently discovered at the Library of Congress, this previously unpublished image provides details of the house as it was and clues to Andrew Jackson's changes, as, for example, his 1833 relocation of the stone gate piers that still stand today.



2. Drawing of the White House from the south by John Rubens Smith, c. 1833, showing the east and west wings in Andrew Jackson's era.

When President John Adams arrived in Washington to move into the White House in November 1800, there were no separate service structures except for simple brick stables two blocks away; the grounds held only workers' sheds. It was up to him and Mrs. Adams to make the unfinished brick and stone interior shell habitable. The basement, containing work and chamber spaces for cooks, housekeepers, and servants, probably seemed more cozy and finished than the principal rooms above. Adams's addition to the house consisted of rickety wooden stairs to a scabbed-on wooden balcony that gave the public unintended access to the south entrance of the house. When Jefferson replaced John Adams as president in 1801, he quietly slipped into a shell of a house still reeking of fresh plaster. His creative design propensities must have been stoked as never before.

White House Remodeling

Thomas Jefferson never resided in any house very long without altering it to suit his ever-developing taste for comfort and convenience. The incomplete interior of the White House presented him with a remodeling opportunity he had already practiced in Williamsburg, Paris, New York, and Philadelphia. This practice on landlords' houses later paid dividends when he remodeled Monticello, constructed his idealistic villa retreat Poplar Forest in Bedford Country, Virginia, and eventually created his largest work, the University of Virginia in Charlottesville. While his remodeling skill bore mostly unrealized fruit in his interior plans for the White House, the two service wings he added established an important link to his three most personal projects and represent an enduring experiment in architecture.

Probably even before Jefferson took up residence in the White House, his creative mind whirred with ideas of how to tweak the large Georgian pile. What he had been given as a starting point was a house of generous size with domestic services confined to the basement story and flanking government buildings about



500 feet to the east and west. The mostly barren shell vacated by John and Abigail Adams was a tabula rasa, as were the grounds around the house, facilitating the amateur architect's fertile imagination to produce remodeling solutions to the former and initial plans for the latter.

To Jefferson's dismay, domestic necessities such as shelters for fowl, goats, and cows had begun to supplant the workers' shanties that had sprung up around the house during construction. Jefferson found other needs wanting. The stables were two blocks distant; guests and servants shared an exterior privy; keeping ice was difficult without an ice house; the basement offered inadequate storage for wood and coal; and other functions such as a hen house and smokehouse were needed and best placed outside the basement. Jefferson's solution to put these functions in wings developed from his use of attached Palladian-style service wings at Monticello. To accomplish this would take time, congressional budget approval, and a capable construction superintendent. The latter job fell to Benjamin Henry Latrobe as surveyor of the public buildings and his assistant John Lenthall.6

3. Drawing of the White House from the southwest by John Rubens Smith, c. 1833, omitting details on the west, foreground, but showing the reuse of portions of the east wing for grounds purposes.

Jefferson had corresponded with Latrobe since 1798, most likely meeting him in Philadelphia about that time, and had first hired him in 1802 to study the Tiber Creek Canal between the White House and the Capitol and then to design a dry dock for the fledgling U.S. Navy on the Anacostia River at the base of Capitol Hill. Having confirmed Latrobe's skills as the most accomplished, and arguably the only, professional architect and engineer in America, Jefferson hired him in March 1803 as surveyor of the public buildings, a position he held until 1811.

Latrobe's initial task at the White House was to replace a leaking roof of slate embedded in mortar and gutters that were letting buckets of water into the house, threatening to destroy the few newly installed architectural finishes. Jefferson also called upon Latrobe to fix the two new water closets on the Second Floor that were fed from rain-collecting cisterns in the attic. Jefferson redesigned the grand, but unbuilt, west staircase that Latrobe would construct off-axis in order to open the vista and public access to the terrace promenade once there was a wing built to support it. A similar glass door was retrofitted in the similar eastern Serliana or Venetian window for east wing terrace access. Jefferson's other interior plans to fashion a French threeroom chamber and study suite on the First Floor were never accomplished but are shown on plans by Latrobe.7 What Jefferson focused on and pursued to at least partial completion were the domestic service or "office" wings and their intended connection to the flanking federal buildings.

Jefferson began remodeling with the easiest, yet important, projects related to convenience and service: replacing the outdoor privy with two indoor water closets from Philadelphia; establishing a cooled wine cellar; hanging service bells throughout the house; upgrading the kitchen for his French chef by installing stew stoves, boilers, and ranges; and having the unsightly and dangerous south stairs removed in favor of a bridge-like entrance on the north side of the house, which had been intended for public access. Jefferson did keep Adams's scabbed-on wooden balcony as a temporary outdoor room from which to view the distant Potomac basin's wilderness, quickly disappearing beyond the already denuded White House grounds. Later he could enjoy the outdoors on his own terraces, but the view would remain less than scenic.

The Domestic Service Wings

Jefferson's solution to the deficiencies of the White House came from his own house rather than from the sophisticated Paris town houses where he resided in the 1780s. His plan drawing of c. 1804 shows what he wanted (illustrations 16, 17). These drawings were first published by the architect and architectural historian Fiske Kimball in Thomas Jefferson, Architect (1916), a monumental work that established Jefferson as an accomplished self-trained architect in addition to his myriad other capabilities. Onto each side of the White House he proposed attached service wings, commonly called "offices." These wings, partially set into the grade on their north or public side, would expand east

and west as needed, or as funded, until they joined the Treasury Department building on the east and the War Department building on the west (illustration 15). The common thread visibly connecting these segments on the south would be a Tuscan order colonnade that provided a covered walkway. Jefferson's drawing also shows a 100 foot section of parallel wings to the south of the main block at the east and west ends, intended for government clerks' offices for the Treasury and War Departments, to which they connected. Latrobe's advocacy of fireproof construction influenced Jefferson to designate the extremities of the wings, opposite the span of proposed clerks' offices, for fireproof storage rooms for each department. This lateral expansion to each side of the White House served to visibly connect the three existing federal buildings in an American way, stretched out horizontally in the wide-open space.8 The grouping of services in these wings left the large, ungraded expanse south of the house for Jefferson's private landscape mixture of formal and picturesque features (illustrations 11, 12).

Kimball's book also depicted Monticello's prototypical north and south colonnaded wings. The difference in function between these and the White House wings had to do with what was already housed in the basements and the scope and function of each house. The common denominator was service. Monticello's daily routine and its economy depended upon enslaved servants. Jefferson's preference at the White House was for paid servants.9 Monticello's wings captured most of the economic and domestic functions of a large Virginia plantation that ordinarily existed as separate buildings arranged hierarchically in the surrounding and distant landscape. Jefferson's imitation of Palladio's domestic service wings reserved the surrounding grounds for picturesque pleasure gardens as well as making the linked and covered buildings convenient.

The White House wing plans can be scaled for size because of a drafting convention Jefferson learned in Paris. The famous antiquarian architect Charles-Louis Clérisseau taught Jefferson the architectural drafting advantages of using pencil on carpetmakers' point paper. Jefferson thereafter used this ruled graph paper (which became standard for architects in the twentieth century) as a visible scale in architectural drawing. The paper consisted of a grid of large red lines containing ten small squares between them. Typically, for

Jefferson, each small square equaled 1 foot. Thus this "decimal" paper required no scale rule or written dimensions for understanding scaled size. By scaling Jefferson's White House wing plan with this method, one can see that he is placing the intended columns on 10 foot centers with door and window openings centered between them. The interior room wall divisions are also centered on the columns, with some larger rooms necessarily being a double or a multiple of the 10 foot module. The first sections of the wings, separated 20 feet from the main house wall, were meant to be 24 feet wide and 150 feet long. The plan shows partially penciled walls, indicating the subsequent extension to the adjacent federal buildings and the parallel row of clerks' offices. Jefferson's precision on the graph paper can be seen in the thickness of the brick walls dividing each room, which are shown to be about 6 inches less than two squares, or about 18 inches, being the standard size of a 2 wythe thick wall using standard 8½ inch long handmade brick with a mortar joint of about ½ inch.10 In this scaled method, the room sizes are as follows: on the west the wine cellar was 18 feet in diameter, the wood room with coal cellar, 8 feet wide; the necessary, 9 feet; the saddle room, 81/2 feet; the servant's room 18 feet; and the coach house 58 feet. On the east the meat house with vault below was 13½ feet; the cellar stairs, 3½ feet; the necessary, 8 feet; the servant's room, 18 feet; the hen house, 18 feet; and the stables, 58 feet.

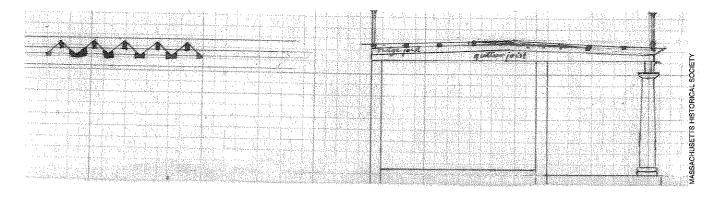
Jefferson's first addition was neither in the house nor in the wings but an exterior ice house constructed just west of the house in 1801. Some functions might wait, but those related to the quality of food and drink could not! This 18 foot round by 16 foot deep structure was not unlike the ice house constructed as part of the north wing at Monticello in 1802. Jefferson's memorandum book notes that he paid for filling the White House ice house in 1802 and for carpentry work by John Lennox the same year.11 The work by Lennox could be for any or all of the tasks of constructing the ice house roof, for an internal platform, or for an enclosure that appeared by 1803. The ice house was then joined to the west side of the basement level by what must have been a simple frame structure that also served to shelter the preexisting well just west of the house.

This was more than simply an ice house, however. Having no deep cellars in the basement posed a problem for keeping expensive drink at cool temperatures.

Apparently the subject became one of anecdote, as Sir Augustus John Foster mentioned in his travel memoir that the ice house-wine cellar had been occasioned after President Jefferson experienced "great losses in wine" from inadequate storage in the basement.12 Latrobe also gossiped of Jefferson's losses when, in a letter to William Lee, he shared his opinion that, due to the absence of an original underground cellar, "Mr. Jefferson lost 800 bottles of Crab cider for want of one" and that "a good provision [for a] cider and beer cellar never existed in the house."13 To prevent further loss of precious liquors, Jefferson had a platform fitted out inside the ice house as a sort of wine cellar room that had impressed Foster enough to remark on its temperature relative to the heat outside. Latrobe lamented that "the wine cellar in the West wing is fit for nothing but wine" but that the "present kitchen will admirably supply the deficiency [for beer and cider]."14

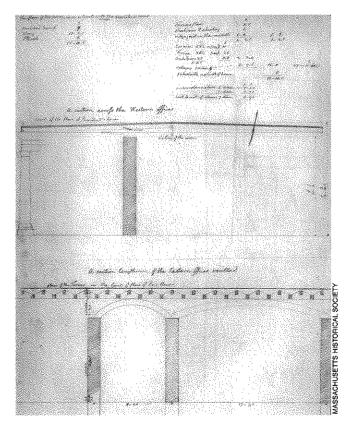
Digging for the west wing began in the summer of 1804 under the direction of architect and engineer Latrobe and his assistant and construction supervisor Lenthall, the same team working on the Capitol construction under Jefferson's supervision. Jefferson had chosen the right man to undertake the most complex of American building projects. While the completion of the Capitol and the President's House was his primary responsibility, Latrobe found that he first needed to supervise emergency rebuilding on both buildings.15 He had promptly engaged builder John Lenthall as his assistant, beginning an interesting correspondence among the three regarding both building projects, with Lenthall serving as an outlet for Latrobe's frequent frustrations with the architect-president.

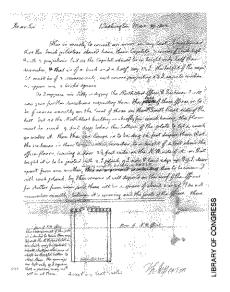
Latrobe and Jefferson found themselves intellectual and architectural soul mates of a sort, while Latrobe and Lenthall bonded over details of building construction. In the beginning, at least, Latrobe was taken with Jefferson, writing home to his wife after a White House dinner in 1802: "It is a long time since I have been present at so elegant a mental treat. Literature, wit, and a little business, with a great deal of miscellaneous remarks on agriculture and building, filled every minute. There is a degree of ease in Mr. Jefferson's company that every one seems to feel and to enjoy."16 The honeymoon would soon be over, however, when Jefferson's architectural ideas and taste clashed with Latrobe's over certain building concepts and construction details.



- 4. Above: Thomas Jefferson's sketch of the terrace roof. Jefferson's preliminary sketch of the wing shows the innovative roof system he was developing for a number of his projects. His indication of "gutter joist" and "ridge joist" would become his signature technique for compressing a watertight roof system while allowing for a strolling deck above.
- 5. Above, right: Jefferson dictated a challenge to Benjamin Latrobe that the east wing should not vary in height although its roof deck next to the White House was lower in elevation than the Treasury Department to which it would connect. Latrobe's sketch indicates that the height difference would be hidden by a low solid parapet wall.
- 6. Right: In this more refined drawing, Jefferson has worked out the Tuscan order modules for columns and entablature and fit them to his "terras" roof system. The "section across the Western offices" clearly shows the sloping pitch of the ridge joists that would deliver water to the wing's edges. The "section lengthwise of the Eastern offices, vaulted" shows the high and low joists connected by boards that would be covered in sheet metal. Jefferson also shows his misinterpretation of how Latrobe will provide vaulting for the fireproof section of the wing.





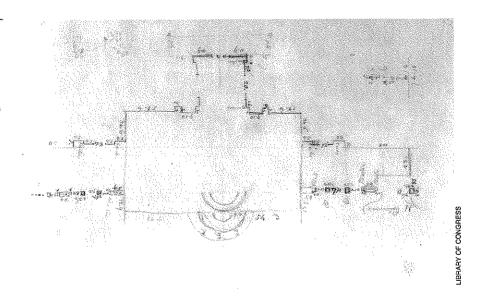




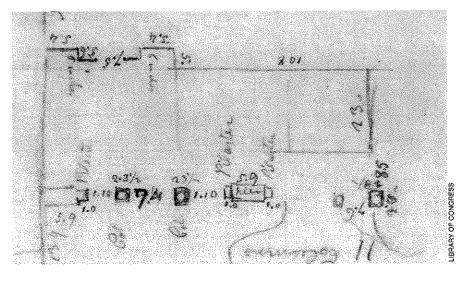
7. Far left: Jefferson's notes and drawing for his ice house at Monticello are the best indication for how he designed the contemporary ice house at the White House.

