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Executive Mansion

REPORT OF THE COMMISSION ON THE RENOVATION OF THE EXECUTIVE MANSION

REPORT OF THE COMMISSION ON THE RENOVATION OF THE EXECUTIVE MANSION

MEMBERS OF THE COMMISSION
SENATOR KENNETH D. McKELLAR;
SENATOR EDWARD MARTIN; REPRESENTATIVE J. HARRY McGREGOR;
REPRESENTATIVE LOUIS C. RABAUT;
RICHARD E. DOUGHERTY AND
DOUGLAS W. ORR

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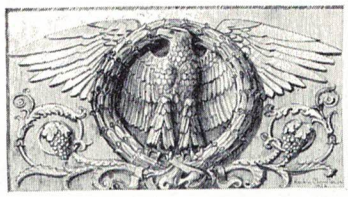

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THE PRESIDENT

THE VICE PRESIDENT

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES

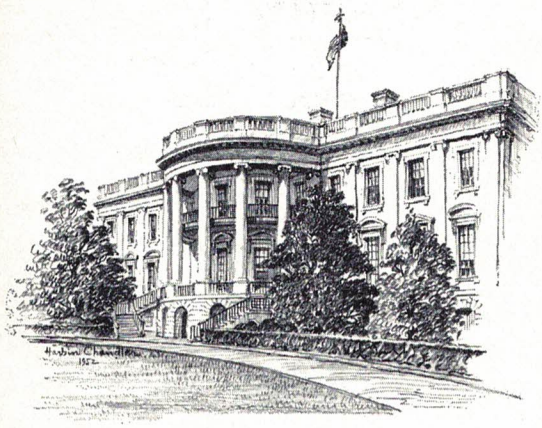
In accordance with the provisions of Public Law No. 40, 81st Congress, 1st Session, we have the honor to submit this final report of the Commission on Renovation of the Executive Mansion.

Very respectfully

Chairman

Vice Chairman

September 1952



FOREWORD

HE structural weakening of the White House which became evident a few years ago was a matter of national concern. The ite House occupies an important and valued place in the affec- s of the people of the United States; and when the critical con- n of the building was disclosed a widespread anxiety arose. While true that certain persons did feel, with some calmness, that the ctural difficulties might offer an acceptable excuse for a new execu- mansion; yet many more were emotionally concerned that the ent building be preserved.

So important was the problem that it became certain that a need ed for the formation of a responsible body which would, after care- tudy and deliberation, arrive at the best and soundest means of cting the serious conditions that existed.

ongress, thereupon, with this in mind, authorized by law the forma- of the Commission on Renovation of the Executive Mansion. This mission, when appointed, was faced with the immediate responsi-

bility of deciding between several possible plans for reconstruction—none of them simple, all of them costly and all of them requiring much elapsed time for their execution.

The Commission was fully aware of its pressing obligation to decide correctly. A long disruption of the President's official residential life was unavoidable; and a large, even staggeringly large, expenditure was involved. If after such sacrifice and cost, the decision proved to be wrong and ill-advised, then disappointment, disapproval and bitter criticism would result.

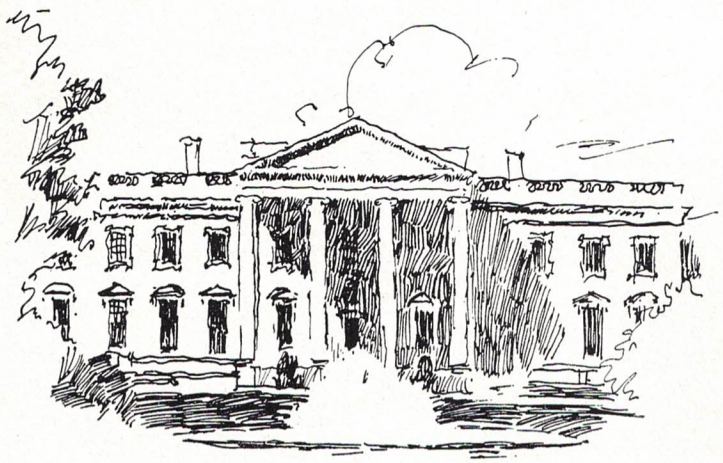
Therefore, striving to leave no facet of the situation unexamined, the Commission collected data, carried on investigation, sought expert advice; bearing always in mind that this definitely must be, not a temporary correction, but a firm and permanent one. At length the data and advice and the results of investigation were in hand. From these, aware of possible opposition but strong in its belief that the conclusion was the best one, the Commission announced its decision to retain intact the historic outer walls and to place the corrective construction within and below these walls.