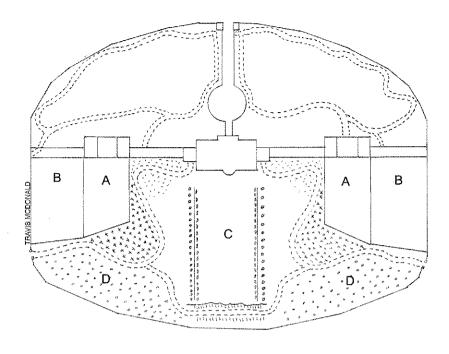
8. Left: President Jefferson and his surveyor of the public buildings, Benjamin Latrobe, exchanged many ideas and drawings for constructing the White House wings.

9. This sketched outline plan of the White House and wings, c. 1807-8, is most likely from Latrobe's office and indicates the actual dimensions of what existed. It shows the west wing in its first segment and a longer east wing with its addition.



10. Latrobe's sketch illustrates how he proposed terminating Jefferson's colonnade adjacent to the house. By creating piers and columns in antis, Latrobe conceived a more elegant solution.

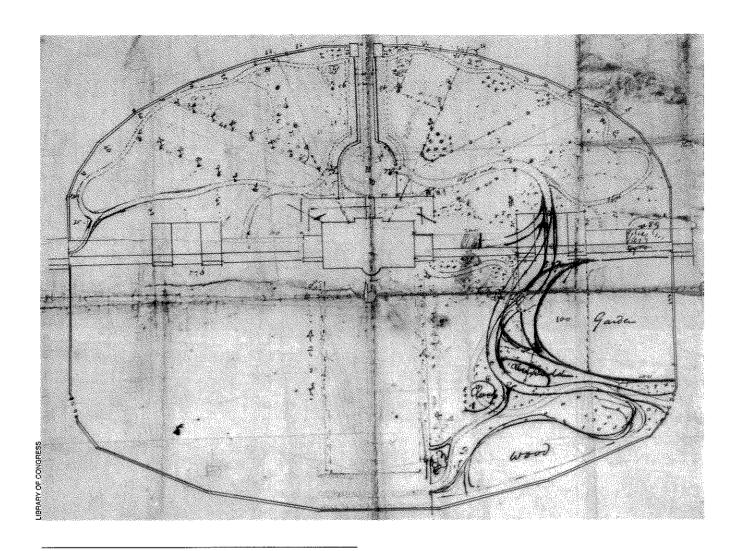




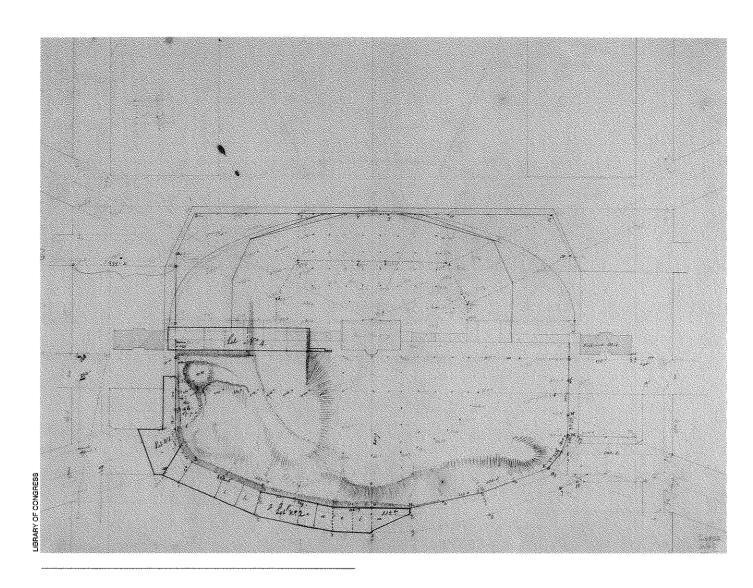
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11. Above: This conjectural landscape for the South Grounds combines Jefferson's utilitarian idea of vegetable gardens (B) and a middle pavilion coach house service yard (A) with picturesque paths and plantings (D) and a more formal lawn planted with trees, flowers, and shrubs (C). This sketch is taken from the lightly drawn central and southeast quadrant design on the collaborative site plan that probably indicates Jefferson's initial ideas. The symmetry assumed for the southwest quadrant is conjectural. Although not realized at the White House, Jefferson's central design in this plan was the prototype for his landscape at his retirement retreat Poplar Forest.

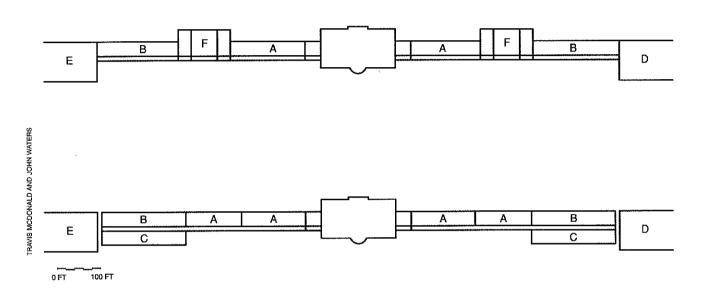
12. Left: Jefferson's sketch in this letter reveals that the majority of ground would be reserved for a decorative landscape.



13. This landscape plan, c. 1805, can be considered a collaborative site plan consisting of Jefferson's initial ideas and Latrobe's suggestions. The collaboration is true both for the wings, with Latrobe's suggested central pavilions, and in the landscape with Latrobe's ideas sketched in a darker, more self-confident overlay in the southeast quadrant. The southwest quadrant was not regraded at the time of the sketch.



14. In this plan both the natural topography and the intended excavation to accommodate the extended west wing are depicted. A faint pencil line showing a curved path, along with the falling grade at the end of the middle lawn, indicate that Jefferson proposed to use the natural topography to lay out his paths and landscape, as seen on the collaborative site plan (illustration 13). The natural grade shown on the southwest would also support a symmetrical plan, as indicated in the conjectural site design.



15. Jefferson's initial scheme for the extended wings, seen on the lower plan, called for extended domestic service wings (A) ending in a double range of government clerks' offices (B,C) that served the adjacent Treasury Department (D) on the east and the War Department (E) on the west. As seen in the upper plan, Latrobe suggested middle pavilion coach houses (F) that would allow for horses or carriages to pass through the range of building from north to south.

Construction of the White House wings in 1805 marked the beginning of a restrained and testy relationship between Latrobe and Jefferson. Responding to Jefferson's early concern for a seamless height and connection of the wings from the White House to the Treasury and War Department buildings, Latrobe wrote, "I find many difficulties in the arrangement of the connecting porticos of the public offices with the President's houses which however I do not despair of conquering."17 Still, Latrobe found that this collaboration of his own architectural taste and reason with Jefferson's as "damned hard work" and confessed, "I have bestowed much labor upon them [designs for the wings] already, and find myself exceedingly puzzled how to determine the exact mode of accommodating the two ends of the wing between the President's house and the Treasury to each other so as to answer the object of each in the best manner."18

In a letter to Lenthall, Latrobe complained of the difficulty of aligning the east wing deck level with the flanking Treasury fireproof wing at a higher grade level. Latrobe lashed out in frustration and famously remarked: "I am sorry that I am cramped in this design by his [Jefferson's] prejudices in favor of the old French books, out of which he fishes everything, but it is a small sacrifice to my personal attachment to him to humor him, and the less so, because the style of the Colonnade he proposes is exactly coincident with Hoban's Pile,—a litter of pigs worthy of the great Sow it surrounds, and of the Irish boar, the father of her."19 When Latrobe accidentally addressed the letter to Jefferson, Jefferson returned it stating he had not read it. Latrobe then wrote, somewhat embarrassed, to Lenthall: "The president, might have very safely read the whole of my last letter to you, even to the litter of pigs. He is certainly one of the best hearted men that ever came out of the hand of Nature and has one of the best heads too."20 An indication that Jefferson actually did read Latrobe's reference to "old French books" is a letter Jefferson wrote in 1807 asking Latrobe for the return of his Kraft and Ransonnette book on the mansions of Paris, saying: "Being about to build some little temples in my grounds at Monticello, I must pray the return of the Plans des Maisons des Paris . . . as I expect to find some good designs in that."21 In other words, Jefferson planned a fishing expedition in new (1801) French books.

The first portion of wings, east and west, appeared by the end of 1805 under Lenthall's supervision. When Latrobe submitted the surveyor's annual report on the public buildings to the president and Congress, part 3 of that report addressed the White House: "At the President's House two small buildings have been erected, containing some of those domestic offices without which that building could not conveniently be inhabited. They contain a meathouse, cellars for liquors, coal and wood, and privies, and are intended to be faced to the South by a covered passage, or colonnade. Further menial offices, and some of them of the first necessity, are still wanted, before the dwelling of the President of the United States will be provided with all those domestic accommodations which are required by most private citizens."22

Evidence for the Design of the Wings

Were these first sections of the White House wings, with later "menial" and subsequent sections. constructed according to Jefferson's original plan? Did Latrobe influence changes to what Jefferson designed and intended? Did President James Monroe and the architect James Hoban alter the original design after the 1814 fire? This article is the first to seriously address these questions. To decipher the answers, a rather detailed account must be given to support an interpretation that stands on the variety of sources. The best answer to all of these questions requires some historical sleuthing based on the analysis of different sets of relevant evidence: Jefferson's c. 1804 drawing of the intended wings; drawings and written references to the wings during construction; Hoban's account of rebuilding the wings in 1817; the earliest known post-Jefferson wing plan drawing, by the architect Thomas U. Walter from 1853; and illustrations and photographs from the nineteenth and twentieth centuries, especially photographs of White House renovation projects from 1969. The myriad sources and types of evidence are not always in perfect corroboration, but they have been assembled and reassembled to test all the possible hypotheses and present the case that is best supported.²³

Correspondence among Jefferson, Latrobe, and Lenthall implies that Jefferson's initial design was stubbornly adhered to despite Latrobe's personal preferences. One of many lengthy letters indicates that Latrobe worked from Jefferson's design but was producing working drawings, more or less in accord with Jefferson's drawing, for Lenthall's use. Latrobe wrote Lenthall during the initial season of building:

As to the president's calculations of his coal cellars, pray don't plague yourself about them, nor about the necessary. You have my ground plan; let that be your guide & of what consequence is it, whether there be a foot or two more or less for coals or dung provided there be the room enough. Now the president's 20 feet, are two spaces of 10 feet, whereas my two spaces make only 19'6"—& my are produced by the actual division of the spaces allotted for the Colonnade into equal parts & his are assumption near the truth and as to the door & windows, it is also only of consequence whether they fall centrically into the intercolumniations or not, but of none at all whether they fall symmetrically internally.24

Latrobe considered his own drawings the more accurate ones for Lenthall to follow while reconciling Jefferson's ideal design regularity to the reality of wall thicknesses and the practical space in each room. Walter's plan, subsequent plans, and what is still standing of the west wing confirm that exterior appearance and style did matter. Door and window openings were centered between each Tuscan column on the south (the columns did not come until 1808) and between the evenly spaced lunette windows on the north. That this design trumped internal room division walls is at the heart of the matter for understanding changes. Latrobe's mention of rooms 10 feet wide does not match the surviving Jefferson plan and indicates either some missing updated drawings by Jefferson or some tweaking by Latrobe.

The 1805 report to Congress describes the first wing segments as "two small buildings" containing a "meathouse, cellars for liquors, coal and wood, and privies" (illustrations 27, 28). Taken at face value, according to Jefferson's plan, this description would include three spaces on each side: ice house, coal and wood room, and privy on the west; and meat house with vault, stairway, and privy on the east. Latrobe's working drawings for the wings are not known to survive, and the later physical evolution of the wings makes it is hard to confirm this arrangement and size except for the first room on the west. Key to distinguishing between

Jefferson's intentions and Latrobe and Lenthall's construction is Walter's 1853 wing plan, the second oldest known after Jefferson's (illustrations 16, 17).

While it offers a distant comparative view in time. we know that President James Madison was determined to rebuild the house and wings as they were before the fire, a symbolic gesture that also implied the already iconic nature of the house. Hoban left a pretty good description of the extent of the main house's standing walls but not of the wings. The wing's masonry walls, partially in-ground, might have withstood substantial destruction just like those of the basement. The Walter plan thus serves as one verifiable measure in addition to other evidence when determining the original room usage and size for the east and west wings.

On the west the subterranean ice house became reenclosed in brick as part of the west wing in 1805. It constitutes the "room" and contained the wine cellar space referred to in the report to Congress as "cellar for liquors."25 The proposed Walter plan substantiates the ice house use and location in 1853, since its survival was structurally assured and its function easily reactivated after the fire.

In Jefferson's plan next came the wood room with a coal cellar below. The period use of the term "cellar" did not necessarily mean a below-grade room but could denote any type of storage room or space. In this case, however, the Jefferson drawing labels this space "coal below, wood above." What it does not indicate is how servants accessed the piles of Virginia Midlothian coal.²⁶ What seems odd on the Jefferson plan is the narrowness of the wood room and coal cellar, scaled to be about 8 feet wide. It is here that a reference in the above mentioned letter from Latrobe to Lenthall makes sense. Latrobe complained about the president's "calculations of his coal cellars" and that a few inches difference in size for the cellars, be they for "coals or dung," did not matter. This reference seems to be linked to the one that immediately followed, referring to two spaces of 10 feet each. Jefferson apparently increased the size of the second room to 10 feet wide, a width that still worked with the exterior openings and made the adjacent necessary 10 feet wide. The lingering question is how anyone reached the below-grade cellar. The Walter plan shows a much larger second room of about 20 feet wide, the combination of Jefferson's two rooms, that in later plans is still labeled as wood and coal storage.

Jefferson's third space, the necessary or privy, Seale indicates was for servants on this side whereas the east privy would be reserved for the family and guests.²⁷ At 10 feet wide it might have been divided into two stalls but, one or two, was probably still "unisex," as per the custom. Latrobe's reference to cellars for "coal or *dung*," mentioned in relationship to rooms 10 feet wide, seems to confirm a combined cellar space for the coal cellar and privy waste removal. This combination works only for the west wing, but it does not resolve the question of access. A fourth room is unidentified and was probably used by servants.

A surviving drawing helps establish the size of the initial west wing (illustration 9). This drawing shows someone taking measurements of the existing house and wings. If it is related to working out the dimensions of Latrobe's design of a pilaster and pier, it would date to 1807 or 1808. The west wing length given in this drawing is 50 feet. This size accommodates five window or door bays and accounts for all three of the Jefferson designated spaces as well as an extra space on the end. On the Jefferson plan that fourth space is labeled "saddle room," but at this period there were no stables in the west wing. Walter's plan shows a necessary of about 12 feet wide, divided into two stalls with seats, but placed to the west of Jefferson's necessary.

What complicates a reconciliation of the Jefferson and Walter plans is the odd fenestration shown in 1853. While we can expect the room division walls to vary from the regularity of the exterior features, four blind windows shown on Walter's west wing plan for the first five bays produce an awkward collision with internal walls. It is here that other sources help sort out the contradictory evidence. These include a period drawing, personal and official correspondence, and physical evidence shown in photographs.

Latrobe drew a beautiful south elevation of the White House showing a proposed portico (illustration 18). It also shows four bays of the east and west wings at that time. On the west is pictured: a lunette window on the ice house wall; a doorway with typical lunette window above, another doorway, and a window. This fenestration would seem to support the Jefferson room plan and sequence of an ice house, a wood room, and a necessary.

Another piece of evidence is an unlikely photograph taken on November 28, 1969, by a White House

photographer documenting three men digging out the west end of the west wing for Richard Nixon's new Press Room (illustration 22). The men are working below grade in a Piranesi-like view amid piles of dirt and fragments of masonry structures. While far from a suitable documentary recording of architectural evidence, this photograph sadly provides our known universe of physical evidence from which to interpret and test hypotheses of the initial west wing room plan.

The photograph clearly shows a round brick outline of the ice house, the wing room most substantiated. By using the window and door bays as markers, it is possible to place the "ghosts" on the upper walls and the below-grade remains in a proper context despite the photograph's warped perspective. On the right, the south wall, can be seen the first lunette window bay adjacent to the ice house, with a later doorway below it. To the right of that bay is the "ghost" of a missing wall that separated the ice house from room two. The second bay shows the sill of a doorway accessing the wood room that was later filled with brick. The third bay is shown as a doorway that would have accessed the necessary. These three bays confirm Latrobe's elevation and the Jefferson plan. The evidence would seem to confirm the Walter plan's depiction showing a window in bay two.

On the north side (left side of photograph) the ice house wall "ghost" is visible to the right, and continuing below window bay two. This defines the wall between the ice house and the wood room, whose walls are shown on the Walter plan as recessed for the original window and door to open into the room. On the wall to the right of window bay three (upper left foreground), and below to the right of the mason, is evidence of the missing wall between the wood room and the privy. This same wall also appears on the right side of the photograph in the foreground just below and east of the doorway (due to the perspective of the photograph things do not seem to align if the opening bays are not used as reference). This wall also establishes the eastern wall of room three, the necessary, whose full extent cannot be seen in the photograph. These walls for the original rooms two and three prove that the larger room shown in the Walter plan was created out of two earlier rooms. To the left of the mason is a lower brick wall that seems to be directly under the third window bay,

with an arch springing from it.

In addition to showing five later period doorways, there are three things of interest in the photograph. First, at the far wall, the eastern end of the wing, a large masonry arch has been filled in. This arch presumably carried the weight of the wing's eastern brick end wall above the ice house that protruded beyond it at a lower level. Constructed first, the ice house was covered by a wooden roof structure that was demolished when the wing was constructed, leaving the protruding wall that needed to be captured in the squared brick wing walls. The ice house might have been identical to that Jefferson constructed at Monticello at the same time, with a wooden roof structure below the level of the wing roof.29 The original arch extended just to the south (right in the photograph) of the later doorway that was inserted in the filled wall when the ice house ceased to function.

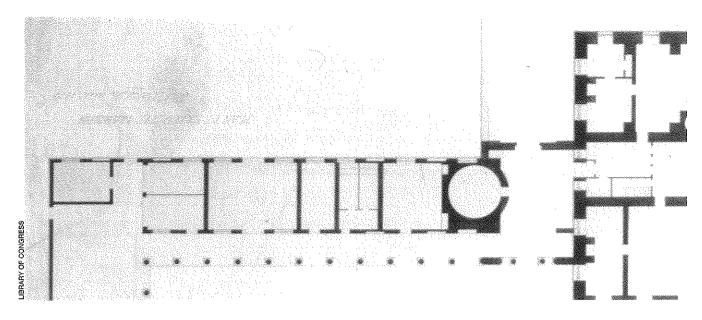
Because the ice house is off-center to the north in the wing, there is room on its south side under the arch for space containing a stairway to be squeezed between the curved ice house wall and the south exterior wall. This is the most likely place for a narrow stairway accessing the cellar space below rooms two and three, and making sense of a cellar for "coals or dung." Jefferson's drawing hints at this arrangement by showing a south doorway in bay one, although with no indication of stairs.30 The Walter plan does not show any access or stairs but simply a solid mass of masonry in this location.³¹ The only reasonable access to cellars below would be a narrow stair space defining a third room, like that shown on the east wing plan, but nothing supports this scenario.

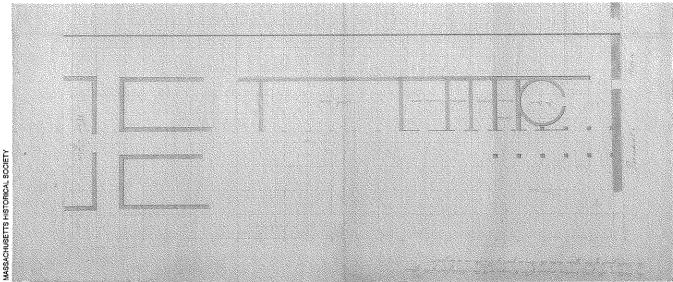
Finally, one perplexing bit of evidence in the photograph is the remains of two arches on the north side shown on either side of the mason. It would be reasonable to think that Jefferson might have created vaulted spaces for the coal cellar and/or a necessary clean-out. However, a letter from Latrobe seems to rule out this possibility. Latrobe remarked to Jefferson: "I regret that your Coal cellars were not arched. I have seen so much rotten timber in every building erected in Washington, that my passion to exclude it altogether grows upon me daily."32 The arches could have been added in the 1818 rebuilding to help support the combined spaces of rooms two and three for wood and coal storage. There is no means of a lower-level access in Walter's plan, so the arches would not be for the necessary, which must have been cleaned from the space itself.33 The other possibility is that the arches are relieving arches for the north wall, allowing the "Coal cellars" to extend beyond the wall into the higher north grade. As such, they would not have fit Latrobe's definition of an arched floor like that designated for the meat house's vaulted floor.

For the east wing a comparison of the Jefferson and Walter plans can be made, but the photographic and physical evidence is lacking due to that wing's demolition in 1866. Jefferson's plan calls for room one to be "Meat house above, Vault below," room two as "Descent into cellar" stairway, and room three as "Necessary." All three functions are mentioned in the 1805 report. What is seen on Walter's plan is consistent with Jefferson's room use and sequence but shows the rearranging of internal room walls to achieve a larger meat house and necessary.

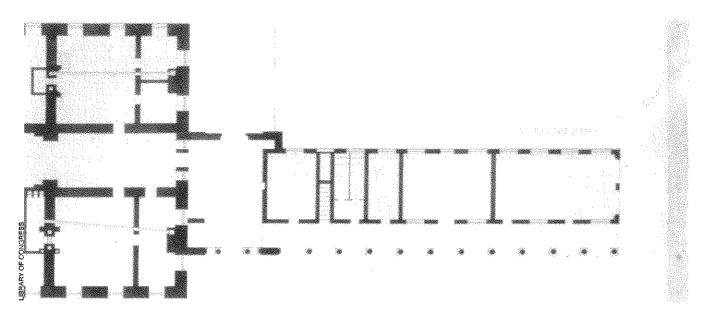
"Meat house" was a term contemporary with "smokehouse," a structure where meats were smoked and salted for curing and then usually suspended from the rafters until needed. The difference with this meat house, due to Jefferson's flat terrace roof above, was that it did not have the typical tall pyramidal peaked roof wherein the hams cured in the upper reaches of smoke. Did this meat house contain only hams smoked elsewhere? Two clues suggest that fires were actually made in the space. The "Vault below" refers to a masonry vault of brick. This would not be necessary for constructing the floor above a cellar or for creating a ceiling above a cellar space, but it would be necessary if the floor structure needed to be fireproof for a fireplace or firepit in the room. The other possible clue to smoke being present is that the Walter plan shows a possible opening for ventilation on the west wall of this space facing the exterior passage between wing and house.

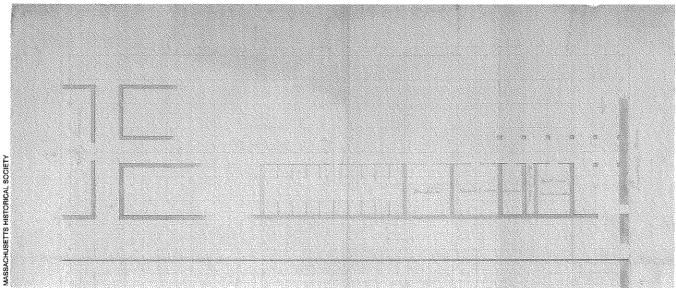
In two other applications where Jefferson created a low ceiling smokehouse under a terrace deck roof-Monticello and Poplar Forest—there was no apparent exit for smoke other than what seeped through the roof or deck.34 The vault was not necessary for a fireproof floor since typical smokehouses had floors of dirt or brick. The vault not only made for a fireproof floor but created a cellar space below, as the stairway indicates. What the cellar was used for is unknown, although the proximity might indicate that it could have housed wood for the fires above. The possibility that the fireplace



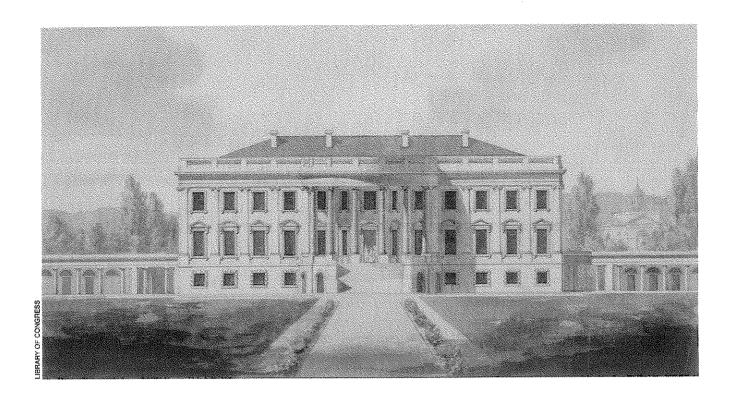


16. The lower plan, c. 1804, depicts Jefferson's initial intention for the west wing, showing the ice house that was constructed before the wing. The upper plan is Thomas U. Walter's drawing from 1853, the earliest known wing plan after Jefferson's and one that reflects the rebuilding after the 1814 fire and subsequent alterations.



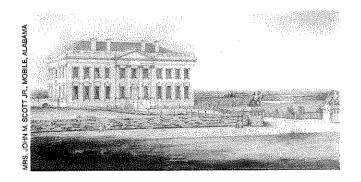


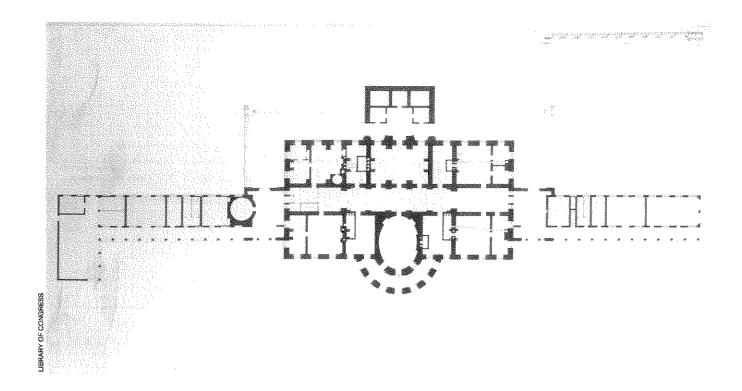
17. The lower plan, c. 1804, depicts Jefferson's initial intention for the east wing, showing steps that accessed a below-grade cellar under the smokehouse. The upper plan is Walter's 1853 wing drawing reflecting the 1818 rebuilding and any subsequent changes.

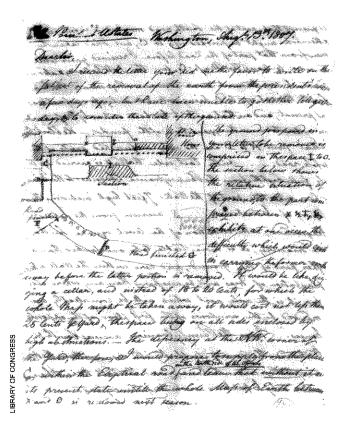


18. Above: Latrobe's "Elevation of the South front of the President's house, copied from the design as proposed to be altered in 1817" shows the first four bays on the east and west wings, lending credence that the Jefferson plan, at least in the first constructed portions, was faithful to his drawing.

19. Right: Latrobe's perspective drawing of the White House hand-dated to 1811 but showing the west wing as it appeared before 1809.







20. Above: Walter's plan of 1853 is the earliest known plan of the White House basement level and wings. It reflects both faithfully reconstructed Jefferson plans following the fire of 1814 and some changes in the west wing.

21. Left: In a letter to Jefferson, Latrobe sketched the current landscape projects in 1807. The earth was too high for the extension of the west wing and needed to be excavated. The South Grounds were also being enclosed by an irregular semicircular stone wall.

was located below the space seems to be negated by Jefferson's use of the word "cellar," which implies storage. The stairway, constituting the second room space, in addition to accessing the "cellar below," could also have accessed the underside of the necessary where waste could be removed. Its window most certainly would have been used originally for light, as opposed to the blind window shown on the Walter plan.