Careful deliberation was needed to implement this decision and carry it forward. Checking of things already checked, care of valuable outer walls during heavy construction within, exactitude of foundations, exactitude of structural frame, exactitude of dimensions to fit lost rooms which were to return, foresight, and precision—all were needed and were initiated or approved by the Commission over its three-year working period.

From an architectural and structural standpoint the plan adopted has, it seems to the Commission, been the correct and proper one. From a sentimental standpoint there is convincing evidence of strong general

approval, indeed acclaim, for the plan to preserve intact the historic outer walls. As completed, the White House now is an appealing and beautiful structure. It is a matter of satisfaction to the Commission, and it is believed to many others, that the building has become strong and stable and capable of resisting the strains of many years to come.

The New Stair



COMPLETED RECONSTRUCTION

WHILE there is great public interest as to the carefully considered engineering methods which returned the White House to stability and strength, even greater public interest naturally exists as to the inner aspect of the building which, having been completely disassembled, has now been replaced and restored. Comment is therefore being made first upon that phase of the rehabilitation.

It is a point of satisfaction that, though construction necessarily required removal of the entire inner content of the building, yet the interior appearance has been well and faithfully restored in the historic spirit of the house.

The beautiful crystal chandeliers have returned to their accustomed places; the oval rooms, as before, fit snugly into the curve at the south portico; the fine, formal expanse of the East Room and the rich elegance of the State Dining Room have come again into being.

The Commission felt, and results appear to justify its opinion, that certain changes in the decorative idea of the East Room and the State Dining Room, both of which represented the design urge at the time

of the reconstruction of the White House of 1902, would accentuate more clearly the original intent of the rooms.

The East Room, as a result of the 1902 renovation, resplendent in the decoration spirit of the French Renaissance, was simplified to be clearly American and to cleave to the simplicity and elegance of the American spirit.

In the same way the beautiful carved wood of the Dining Room was given new life. Formerly showing a sombre natural finish of the deep dark tone associated with the shadowed great halls of British manor houses, it was felt that the American idea was best expressed by the soft green shades found in American Colonial decoration. The room in these tones assumes a grateful lightness and sunniness.

It was felt also that there was a need for change in the arrangement of the White House main stair. This, in its intent a formal stately approach to the second floor, was previously not visible from the entrance foyer. Its once casual and somewhat awkward position has been rectified. The stair now, seen at once from the entrance, is in a worthy location and has become, as it should be, a graceful point of interest.

In the Library and several other spaces on the ground floor the walls are covered with wood from the structural members formerly supporting the second floor. The charm and sentimental feeling of these spaces thus wainscoted with historic material, gives them a pleasant intimate appeal. Especially is this true of the finely proportioned Library, with its mantel-piece tiles designed under the direction of President Roosevelt. A plaque beside the mantel bears the wording:

"These tiles in the Delft manner, originally intended for the Hyde Park Library, were planned with great Interest and Care by President

Franklin Delano Roosevelt the last year of his life, to be an informal panorama of scenes in the Life of a President of the United States. His death came before their completion and President Truman then had them placed in the White House instead of at Hyde Park."

It is interesting that the White House should finally arrive, after a hundred and fifty years of step-by-step progress, at completion. It began with occupancy by President John Adams, who found himself in a structure little more than walls and roof, with inadequate heating and lighting, temporary stairs, difficult water supply. But after 14 years, as the building with slow progress was beginning to attain a certain comfort and livability, it was in 1814 with tragic suddenness burned and carried back to its original stage of primitive beginning.

From then on it moved toward, without ever achieving, completeness; a step at a time, losing in structural sturdiness, as future investigations were to show, as it gained in superficial convenience. Gas illumination and the first piped water, in mid century, cut into its structural frame. Later, electricity, more water pipes, central heating, carved more and more at supports once completely adequate.

New comforts and conveniences, as they came, added weight at the same time their installation reduced supporting strength. The aesthetically pleasant remodelling of 1902, inexorably planned to be finished in the summer lull between June and October, later showed the disadvantageous results of haste, impetuous timber cutting and quick construction methods; which made that ambitious effort a step actually away from rather than toward completion.

The new roof of 1927, similarly, was the placing of fireproof construction on supports not originally built to receive such additional

loading. Engineers at the time pointed out this circumstance but money was not available for correction. Hand in hand with new weight went channelling of the walls, reducing support as weight to be supported increased; thus leading on toward eventual structural failure.

It is a tribute to the foresight and unselfishness of President Truman that, in 1949, though but recently awarded further tenancy in the White House, he earnestly advocated thorough reconstruction of the mansion, which would keep him and his family for a long period in the less convenient and less glamorous Blair House across the street, to which he daily journeyed, and which for three years he occupied, with obvious and once proven personal danger to himself.