The third space on Jefferson's east plan was the "Necessary" that, enlarged to 10 feet wide, might have accommodated two separate stalls for bench seats as shown in the Walter plan. Typically, Jefferson put louvers in his privy window openings for ventilation, but unfortunately his plan does not show windows and the Walter plan does not distinguish anything different in this opening.

In summary, it seems Jefferson stuck to his original plan but allowed for larger spaces (illustrations 27, 28). The first section of the west wing ended up as a five bay section, 50 feet long. The east was first a four bay section, 50 feet long. This arrangement seems to be confirmed by the fact that in 1805 Jefferson mentioned that he wanted to extend the east wing by 60 feet and in 1807 mentioned extending the west wing 50 feet, giving each by 1809 their 100 foot lengths.35 On the east this extension was accomplished in two sections: a stable space was added in 1806, and a carriage house was added to the end in 1809. The west wing did not get its matched extension until 1818.

The Roof Structure

The innovative significance of Jefferson's service wings lies in their roof structure. To create his flat terrace—or what he called "terras"—roof deck or walking platform, Jefferson had experimented at Monticello with several ways to compress the roof structure by altering the ceiling joists of the rooms below. The roof needed to act in a typical manner to keep out water while giving support to the deck and rising to a minimal height, typically behind the entablature trim. It was important that the deck level be at the same level as the floor of the house from which one stepped.36

Jefferson might have seen versions of flat roofs and terrace decks in Europe, where masonry "platform" roofs were more common, but his documented evolution of experimenting with different methods leads to the conclusion that he did invent his ultimate "terras" roof-deck

construction.³⁷ Latrobe, who certainly knew European construction methods, called it the "President's zig zag roof of sheet iron uniting all the good qualities of the pantile, without its bad ones."38 Latrobe had more than a passing interest in sheet iron for roofs, because he was partners with Samuel Mifflin in the first iron rolling mill in the United States and claimed to have been the first to use sheet iron for roof coverings.39 Latrobe and Mifflin were providing sheet iron for Monticello in 1803 at the same time that they were busily producing it for both the White House and the Capitol. At the White House the iron was needed for a hasty retrofit to replace the leaking slate roof and gutters of Hoban's roof.

Jefferson had ultimately settled on a compressed series of high and low ceiling joists for his wings that he called the ridge and gutter joists (illustrations 4, 5, 6). By spanning the closely spaced high and low joists with two layers of shingles, he created a miniature shingle roof that was hidden underneath the deck and at the same time acted as its support. If sheet iron was used. wide horizontal boards would be used to span the joists. Rain water fell through the cracks between deck boards to the sloped shingles or tin-covered boards below, where it was directed into the scooped-out wooden gutter joists that were pitched outward to carry it, by gravity, to one or both sides. In some instances the water was directed into cisterns, and at other times it fell out to the ground through scuppers in the entablature.40 At the White House, hidden gutters directed water to tin pipes that ran down the outside of the room walls and from there it probably fed into cisterns in the basement, just as the main roof gutters delivered water into attic cisterns that fed the interior water closets. As Latrobe put it to Lenthall, "[There are] cross gutters inside the [wing] wall, into which all the others piss, as you say."41

The Achilles' heel of this system was the wooden gutter under the deck that stayed dark and damp and rotted. Jefferson solved this problem by using some sheet iron intended for the Capitol. Folded sheet iron was placed over the wooden ridges that overlapped, like a pantile roof, with inverted folded sheets in the gutters. Jefferson's "terras" roof drawing for the White House shows a V-shaped gutter to accommodate the sheet metal.42 The terrace deck above required a wooden cap on top of the ridge in order to hold and secure the perpendicular sleepers to which the deck boards would rest and fasten. Even with sheet iron covering the wood, the

same longevity problem existed: the thin sheets of rolled iron could not be tinned like smaller sizes and had to be continually painted to be preserved.

The fixed deck not only kept air and sun out but also prevented maintenance, causing the iron sheet metal to rust or uncovered wood gutter joists to rot. Jefferson apparently first saw a similar use of sheet iron at General Samuel Smith's modern house, Montebello, outside of Baltimore. In a letter to Latrobe in 1803, Jefferson asked him to stop to see the house with its flat roof that used iron sheet metal in gutters, being "the first and only example yet executed." Jefferson asked Latrobe to examine it so that "it may furnish us, by the manner of its execution, information both as to what succeeds, and as to what may not succeed, and therefore is to be avoided, if anything about it does not succeed."43

There is no known further correspondence on the matter, but Jefferson proceeded with the sheet iron, and in fact had already ordered the material for Monticello's roof. While he used sheet metal for gutters at the White House and later at the University of Virginia, he came to acknowledge its failure. Concerning a similar "terras" deck and zigzag roof on the 1815 service wing at Poplar Forest, Jefferson remarked that sheet iron was expensive (when not at federal expense) and lasted no longer than the thick wooden gutter joists, which at Poplar Forest was only ten years.44 At Poplar Forest wood shingles spanned the high and low joists and directed rain water into the wooden gutters and out through scuppers in the entablature, where it fell to the ground.45 Using sheathing boards covering with sheet iron rather than wooden shingles saved a great amount of labor. A surviving wing roof shingle found at Poplar Forest shows that they were not typical shingles but were specially made. Each pine shingle—and there were about nine thousand for a 100 foot long roof-had to be planed on four sides, cut with beveled tops and bottoms, and incised with two parallel 1/4 inch grooves on their faces to facilitate downward movement of water. The labor, it must be remembered, on Jefferson's own projects at Monticello and Poplar Forest, was slave labor. At the University of Virginia in the 1820s, with state money, Jefferson experimented with even more versions of this system over the student rooms on The Lawn, sometimes with wood shingles and at other times with sheet metal in the gutter joists.46

The sheet metal used in the White House roof gutters probably lasted until the British torched the place in

1814, but another typical type of failure before that prevented President James Madison from strolling or sitting on the deck as Jefferson had. Latrobe wrote Madison in 1812 that the "platforms covering the gutters were rotten and must be replaced."47 This message must have chagrined Madison, who had adopted one of Jefferson's zigzag roof systems to create decks over the 1809 wings at his Montpelier. Whether they were replaced at the White House, or not, is hardly relevant because they would be burned in two years. When the wings were rebuilt by James Hoban in 1818, the roofs were copper. Whether Hoban constructed the roof structure with Jefferson's joist system or simply constructed a low pitch rafter roof is unknown.

The Terrace Deck and Coach Houses

On April 22, 1805, Jefferson wrote to Latrobe with the request that his drawings of the wings be returned and asking for Latrobe's comments so that the "offices" could begin.48 About that time Latrobe wrote to his brother and mentioned two of his projects: "I shall this Year build wings to the president's house of his own design (he is an excellent architect out of books by the bye, but loves the taste of Queen Elizabeth best), [and will build] additions to the Treasury offices."49 Just prior to sending a long critique of Jefferson's "own design" along with his ideas, Latrobe confided in Lenthall that "neither my taste nor my reason could at first be made to yield acquiescence" to the architect-president.50 In addition to a design improvement of terminating the colonnades with piers and pilasters rather than columns, Latrobe addressed two major issues: the difficulty of reconciling the wing roof deck height from the White House to the Treasury building on the eastern terminus, and the recommendation that the long 500 foot stretch of eventual service buildings on each side of the house needed to be broken up in the middle by a stables or coach house pavilion. The pavilion, he reasoned, would allow for more convenient north-south horse and carriage access, instead of going around the long wings. At the same time the messy stable vard could be accommodated farther away from the house. Further, the repetitive colonnade, Latrobe pointed out, allowed insufficient room for carriages to pass through.

Jefferson replied to Latrobe's suggestions stating that the piers and pilasters were fine and that the pavilions were along the lines of his own thinking, but the

terrace deck level was not negotiable: "Nothing can be admitted short of the terras of the offices from the President's House to the pavilions each way being absolutely in the level of the floor of the house. How it shall drop off from the last Pavilion to the Treasury, and gain from the West one to the War office is the difficulty of the art which will be worthy of you to conquer."51 Jefferson evidently felt very strongly on this point because when he directed construction of the 100 foot service wing at Poplar Forest, he adamantly stated the deck should be "in the level of the floor of the house."52 Jefferson's stubborn reply was later echoed in a Latrobe letter over the debate of whether real stone or rough cast (stucco) was appropriate on the north side of the wing. Latrobe wrote to Lenthall: "The back front [north] of the presidents buildings must absolutely be in ashler, let him manage the south as he will; I shall oppose rough cast on the north side tooth and nail, at the Treasury end, where I am master [it will be ashler]."53 Latrobe's pencil sketch shows how he intended to accommodate the wing levels through an intermediate terrace deck level next to the house that gained height once over the wings proper with a low solid balustrade added to mask the difference (illustration 5). He also sketched a pier and pilaster design for any interruptions or terminations of the colonnades (illustration 10). Otherwise, Latrobe faithfully carried out the ridge and gutter system sketched by Jefferson (illustrations 4, 6).

The visual clue to what Latrobe proposed as the "middle pavilion" is seen on a collaborative site plan drawing c. 1805 that evidently merged Jefferson's design for wings and landscape with Latrobe's counterdesign with middle pavilions (illustration 13). The pencil drawing might have been the work of Jefferson's architecture student Robert Mills, who was working in Latrobe's office, with heavier ink overlays by Latrobe.54 The pavilions are shown as wing segments cut up, turned perpendicular, and pulled apart with a generous pass-through space in between. They project north from the wing wall 35 feet, and each side bay is 35 feet wide.55 The center portion is a carriage passage that, at a very generous 60 feet wide, would have spanned the different heights of north and south with a pitched and paved surface. Altogether the structure was 70 by 130 feet, a rather large building. At a later date, after 1806 by the indication of the east wing's extension and the appearance of the Treasury fireproof, Latrobe's hand is

seen in the heavy overlay lines on the drawing that directs a major roadway from the north through this opening southeast toward his Pennsylvania Avenue gateway.56

It is worth quoting a good portion of Jefferson's reply to Latrobe's critique and design suggestions, as it reveals the detailed level of Jefferson's involvement as well as his polite reminder of who was in charge:

That the coach house cannot permanently remain where I have planned it, is certain because of the inconvenient distance a carriage would have to go from the South to the North front when the whole line of offices shall be closed. The upper floor of the Middle pavilions, level with the surface of the ground on the North side, and opening on it, must ultimately be destined for coachhouses. But I want a coach house immediately and hope we may the next year add 60 f. to this year's work which may be conveniently used as a coach house, while the rest of the line is unclosed, and may be converted to any other use, when further calls for accommodations shall render it necessary to build as far as the center pavilions. The obstructions to the colonnade from the stables, may be prevented by giving them a North door, as horses will easily ascend or descend the terras on the North side. But the most difficult of all is the adjustment of the new connecting building to the different levels of the three existing buildings. Nothing can be admitted short of the terras of the offices from the Pres.'s House to the pavilions each way being absolutely level of the floor of the house. How it shall drop off from the last Pavilion to the Treasury, and gain from the West one to the War office is the difficulty of the art which will be worthy of you to conquer. The depression of the Treasury floor favors eminently the giving the necessary height to the Treasury offices now to be built. By the bye, I observe in the drawings for the Treasury offices in mr. Gallatin's hands, that the barrel of the vault runs lengthwise of the building, to wit, from East to West. I thought that you had concluded it would be better for them to run across the building from N. to S. so as to press against each other, and rest on piers or partition walls. These would take little from the internal room as they would serve to place presses

against, and this arrangement would give large South windows; not indeed material for the Treasury offices now to be executed, but indispensable for those hereafter in which the officers and clerks will write. They will want doors too opening into the colonnade. My opinion is that in time they will want a double row of offices, as in my sketch given you, the passage between which will range with the colonnade. These suggestions are for your consideration; but your presence here for a few days is indispensable to consult and determine ultimately on the plans. In the mean time the digging is going on, and mr. Lenthall found that the excellent rough building stone here is cheaper than brick in the proportion of 3. to 5. It is certainly as durable, and either of them being to be rough cast, it ought to be preferred, because it enables us to do more with our appropriated sum in the proportion of 5. to 3. which is a great matter.57

This letter informs us of a number of important issues respecting the immediate and continuing construction of the wings. Whatever he had contemplated (and we must take him at his word that he had), Jefferson accepted Latrobe's idea for distant middle pavilion coach houses and stables. Jefferson threw Latrobe another challenge. Making the pavilion's upper floor level with the north grade would pose yet another grade-building height to conquer, especially with a steeper grade for horses and carriages. At the same time Jefferson affirmed what he had drawn in his wing plan, that the stables and coach house would be closer to the house, even if temporary. Latrobe raised a good question when asking how carriages and horses would exit through the southern colonnade. For the present it was a mute question given the short sections of wings, but Jefferson's solution to the colonnade problem was simply to put a north door in the stables where the horses could "easily ascend or descend the terras on the North side." Jefferson's adamant statement about keeping the terrace deck level regardless of the change in grade reveals the sovereignty of Jefferson's "terras," for it connected architecture, landscape, and nature. The letter also confirms Jefferson's idea for using a parallel row of clerk's offices, the fact that he had sent Latrobe sketches, the frustration with Latrobe working long distance from Delaware, and the debate over using good stone versus cheaper stone covered with rough cast.

Jefferson's response to Latrobe's critique contains the first mention of a wing extension. Jefferson wanted an immediate extension for a coach house 60 feet long with a north doorway for horses. He acknowledged that this was temporary and when eventually the coach house would be located farther away in the pavilion, the wing space can "be converted to any other use."58 The congressional report of 1806, however, mentions that a stable, rather than a coach house, was added on the east and that a coach house was still needed.59 If this first addition, a stable, is defined on the 1853 Walter plan by the three bay room in the center of the east wing, the center opening on the north side indicates the doorway mentioned by Jefferson as the solution to north-south access (illustration 17).

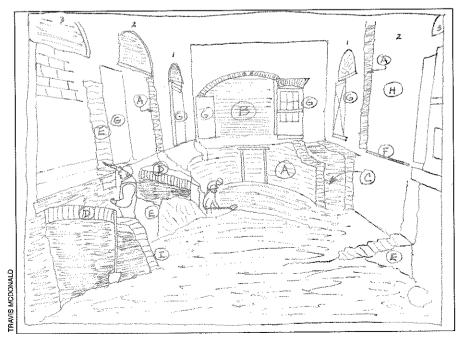
Jefferson's west wing expansion had to await a considerable grade change (illustration 21). The "temporary stable" had been "added under the colonnade" on the east side (illustration 27). "Under the colonnade" had now become the catch phrase for "temporary," holding out hopes of some grand central pavilion. 61 The east wing grew again with a temporary coach house extension in 1809 under President Madison. The access problem through the intended colonnade, mentioned by Latrobe, was solved by two large carriage openings forming the east end of the wing and shown on the Walter plan. This temporary solution, due to the incomplete wing row, is also confirmed on the collaborative site plan showing Latrobe's bold marks leading a carriage drive from the north public grounds directly into the end of the east wing. While servants might have occupied the extended wing as Jefferson indicated, his "hen house" was forgotten.

Photographs from a 1969 excavation in the West Wing confirm that the eighth lunette window opening had been a doorway and later filled with brick for a window (illustrations 24, 25).62 Walter's 1853 plan also indicates the location of this doorway. Plans from 1877 and 1902 actually show it as a pass-through, with the north door aligned with one on the south. Architectural elevation drawings from McKim, Mead & White clearly show this doorway being reduced in size to a pedestrian one from its former, larger size. 63 The 1808 congressional report also stated that a coach house would be added "under the colonnade" of the east wing.64 When this "temporary" "stable and coach house" function extended the east wing in 1809, supervised by Madison's

22. Top: In 1969 the eastern portion of the original west wing was excavated to create President Richard Nixon's Press Room. The three workers are working in and around the remains of the rediscovered cellar spaces that had not been seen since the nineteenth century. The photograph was taken from the room three space, the necessary. The perspective angles of the photograph are deceiving if the door and window bays are not used as markers.

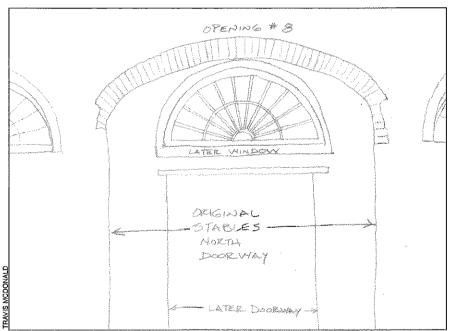
23. Bottom: A visual anatomy of the excavation photograph can tell us many things: A is the circular ice house wall and the wall forming room two. B shows the later brick fill for the large arched opening that spanned the protruding section of the ice house. C is a space between the walls that most likely contained a wooden stair to the cellars. D shows two half arches that probably allowed coal to be stored beyond the north wall. E, on both left and right, represents the now vanished west wall of the wood room. F is the remains of a door to the wood room. G indicates five later period doorways. H is the brick-filled doorway to the wood room. I is the belowgrade wall for the arch at D

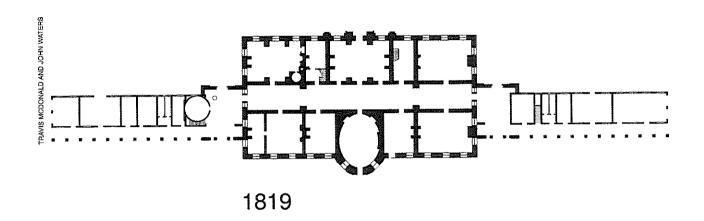






- 24. Top: In this 1969 photograph, the eighth window bay (from the east) of the west wing shows a much larger opening that has been filled.
- 25. Bottom: This overlay tracing of above photograph shows the original wider opening for the stables that was first filled in for a doorway that was finally itself filled in.

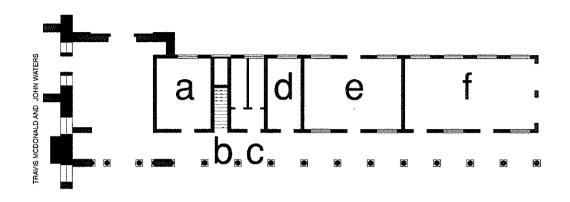


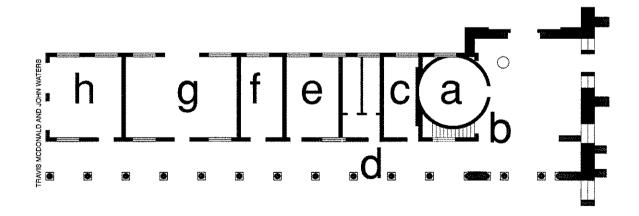


26. Above: The west wing received its final form when Charles Bullfinch directed the postfire rebuilding in 1819.

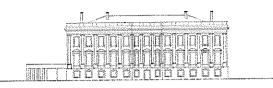
27. Opposite, top: East wing plan, c. 1809. a, meat house (smokehouse) above and cellar below, 1805; b, stairs to cellar, 1805; c, necessary, 1805; d, servant's room or granary, 1806; e, stable, 1806; f, coach house, 1809.

28. Opposite, below: West wing plan: a, ice house, 1801/1805; b, stairs to cellar, 1805; c, wood storage above and coal below, 1805; d, necessary, 1805; e, servant's room?, 1805; f, granary, 1818; g, stables, 1818; h, coach house, 1818.

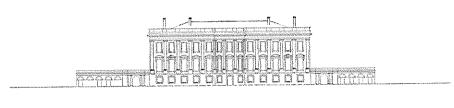




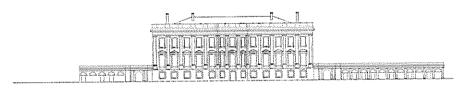
29. This chronological sequence shows the evolution of the wings from the South Front of the White House.



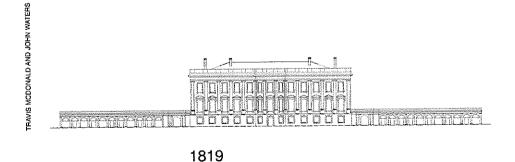
1803



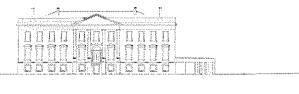
1805



1809

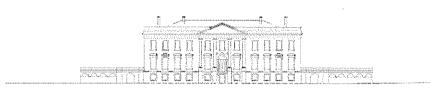


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1803

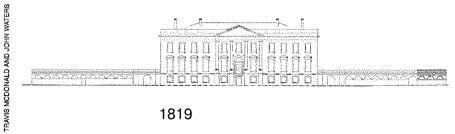
30. This chronological sequence shows the evolution of the wings from the North Front of the White House.



1805



1809



1819



31. A comparative elevation of the current White House with its later West Wing Office Building.

steward J. P. Sioussat, it faced the same colonnade access problem.65 Walter's plan shows that two large carriage openings formed the east end of the carriage house. This temporary solution, due to the incomplete wing row, is also confirmed on the collaborative site plan c. 1805 showing Latrobe's bold marks leading a carriage drive from the north public grounds directly into the end of the east wing. Walter's 1853 plan shows the 1809 extension as two rooms, the western one being the carriage horse stable and not the servant's room or the "hen house," as intended on the original Jefferson plan.

The Treasury Fireproof

At the same time that the White House wings were under construction and considered the president's project, Latrobe started his "own" project, for which he was "master"—or almost. On March 1, 1805, Congress appropriated \$9,000 for a Treasury fireproof building. Although fireproof wings were suggested by clerks in the Treasury, Jefferson saw them as part of his scheme for connecting the flanking public departmental buildings. The design of the fireproof buildings allowed Latrobe to demonstrate his professional architectural and engineering skills in comparison with Jefferson's. Latrobe first proposed to Secretary Albert Gallatin a quadrangle of fireproof buildings north of the Treasury that almost equaled its size.66 The idea appealed to Gallatin but "in Compliance with Mr. Jefferson's wish" it became an eastern segment in the envisioned eastwest chain of service buildings.67

Because the money for the fireproof building came through the Treasury, Latrobe served two masters: Secretary Gallatin who did not tend to interfere, and President Jefferson who had oversight of his surveyor of the public buildings and used it. Latrobe's beautifully executed drawing dated April 27, 1805, was sent to Secretary Gallatin but soon after was examined by Jefferson (illustration 34). The structure's fireproof nature was just the thing Latrobe loved, and he advocated for permanent and substantial construction: below-grade "carriage" arches in conjunction with a longitudinal groin vault, upper transverse arches that contained between them shallow masonry vaults, and cast-iron lunette window sash (illustration 35). Like the wings flanking the White House, and those projected for the future, Latrobe showed a Tuscan colonnade that

would provide a covered walk on the wing's south side and the typical "terras" roof of Jefferson's that is indicated in Latrobe's drawing by pitched wooden joists. Jefferson's "terras" covering was undoubtedly the weakest link regarding fire hazards. Inside were specially designed bookcases supported by iron rods passing north and south to the outer pier arches.

Jefferson apparently misread Latrobe's drawing, about which Latrobe confided to Lenthall: "The President objects to my mode of constructing the fireproof arches, and proposed another method, which won't do at all."68 With an almost free hand, Latrobe told Gallatin that the design pleased him, being "infinitely the best morceau," and that he was "entirely satisfied" with his design freedom, on the fireproof project at least.69

When forced by financial circumstances to lop off the western two bays of the Treasury fireproof, reducing the building from 90 to 70 feet, Latrobe convinced Gallatin that a three bay, two story connection between the fireproof and the Treasury building could house a library for the secretary on its second floor adjacent to the secretary's office. Jefferson again intervened, as the idea involved his tenacious plan for the White House wings, and as Latrobe put it to Gallatin, he "interdicted your library upstairs."70 After a conversation with Gallatin, Jefferson relented and allowed him the fashionable, shallow saucer-domed library space, which became even more elegant when filled with Latrobedesigned neoclassical furniture.71 It was August 1807 when the 19 foot long section of the "fireproof of snail pace growth," which had collapsed and been rebuilt, finally reached completion, with its first floor fireproof room and the secretary of the treasury's library above.72 This completed the easternmost end of the intended east wing range, but a gap of 250 feet still existed on this side of the White House (illustration 32, 33).

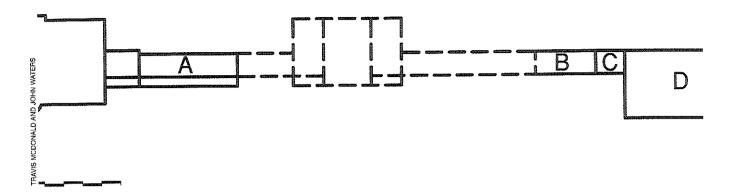
The final component added during Jefferson's time was the long-awaited stone Tuscan columns that lined up on the south of the wings, creating the covered passage colonnade. On the distant east end the Treasury fireproof never received the columns that were to join seamlessly with those of the extended wing sections beyond the planned central pavilion. If Latrobe ever drew plans for the central stable or coach house pavilions, they have been lost. Were these mysterious buildings ever built? It seems that Talbot Hamlin, in his Pulitzer Prize-winning biography of Latrobe of 1955,

misinterpreted letters referring to the Treasury fireproof connection collapse of 1806, thinking they were in reference to the middle pavilions. A number of historians thereafter relied on his interpretation and perpetuated the error. Hamlin's mistake stems from his misreading of Latrobe's letter to Lenthall of December 31, 1806, in which Latrobe offers his explanation of how the building connecting the fireproof section with the actual Treasury building collapsed. In that letter Latrobe references a "Carriage arch," which Hamlin took to mean an arch for a carriage opening rather than the below-grade groin vault's arch whose task it was to carry the masonry above, as in "the East carriage [that failed]."73 A close reading of Latrobe's letter, keeping in mind that the Treasury connection was between the Treasury fireproof wing and the Treasury building to its east, dispels the notion of the middle pavilion as the subject of this letter, as do several other facts. Latrobe's indication of the middle pavilions on the collaborative site plan c. 1805 show the structure to be enormous in size, each about 70 by 130 feet. A building of this size, not too much smaller than the White House itself, would have to have been authorized and funded by Congress, but there is nothing in the records to this effect. It would no doubt have been thoroughly discussed by Jefferson, Latrobe, and Lenthall in its lengthy construction, yet there is no mention of its construction other than Jefferson's reference to its need in the future. The "new fireproof between the Treasury fireproof and the Treasury" did not have a finished roof and had to be temporarily covered with boards, and thus was vulnerable during the winter of 1806. Latrobe later mentions that the failure of the carriage arch was due to both frost damage and the premature removal of the centering from the upper arch. William Thornton's snide remark of March 1807 referring to Latrobe's arch failure, "one of the fireproof rooms, viz. that next the Treasury,"74 has also been misinterpreted to mean the central pavilion. Latrobe's defensive reply to Thornton and James Hoban that the failed structure was rebuilt the following year for \$80 could hardly be for a large structure.75 There are several mentions that the Treasury fireproof connection was rebuilt in 1807, but nothing about a stable or coach house structure collapse.76

After the Jefferson Presidency

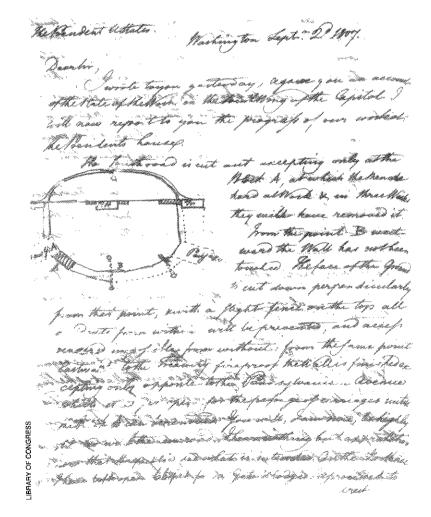
Thomas Jefferson left "the splendid misery" of the presidency to his friend and protégé James Madison in March 1809. At the end of that year Latrobe's surveyor of the public buildings annual report provided a summary of what had been done that year in addition to a concise history of his and Jefferson's time: "The appropriation made at the last session for the President's house, has been expended towards the arrangement of the grounds and garden within the enclosure; the coping of part of the surrounding wall, the construction of carriage house (the 60' extension of the east wing), and the better arrangement of the interior for the accommodation of a family." Latrobe then listed the priorities for the next year by first providing a history of accomplishments:

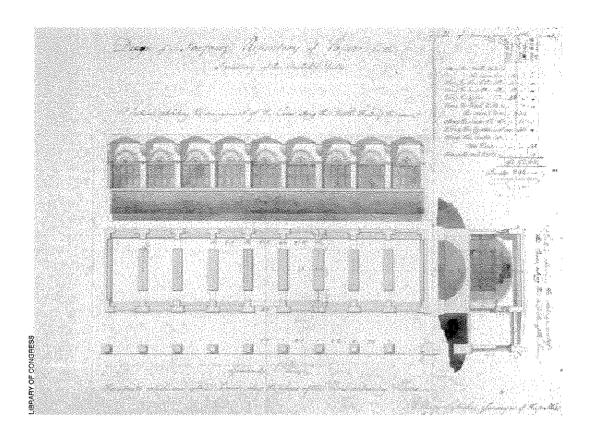
On the removal of the seat of government to Washington, in the year 1800, the President's house was in a most unfinished state, and quite destitute of the conveniences required by a family. The roof and gutters leaked in such a manner as materially to injure the ceilings and furniture. The ground surrounding the house barely enclosed by a rough fence, was covered with rubbish, with the ruins of old brick kilns, and the remains of brick yards and stone cutters' sheds. During the presidency of Mr. Jefferson, from the year 1804, annual appropriations have been made, by the aid of which several bed chambers were fitted up; the most necessary offices and cellars, which before were absolutely wanting, were constructed; a new covering to the roof was provided; a flight of stone steps and a platform built on the north side of the house; the grounds were enclosed by a wall, and a commencement was made in leveling and clearing them in such parts as could be improved at the least expense. But notwithstanding the endeavors of the late President, to effect as much as possible by these annual legislative grants, the building in its interior is still incomplete. It is, however, a duty which I owe myself and to the public, not to conceal that the timber of the President's house is in a state of very considerable decay, especially in the northern part of the building. The cause of decay, both in this house and in the capital is to be found, I presume, in the green state of the timber when first used, in its original bad quality, and in its long exposure to the weather before

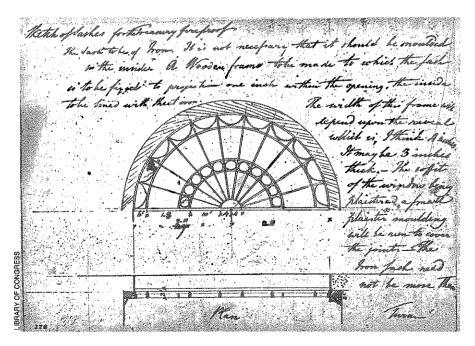


32. Above: The mysterious middle pavilion proposed by Benjamin Latrobe would have been short of the east wing (A) as completed in 1819 and well short of the Treasury fireproof section of wing (B) and its connector (C) to the Treasury Department building (D).

33. Right: This sketch by Latrobe in a letter to Jefferson from 1807 was in reference to the project for grading the grounds and enclosing it with a wall, but it also shows the extent of the east and west wings and their relationship to the Treasury's fireproof wing and connector.







34. Above: Latrobe executed this beautiful drawing, dated April 27, 1805, of the eastern-most range that terminated Jefferson's east wing plan. This fireproof section was fully Latrobe's design. It housed documents for the Treasury Department and was to be matched on the far west wing with a similar War Department fireproof. The building never regained its purpose after the fire of 1814.

35. Left: Latrobe sketched this delicate lunette window in one of his many letters to construction supervisor John Lenthall in 1805. To contribute to the fireproof nature of the Treasury fireproof building, he designed the window to be made of iron.

the buildings could be roofed. Further progress in the leveling and planting of the ground, in the coping of the wall, and in current repairs and minor improvements, are also included in the estimate submitted.78

Clearing and improving the grounds around the house had been a constant and never-ending story, paralleling that of the wings. Landscaped grounds were never far from Jefferson's mind as he looked out his study window onto the bleak surrounding site's contrast to the breathtaking distant views. Even more to Jefferson than Latrobe, landscape was integral with architecture. The fits and starts of improving the White House grounds had been excruciatingly slow due to the laborious amount of work entailed and to congressional appropriation for the same. Jefferson's unexecuted plans, seen perhaps as an echo on the collaborative site plan c. 1805, were not in vain, however, because they reappeared in his landscape at his retirement villa retreat Poplar Forest, Starting in 1805, as he worked on various projects from his White House study, Jefferson had been sending and receiving weekly letters to his workers in Bedford County, Virginia, who were preparing the modern octagonal house he would use as soon as he departed public life in March 1809 and continue to use until 1823.79 Seale has indicated that Jefferson's landscape ideas were not forgotten but finally found form in schemes executed by Hoban, John Quincy Adams, and Andrew Jackson.80

In 1814 British marines infamously compromised the physical preservation of Jefferson's "office" wings. After the devastating fire, President Madison declared the following year that all must be rebuilt as before, without deviation. James Hoban, the original architect, came back by conservative demand to rebuild the largely destroyed mansion, just as Latrobe also returned to rebuild the Capitol.

Both Latrobe and Thornton inserted themselves as architects willing to help with a White House rebuilding directed—in an ironic second poor choice, they must have felt-by the original architect. Latrobe saw the opportunity to influence some kitchen improvements in the basement, while Thornton sought to help with the wings. Thornton solicited former President Jefferson's advice in 1815 on rebuilding and completing the wings and enlarging the executive office buildings. When Congress failed to approve either, Thornton suggested

to Jefferson that the ends of the wings be terminated on top with neoclassical tempietos. As C. M. Harris has noted, Jefferson "would not, and probably could not, return to these past scenes."81

Phoenix-like, the house, and then the burned wings, rose again and returned to use in 1818. President James Monroe suggested, either from Thornton's inquiry or perhaps after a conversation with his friend Jefferson, that the service wings be extended all the way east and west as intended.82 When denied funding in 1819. Monroe insisted that a new coach house and stables be built on the west, abandoning the "temporary" coach house and stables that had been added "under the colonnade" on the east. The Report of the Committee on the Public Buildings from January 1819 stated that the western extension was 60 feet long, a symmetrical necessity to match the 60 feet added earlier to the east wing (illustration 28).83 Hoban's addition housed a stables, carriage house and granary. Walter's plan shows that the carriages were accessed from large openings on the west end in a fashion similar to that on the east wing. Photographs from the 1969 excavation of the west wing confirm that the eighth lunette window opening in the stables space had been a north access doorway that was later filled in (illustrations 24, 25). This north doorway, similar to one on the east wing, is shown on plans from 1877 and 1902. Architectural drawings from McKim, Mead & White show this doorway being reduced in size to a pedestrian one from its former, larger size. On the east the extant wing stopped about 50 feet from the intended position of the intended pavilion and 200 feet short of the Treasury fireproof. The enormous 450 foot gap between the White House and its flanking federal buildings equaled a vast space that required congressional funding to fill.84

Hoban's 1818 construction estimate for the wings reveals little about Jefferson's original plans or departures from what existed before the fire. Hoban's specification of copper for the wing roofs does not detail the roof construction or shape. Did he replicate Jefferson's zigzag roof system? From early illustrations it appears that the roof had a low profile behind the low parapet and might still have served as a terrace walk. The roof was apparently flat enough to serve the first greenhouse added on top of the west wing in 1857. Hoban's estimate for the wing's ground-up construction provides some evidence of the extent of Jefferson's west wing.

Along with the "best granite" stone for foundations, and freestone for the north and west exterior-facing walls, the parged brick exterior walls that formed the new stables courtvard contained 60 feet of "entablature over columns," "6 column shafts," and 11 semicircular windows, ensuring the wing would visually fit with its original neighbor. The walls shown on the 1853 Walter plan seem to confirm the room divisions and an open carriage end similar to one on the east.

The Treasury fireproof also got a postfire makeover as a toolshed for the now-installed vegetable garden to its south, shown proposed on the collaborative site plan c. 1805. Given Jefferson's love of vegetables, this must have been his intention, because he had sketched a plan in 1807 that designated a 100 foot wide garden space to the south of each terminating double range wings, reserving about 1,000 feet in between for a pleasure garden (illustration 33).

The use and function of Jefferson's rebuilt wings changed over time as frequently as the building they supported. By the end of the 1820s the gardener, John Ousley, and his family were residents of the former fireproof wing, while cows temporarily resided in the west wing along with servants. Andrew Jackson's new remote stables near the southeast gate freed the old stable wing for service and as the residence of the vegetable gardener, Charles Bizet, in the 1830s. In 1835 the old Treasury fireproof building was upgraded from toolshed to orangery by Andrew Jackson to house a salvaged sago palm from Mount Vernon, among other things.

During the 1840s the west wing laundry room that had moved out of the basement caught fire. Fire was still a danger from the kitchen that never left the basement space. During the 1850s the orangery was taken down, rebuilt, and demolished, its function moved to the roof of the west wing. The privies were moved to the space between the wings and the house, freeing up space for servants' quarters and bathing rooms in the west wing along with the continuing laundry and ironing function. Andrew Jackson's own shower bath was put in the east wing in 1832.

By 1870 the ice house had been floored over for a black servants' dining room and lounge, hiding that earlier feature for the rest of the century. The most dramatic change came in 1866, when the east wing, having succumbed to a toolhouse, potting shed, and compost storage, was demolished and a balcony added to the east elevation in its stead. When the west terrace greenhouse burned in 1867, the entire roof was rebuilt with iron support beams and brick arches that supported a new greenhouse on top. President Ulysses S. Grant found the west wing convenient for his infamous billiard room in the east end of the conservatory just next to the house. President Rutherford B. Hayes took full advantage of the Victorian conservatory fad by rebuilding one of cast iron on the west terrace in 1880 and expanding with even more of them to the south of the wing. Hayes also relocated the billiard room to a space in the lower wing and reinstalled Jefferson's prominent glass doors that let family or guests promenade from the dining room into the popular tropical plant splendor.

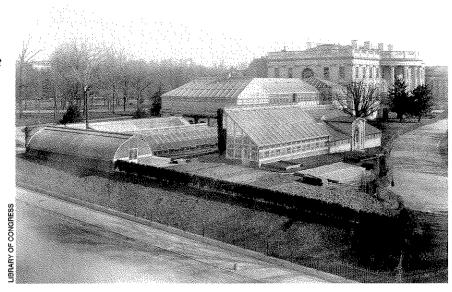
Jefferson had created the terraces as a place to sit or stroll, enjoying the outdoors in good weather. While he undoubtedly used them for this purpose, the view was one of still open spaces retaining some naturalness in the far south vista. Had he been there in Hayes's time he, too, might have used the greenhouses as a retreat from an expanding and encroaching Federal City.

President Theodore Roosevelt chose for a major White House remodeling in 1902 the New York architect Charles McKim of the famous McKim, Mead & White firm. McKim sought to bring Beaux-Arts order to the exterior by removing what he considered as unsightly the greenhouses that crept out from the house in a southwestwardly direction. He finally won a sensitive battle of influence over the first lady and other conservatory lovers, smashing the houses of glass and restoring Jefferson's idea of an exterior flat roof promenade. To further restore Jefferson's vision, McKim convinced Roosevelt to champion a reconstructed east wing to match and balance that of the west. This new east wing took on higher purpose than its predecessor and served as a secondary entrance to the house.

The west wing continued to house servants and laundry functions, but McKim and his government contact Colonel Theodore Bingham added an important new building just west of the old wing. A presidential and staff office building allowed those functions to depart the Second Floor of the White House, leaving their spaces to be remodeled for the needs of a goodsize presidential family.

President William Howard Taft expanded the president's office even more, taking over the west wing and moving some service functions back into the basement

36. By the late nineteenth century, the greenhouses had expanded to the west considerably beyond the roof of the west wing where they humbly started in 1857 for the pleasure of President James Buchanan.



37. The reconstructed East Wing took as its model the remains of the original west wing but with a new role as the principal social public entry to the house, along with reception rooms, lounges, and offices.

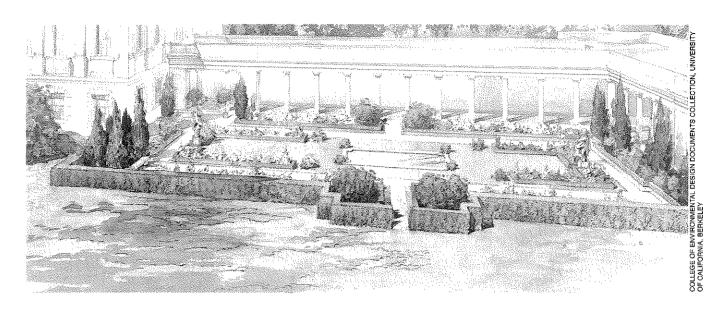




38. In 1902 the East Wing was reconstructed in the same location by Charles McKim, providing a visual balance to the west wing that had been stripped of its greenhouses. During excavation the contractors found and dug up the original east wing's foundations.

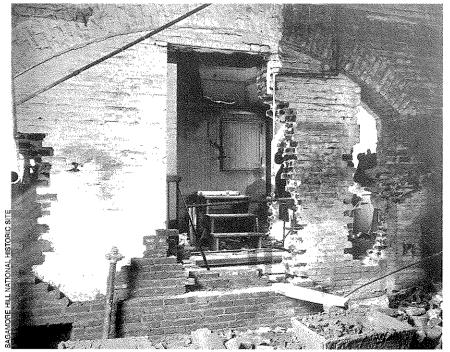


39. President Franklin D. Roosevelt scooped out the western portion of the original west wing in 1933 for his exercise pool, funded by school children around the country.

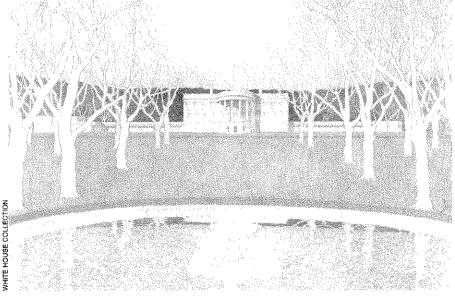


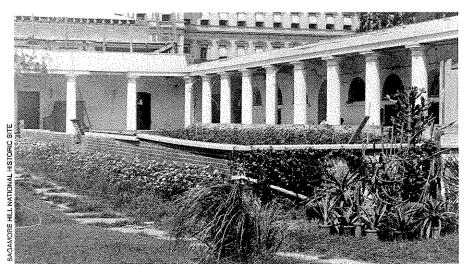
40. Above: After the East Wing's reconstruction the landscape designer Beatrix Farrand designed this formal flower garden and pool as its complement in 1913. The colonnade is shown open as it would have been originally, but after it was enclosed in glass it became even more of an all-weather passageway than Jefferson had intended.

41. Right: By the late nineteenth century the former ice house, so important to Jefferson, had evolved into a servants' dining room and still later into an office and then the West Garden Room. This photograph from 1902 shows the large original arch that spanned the protruding round ice house that was first enclosed in wood along with the original well.









- 42. Top: As it evolved over two centuries, the South Lawn took on the pleasant ornamental grounds appearance envisioned by Jefferson, with paths winding through naturalistic woods. It remains, as he conceived it, the private side for presidents and their families.
- 43. Center: Artist Jules Guérin's rendering of the White House in 1902, after the return of the East Wing, eerily evokes, in an ascetic way, Jefferson's design of a central lawn and allée of trees, creating a landscaped "room" through which to stroll.
- 44. Bottom: The West Wing returned to its earlier form after the architect Charles McKim achieved for the removal of the numerous greenhouses that had sprung up through the later nineteenth century.

where they originally began. In the process, Taft built the first Oval Office. Another exchange of service "office" rooms for real clerks' offices took place during President Woodrow Wilson's term. Finally, under President Herbert Hoover, when the president's office building was destroyed by fire, it was rebuilt even larger, replacing the old wing as the Oval Office we know today.⁸⁵

McKim's reconstructed East Wing continued to serve later presidents in the role for which it was designed, while the West Wing offered space with which to fiddle. Architectural fiddling is what pleased President Franklin Roosevelt, and in 1933 student contributions from around the country funded his exercise swimming pool and two dressing rooms within the West Wing walls. Roosevelt's architect, Lorenzo Winslow, proudly kept the Jeffersonian lunette windows of the north wall but added glass doors on the south to help light the room.86 Gone from the West Wing forever were the "office" functions of both sorts. In 1969, in an ironic boost to press reporters' convenience, President Richard Nixon floored over FDR's swimming pool room that had been recently remodeled by President John F. Kennedy and created the Press Room that remains today. Workers on bulldozers within the wing posed for the camera, looking eerily like President Harry S. Truman's directed army of bulldozers that had scooped out the interior of the White House in 1949-50.87 Unfortunately, whatever evidence of Jefferson's original wing spaces that might have been gathered at that time is only accidently captured in these photographs. As late as 1985 the staff of the Ronald Reagan White House, working on a new "west garden room" west of the house in the original north-south exterior passage, briefly revealed traces of the wing's large arch that had spanned the ice house.

Thomas Jefferson's spirit returned to the White House in the twentieth century after a long absence in the later nineteenth. It was not so much a guardian spirit, with so little left to guard, as it was a name invoked for periodic remodeling progress and the occasional brief reminders when architectural relics were found and destroyed. In making his case to clean up the White House exterior, Charles McKim invoked the spirit of Jefferson, as he did that of L'Enfant at about the same time when cleaning up the Mall under the McMillan plan. McKim referred to the "restored" wings

on the house as returning the "saucer" to the "cup."288 He proudly reported the discovery of the original east wing's foundations as they were excavated for the new reconstructed wing (illustration 38), Jules Guérin's evocative images from 1902 show a romanticized landscape with the visual impact of Jefferson's two wings as they might have looked had his landscape been executed (illustration 43). McKim was not a historical architect by any means, but his partner Stanford White had been immersed in studying Thomas Jefferson during the reconstruction of the Rotunda at the University of Virginia in the 1890s. McKim's passing interest in Jefferson led Roosevelt to acknowledge him in a public statement: "In making the restoration the utmost care has been exercised to come as near as possible to the early plans and to supplement these plans by a careful study of such buildings as that of the University of Virginia, which was built by Jefferson."89

Excavations inside the West Wing have from time to time turned up bits of Jefferson's structure. Hoover's remodeling in 1929 revealed some, as did the 1933 installation of Franklin Roosevelt's pool. Truman invoked Jefferson for a hotly criticized project of adding to the White House exterior. Having given a speech at the University of Virginia in 1947, Truman admired Jefferson's suspended balconies on The Lawn pavilions and used that device's origin in arguing for a similar suspended balcony on the South Portico. Although Jefferson is probably mentioned by every president who dwells in the house, Kennedy famously invoked Jefferson's intellectual spirit in his tribute during a Nobel laureates' dinner: "I think this is the most extraordinary collection of talent, of human knowledge, that has ever been gathered at the White House, with the possible exception of when Thomas Jefferson dined alone."90

Since the 1940s Jefferson has stood in oversize bronze in the Jefferson Memorial, gazing north toward the White House. Jefferson would not lament the loss of his architectural vision or the treatment of his special wings, for he was known to favor the future over the past. The White House remains, in the words of William Seale, far more significant as a "cultural artifact" than as a misunderstood piece of venerable architecture. ⁹¹ Inherent in the original wings, however, are the thematic elements of Jefferson's synthesis of ancient and modern architecture, landscape design and nature, construction technology, and the efficiency of domestic and public

service. Jefferson's wings, like the house itself, have suffered use, reuse, and abuse. They recall the unfulfilled and unfinished business that is historically appropriate for the ever-changing nature of the White House. There newness has always been considered superior, and even in the nation's best interest, to any regard for historical fabric. Like the unquenchable need to use and interpret Thomas Jefferson from generation to generation, the symbolic and imaginative power of the White House is intangible and never ending, and always focused on the present and the future.

NOTES

- See William Seale, The White House: The History of an American Idea, 2nd ed. (Washington, D.C.: White House Historical Association, 2001). General references to the history and the architectural history of the White House are based primarily on this book and on other published sources to which all White House researchers in the past twenty years must turn: William Seale, The President's House: A History, 2nd ed. (Washington, D.C.: White House Historical Association, 2008); and various articles in White House History, all published by the White House Historical Association. For convenience, see the three bound volumes of White House History (2004 and 2008).
- Jefferson's architectural style and taste were decidedly different from Washington's. Jefferson had anonymously entered the 1792 competition with his version of Andrea Palladio's Villa Rotonda, but while his plan won second place, it was perhaps too radical for the time. When Jefferson failed to win over conservative minds, he fell silent on the issue in deference to Washington. Nevertheless, he had architectural traditions and personal forms that he would carry with him everywhere, including to the new national capital.
- Seale, President's House, 109.
- S. Fiske Kimball first discussed Jefferson's various plans for alterations in the Virginia Governor's House in Williamsburg, in his rented Paris house, and in his rented town houses in New York and Philadelphia. Kimball, Thomas Jefferson, Architect (1916; reprint, New York: Da Capo Press, 1968). See also Mark R. Wenger, "Thomas Jefferson, Tenant," Winterthur Portfolio 26, no. 4 (1991): 249-65.
- Jefferson remodeled Monticello, first begun in 1769, after he returned from Paris in 1789 and completed it c. 1809; he began Poplar Forest in 1805 and completed it in 1826; and he began designing the University of Virginia c. 1810, with construction beginning in 1819.
- In addition to Seale and Kimball, the complicated Jefferson and Latrobe architectural collaboration is found principally in Michael W. Fazio and Patrick A, Snadon, The Domestic Architecture of Benjamin Henry Latrobe (Baltimore; Johns Hopkins University Press, 2006); Jeffrey A. Cohen and Charles E. Brownell, The Architectural Drawings of Benjamin Henry Latrobe (New Haven, Conn.; Yale University Press, 1994), vol. 2; Talbot Hamlin, Benjamin Henry Latrobe (New York: Oxford University Press, 1955); Saul K. Padover, Thomas Jefferson and the National Capital (Washington, D.C.: U.S. Government Printing Office, 1946); William C. Allen, History of the United States Capitol: A Chronicle of Design, Construction, and Politics (Washington, D.C.: U.S. Government Printing Office, 2001); and C. Ford Peatross, ed., Capital Drawings: Architectural Drawings for Washington, D.C., from the Library of Congress (Baltimore: Johns Hopkins University Press, in association with the Library of Congress, 2005).
- Benjamin Latrobe's floor plan drawing of 1807 shows how Jefferson intended to remodel the house based on his experience with French hôtel (town house) plans for apartments that were fashionable when he lived in Paris in the late eighteenth century. See Seale, President's House, 62; Michael Fazio and Patrick Snadon, "Benjamin Latrobe and Thomas Jefferson Redesign the President's House," White House History, no. 8 (Fall 2000): 36-53.
- The architectural historian Vincent Scully has commented on the Jeffersonian, and American, trend for horizontal spread: "Much of Jefferson's work should be seen, metaphorically speaking, as a struggle between the fixed European past and the mobile American future, between Palladio and Frank L. Wright,

- between a desire for contained, classical geometry and an instinct to spread out horizonally along the surface of the land." Vincent Scully, quoted in Lois Craig, The Federal Presence (Cambridge, Mass.: MIT Press, 1978), 27.
- Lucia Stanton, "A Well-Ordered Household': Domestic Servants in Jefferson's White House," White House History, no. 17 (Winter 2006): 8.
- 10. Examination of photographs showing the interior of these wing walls during deconstruction in 1969 confirm the practice of an interior brick wall using a three course common or American bond whereas the outer wall was undoubtedly the more refined Flemish bond. The outer and inner courses would be bonded together with header and stretcher bricks respectively. It was common for Jefferson to specify for public buildings that the outer mortar be richer in lime than the inner-face mortar and that a lime mortar grout be used between the two. He used these specifications at the University of Virginia.
- 11. Thomas Jefferson, Jefferson's Memorandum Books: Accounts, with Legal Records and Miscellany, 1767-1826, ed. James A. Bear and Lucia C. Stanton (Princeton: Princeton University Press, 1997), 2:1066.
- 12. Sir Augustus John Foster, Notes on the United States of America Collected in the Years 1805-6-7 and 11-12 by Sir Augustus John Foster, Bart., ed. Richard Beale Davis (1954; reprint, Westport, Conn.: Greenwood Press, 1980), 12. Latrobe wrote, "The President's House was erected by an Irish mason who gave as his own the plan of the Duke of Leinster's house in Dublin. This being shown to General Washington was approved of by him; and the Irishman, who had been but a journeyman under the real architect and designer of the plan, was appointed to superintend the building. He left out the upper story however and built no cellars, which President Jefferson, after experiencing great losses in wines, has been obliged to add at a depth of sixteen feet under ground. These are so cool that the thermometer stood two degrees lower in them than it did in a vacant spot in the ice-house early in July, when in the shade out of doors it
- 13. Benjamin Henry Latrobe to William Lee, March 22, 1817, The Correspondence and Miscellaneous Papers of Benjamin Henry Latrobe, ed. John C. Van Horne and Lee W. Formwalt, et al. (New Haven: Yale University Press, 1984-88),
- 14. Foster, Notes on the United States of America, 12; Latrobe to Lee, March 22,
- 15. Latrobe faced the complications of taking over design and construction of buildings that had been designed by others and partially constructed. His uneasy relationship with Congress stemmed from his contention that much of the already constructed Capitol, designed in competition by William Thornton. was faulty in both structural design and quality of construction. Latrobe's criticism of Thornton's skill resulted in a protracted war of words between the two, especially after parts of the Capitol collapsed. Latrobe was called back after the 1814 fire to rebuild the Capitol. The classic story of the Capitol's architectural history and its roster of prominent architects is contained in Glenn Brown, History of the United States Capitol (Washington, D.C.: U.S. Government Printing Office, 1900) and updated by Cohen and Brownell, Architectural Drawings of Latrobe; Padover, Jefferson and the National Capital; Allen, History of the United States Capitol; and Peatross, ed., Capital Drawings.
- 16. Latrobe to Mary Elizabeth Latrobe, November 24, 1802, Correspondence of Latrobe, ed. Van Home and Formwalt, 1:232.
- 17. Latrobe to Jefferson, March 26, 1805, The Microfiche Edition of the Papers of Benjamin Henry Latrobe, ed. Edward C. Carter and Thomas E. Jeffrey (Clifton, N.J.: James T. White & Company, 1976). Latrobe was as meticulous as Jefferson in his correspondence, separately numbering sequential letters to different people. This numbering system is evident in the microfiche copies, providing great service to researchers, but the numbers do not appear in the published letters. Latrobe was delighted in 1803 to start using Charles Willson Peale's polygraph machine that produced, by means of an attached second pen, a copy of each letter written. In February 1804 Latrobe lent Jefferson his polygraph to try and asked Peale to send one to the president for his own. Jefferson began using his in 1804 and later remarked that it was the finest invention of his age, reflecting the care he took to document his life and letters. For later historians of Jefferson and Latrobe, their use of this machine is the equivalent of a modern copy machine as opposed to press-copy roller machines that produced a faint, backward copy. The only other good letter and document copies of the time were those copied by clerks who were paid to do so for official reasons. Jefferson had hopes that the government would purchase multiple polygraph machines to lessen the reliance on copy clerks.
- 18. Latrobe to Jefferson, May 4, 1805, and April 28, 1805, ibid.
- 19. Latrobe to John Lenthall, May 3, 1805, ibid.
- 20. Latrobe to Lenthall, May 11, 1805, quoted in Seale, President's House, 113.

- 21. Jefferson to Latrobe, May 26, 1807, Microfiche Papers of Latrobe, ed. Carter and Jeffrey. Perhaps as payment for the loan of the copiously illustrated books, Latrobe hand-tinted all the plates.
- 22. Latrobe, "Report on the Public Buildings," December 22, 1805, Correspondence of Latrobe, ed. Van Horne and Formwalt, 2:168-72.
- 23. The drawings are illustrated in this article; illustrations and photographs are in the Office of the Curator, The White House. See also Report of James Hoban, Superintendent of the President's House, to Samuel Lane, Commissioner of Public Buildings, Washington, December 3, 1816, available at loc.gov. This author has diligently combed many primary and secondary sources for this article. However, one important source—the various files of correspondence in the National Archives-was not examined firsthand but through William Seale's two monumental works, The President's House, and The White House. An excellent guide to the most important White House records is contained in Alysha E. Black, "Making the Most of the Archives: Finding White House Documentary Sources at the National Archives," White House History no. 9 (Spring 2001): 4-13.
- 24. Latrobe to Lenthall, July 29, 1805, Microfiche Papers of Latrobe, ed. Carter and Jeffrey.
- 25. Jefferson's drawing shows the ice house as 20 feet from the house, but between the house and the ice house is written "24 feet," an annotation that might indicate someone verifying the actual dimensions when constructed. It is possible that the vaulted cellar space under the meat house could have been used for storing other liquors such as beer or cider.
- 26. The Jefferson drawing shows a doorway and a small space on the south wall of the ice house that might have been a space for a staircase to the coal cellar, but nothing supports this idea and in fact other clues suggest it was always a window bay, although later a doorway was retrofitted in the area.
- 27. Seale, President's House, 112. Whether the west privy was for all servants or only for black servants is not known. Interestingly, of the two octagonal original privies at Poplar Forest, oral history claims that one was for the family and guests and the other was for the later nineteenth-century tenant farmers and thus likely for the enslaved population during Jefferson's time since there did not seem to be a segregation in early privies by sex, but by race.
- 28. Jefferson's statement in 1807 that he wanted to extend the west wing by 50 feet would work with the evidence that it eventually was 100 feet long. Jefferson to Latrobe, August 5, 1807, Microfiche Papers of Latrobe, ed. Carter and Jeffrey. The initial 50 foot length is also confirmed by an 1811 perspective drawing from the north by Latrobe that shows the west wing with five window bays.
- 29. The Monticello ice house roof was correctly reconstructed in 2009 and is probably identical to that at the White House, with the exception of the inserted wine room.
- 30. Jefferson's drawing also shows a wooden south wall, similar to ones at Monticello, that was eventually constructed in brick intended to be stuccoed. The north wall of the first segments was constructed of stone below grade and brick above grade. The second segment of wing was constructed with brick below and above, according to photographs from 1969.
- 31. At the time of the Walter plan the large room formed by combining rooms two and three served for wood and coal storage without the need of an underground space; the stairs access might have been closed off and the space shown as solid masonry.
- 32. Latrobe to Jefferson, September 13, 1805, Microfiche Papers of Latrobe, ed. Carter and Jeffrey,
- 33. Generally, how were permanent privies cleaned? Permanent privies, such as the temple-like octagonal brick privies at Poplar Forest, did not use a deep shaft for waste and required a clean-out method of one type or another. If not a removable section right under the seat as in a close stool, or some type of drainage system, access was needed to a deeper space below. At Poplar Forest this access consisted of an arched opening at grade both for the octagonal privies and for the retrofitted privy under the staircase next to Jefferson's chamber. On the north public front of the White House wing this method seems unlikely. Rather, it seems that a vaulted space under the privy, adjacent to a similar one for the coal cellar, provided access for servants to haul away waste.
- 34. In both places Jefferson solved the low ceiling-smoky room problem by creating a vestibule with a fireplace where logs could be fed without being in the smoky space. The flue simply went into the room on the other side of the vestibule. A doorway on the side of the vestibule would provide access, when needed, to place or retrieve the meat.

- 35. Jefferson to Latrobe, May 11, 1805, Correspondence of Latrobe, ed. Van Horne and Formwalt, 2:67; Jefferson to Latrobe, August 5, 1807, Microfiche Papers of Latrobe, ed. Carter and Jeffrey.
- 36. At Monticello the terrace decks attached to the house at the enclosed greenhouse space off Jefferson's chamber suite on the south and off the open porch on the north but, basically, from the house floor level. Poplar Forest was like the President's House, where one stepped onto the terrace deck directly from the house, requiring the same floor level.
- 37. William L. Beiswanger, "Jefferson and the Art of Roofing," Chronicle of the Early American Industries Association 58, no. 1 (2005): 18-25, 36. See also the Report on Phase II-C Investigations, 1994, prepared for Poplar Forest by Mesick Cohen Wilson Baker Architects, which documents the various evolutionary construction systems that Jefferson tried for his flat deck supported by a serrated joist system. Jefferson's use of the Palladian wings came with the first Monticello before he experienced Europe, but it had a conventional roof like Palladio's wings. It was not until the President's House occupancy that Jefferson decided to build the upper roof at Monticello and to rebuild the wing roofs with flat terrace decks.
- 38. Latrobe to Lenthall, September 26, 1803, Correspondence of Latrobe, ed. Van Home and Formwalt, 1:325.
- 39. This was at Nassau Hall, Princeton. The claim might be exaggerated. See Correspondence of Latrobe, ed. Van Horne and Formwalt, 2:86n2,
- 40. At Monticello the gutter joists directed water into a gutter system that fed cisterns. At Poplar Forest and at the University of Virginia the gutters simply dringed water onto the ground.
- 41. Latrobe to Lenthall, July 29, 1805, Microfiche Papers of Latrobe, ed. Carter and Jeffrey.
- 42. Jefferson used V-shaped gutters at Monticello, and both V- and U-shaped gutters at Poplar Forest and the University of Virginia.
- 43. Jefferson to Latrobe, May 23, 1803, Microfiche Papers of Latrobe, ed. Carter and Jeffrey.
- Jefferson to Arthur Brockenbrough, September 1, 1819, Thomas Jefferson Papers, Library of Congress, Washington, D.C., DLC51. In 1825, when asked by his slave joiner John Hemings whether he wanted to put tin over the serrated roof on the main house at Poplar Forest, Jefferson replied that tin "would be a useless expense, because shingles will turn the water as well, and it would be no guard against fire as a plank floor is to be laid over them." Jefferson to John Hernings, August 17, 1825, Jefferson Papers, Coolidge Collection, Massachusetts Historical Society, Boston, record group 12. The Poplar Forest wing's first 1814 serrated roof joists rotted by 1824, and Jefferson commented to a friend that a new method, presumably a U-shaped gutter like that used at the University of Virginia, would be an improvement, perhaps because a Ushaped insert could replace any rot in the future. Jefferson to F. R. Hassler, December 3, 1825, Jefferson Papers, Library of Congress, DLC55.
- 45. A Jefferson drawing of the section of zigzag roof construction over the student rooms at the University of Virginia shows a curved metal plate that protrudes like a tongue to direct water away from the end of the gutter rather than dripping down the surface. This method was used in the Poplar Forest reconstruction. In his first-century B.C. architectural treatise Vitruvius mentions that lionhead scuppers on ancient temples used protruding tongues for a better drip edge. At the Poplar Forest wing, Jefferson installed a ground drain system on the south side of the wing to direct the dripping water away from the building and toward his plantings and garden to the south.
- 46. See various historic structure reports by Mesick Cohen Waite and Mesick Cohen Wilson Baker Architects on various pavilions at the University of Virginia.
- 47. Latrobe to James Madison, March 28, 1812, Correspondence of Latrobe, ed. Van Horne and Formwalt, 3:271.
- Jefferson to Latrobe, April 22, 1805, Microfiche Papers of Latrobe, ed. Carter and Jeffrey.
- 49. Latrobe to Christian I. Latrobe, June 5, 1805, ibid.
- 50. Latrobe to Lenthall, May 4, 1805, Correspondence of Latrobe, ed. Van Horne and Formwalt, 2:62.
- 51. Jefferson to Latrobe, May 11, 1805, ibid., 2:67-68.
- 52. Jefferson to John Wales Eppes, July 16, 1814, quoted in Thomas Jefferson's Garden Book, 1766-1826, with Relevant Extracts from His Other Writings, ed. Edwin Morris M. Betts (1944; reprint, Charlottesville, Va.: Thomas Jefferson Memorial Foundation, 1985), 534.

- 53. Latrobe to Lenthall, July 8-9, 1805, Microfiche Papers of Latrobe, ed. Carter and Jeffrey.
- 54. This is the opinion of Latrobe scholars Snadon and Fazio, Domestic Architecture of Latrobe, and Mills scholar Pamela Scott.
- 55. These dimensions are written on the original drawing.
- 56. Different scholars have remarked on this drawing and consider the landscape designs to be Jefferson's even though this drawing is not in his hand. C. Allan Brown first commented on the similarity of Jefferson's design for the White House ornamental landscape with that of Poplar Forest, C. Allan Brown, "Poplar Forest: The Mathematics of an Ideal Villa," Journal of Garden History 10, no. 2 (1990): 117-39.
- 57. Jefferson to Latrobe, May 11, 1805, Correspondence of Latrobe, ed. Van Horne and Formwalt, 2:67-68.
- 58 Thid
- 59. Message from the President of the United States Communicating a Report of the Surveyor of the Public Buildings at the City of Washington, on the Subject of the Said Buildings, December 15, 1806 (Washington, D.C.; A. & G. Printers,
- 60. Jefferson to Latrobe, August 5, 1807, Microfiche Papers of Latrobe, ed. Carter and Jeffrey.
- 61. Report of the Committee Appointed to Ascertain the Expenditures and Probable Estimates in Relations to the Public Buildings in the City of Washington, December 21, 1808, available at loc.gov.
- 62. These photographs are in the Office of the Curator, The White House, Washington, D.C.
- 63. Restoration of the White House. Message of the President of the United States Transmitting the Report of the Architects (Washington, D.C.: Government Printing Office, 1903), copy in the Office of the Curator, The White House.
- 64. Report of the Committee, December 21, 1808, 11.
- 65. Report of the Surveyor of the Public Buildings of the United States to the President of the United States, December 11, 1809, 5, available at loc.gov. This report mentions funds expended in the year for "construction of the carriage house."
- 66. "United States Treasury Department," Harper's New Monthly Magazine, 262 (March 1872):481-98; Cohen and Brownell, Architectural Drawings of Latrobe, 2:491-92. The definitive architectural history of the Treasury Department is a forthcoming publication by Pamela Scott. I am greatly indebted to her for allowing me to read a draft chapter entitled "Bemoaning My Cock Sparrow": The Treasury Fireproof, 1804-1808." In this and other ways Scott displayed the generous colleague trait for which she is so well known.
- 67. Quoted in Scott,"Bemoaning My Cock Sparrow." See also Correspondence of Latrobe, ed. Van Horne and Formwalt, 2:34. The most extensive published work to date that treats the Treasury fireproof building is Cohen and Brownell, Architectural Drawings of Latrobe, 2:491-96.
- 68. Latrobe to Lenthall, May 17, 1803, Correspondence of Latrobe, ed. Van Horne and Formwalt, 2:66n1.
- 69. Latrobe to Albert Gallatin, quoted in ibid., 2:64–65n1.
- 70. Latrobe to Gallatin, October 17, 1806, ibid., 2:275.
- 71. For this story, see Scott, "Bemoaning My Cock Sparrow."
- 72. Latrobe to Gallatin, August 20, 1807, and Latrobe to Lenthall, November 21, 1807, Correspondence of Latrobe, ed. Van Home and Formwalt, 2:470, 497.
- 73. Latrobe to Lenthall, December 31, 1806, Correspondence of Latrobe, ed. Van Home and Formwalt, 2:346-48.
- Ouoted in ibid., 2:321n,25.
- 75. See ibid., 2:347-48n,1.
- 76. This author looked diligently for any evidence to support the existence of the east middle pavilion, especially in the unpublished Latrobe letters on microfiche, and found none. This was a period when Latrobe and Jefferson were using the polygraph machine that produced copies of their letters sent; there is a full record of correspondence sent as well as that received for these years. including sequentially numbered letters to Jefferson and Lenthall, and no gaps exist in this correspondence to suggest any loss of letters regarding the pavilions. The Baroness Hyde de Neuville's drawing of 1820 or 1821 shows the east end of the east White House wing in ruinous condition and the west end of the

- Treasury fireproof in the same condition. It does not imply that the gap between them is the missing pavilion. The drawing is far from accurate, showing wings that are out of proportion with the actual space between the White House and its flanking buildings. Likewise, the west wing is shown halfway to the War Department, when it was in reality only one-quarter of the way. The number of arched windows is also incorrect on the wings, leading one to conclude that it is fanciful in addition to whatever truth it shows in other buildings. It is possible that the ruinous end of the Treasury fireproof shows its conversion in 1820. from the burned ruins into a smaller structure that served as a toolshed.
- 77. Jefferson to Elbridge Gerry, May 13, 1797, quoted in Richard B. Bernstein, Thomas Jefferson (New York: Oxford University Press, 2005), 158.
- Report of the Surveyor of the Public Buildings of the United States to the President of the United States, December 11, 1809, 5, 8-9, available on the web at Early American Imprints, II, Shaw and Shoemaker, 1801-19.
- See Travis McDonald, "The Private Villa Retreat of Thomas Jefferson," White House History, no. 18 (spring 2006): 4-23. See also Brown, "Poplar Forest."
- William Seale, The White House Garden (Washington, D.C.: White House Historical Association, 1996), 30-31.
- 81. C. M. Harris, "The Politics of Public Buildings: William Thornton and President's Square," White House History no. 3 (Spring 1998): 46-59.
- 82. The Report of the Committee on the Public Buildings, January 7, 1819, stated: "The offices to the President's house are so small, and inconvenient, as to induce the committee to recommend an addition to be made to the office west of said house." In his December 28, 1818, report to Samuel Lane, commissioner of public buildings, James Hoban provided the estimate for "extending the Colonnade Building, West of the President's House, 60 feet, to admit of Stables, Carriage House, Granary, &c." Both reports are available on the web at Early American Imprints, II, Shaw and Shoemaker, 1801-19.
- 83. Report of the Committee on the Public Buildings, January 7, 1819.
- 84. Scale, President's House, 171, mentions that Hoban was again brought back to the White House in 1829 during Andrew Jackson's term to consider a revised or new coach house and stables on the end of the west wing. This idea was dismissed in favor of a new stables farther removed from the house on the west.
- 85. The West Wing in size and location actually gives a good indication of the scale of the intended middle pavilions, as does the East Wing addition.
- See William B. Bushong, "Lorenzo Simmons Winslow: Architect of the White House, 1933-1952," White House History, no. 5 (Spring 1999): 23-32.
- 87. The Truman renovation photographs are in the Office of the Curator, The White House.
- Quoted in Seale, White House, 172.
- Restoration of the White House, Message of the President of the United States Transmitting the Report of the Architects, 20. This obscure reference to Jefferson as an architect might be one of the first public acknowledgments, as Kimball's monumental monograph that revealed Jefferson's rich architectural contributions would not come out until 1916.
- John F. Kennedy, April 29, 1962, John F. Kennedy Presidential Library and Museum website, www.kennedylibrary.org.
- 91. Seale, President's House, x.