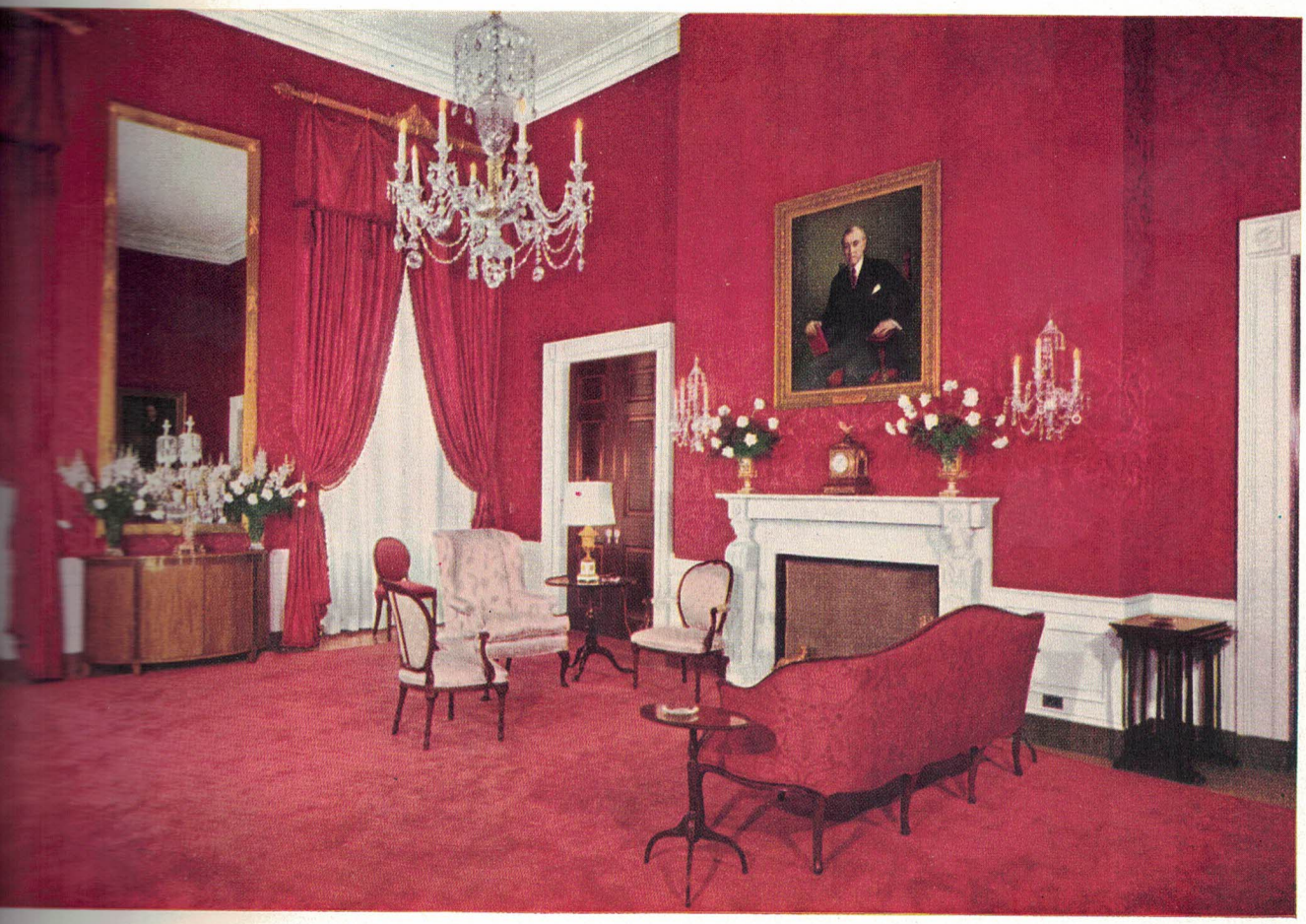
President Truman expressed himself as desiring the job to be done in so thorough a manner that another President would not, after the lapse of a few years, be faced again with the same problem.

The Executive Mansion was thus at last carried to full completion. It is now a building possessing adequacy for years to come; not only because of its present completness, but because an understanding has been established as to its inner nature which will cause future architectural and engineering designers to examine thoroughly the construction conditions before altering them to the building's disadvantage. In a certain other sense, it is fortunate that the renovation was completed at this time, since craftsmen skilled to perform much of the fine work in the White House are now scarce. Old age is claiming them, and there is not the need to train young men to replace them.

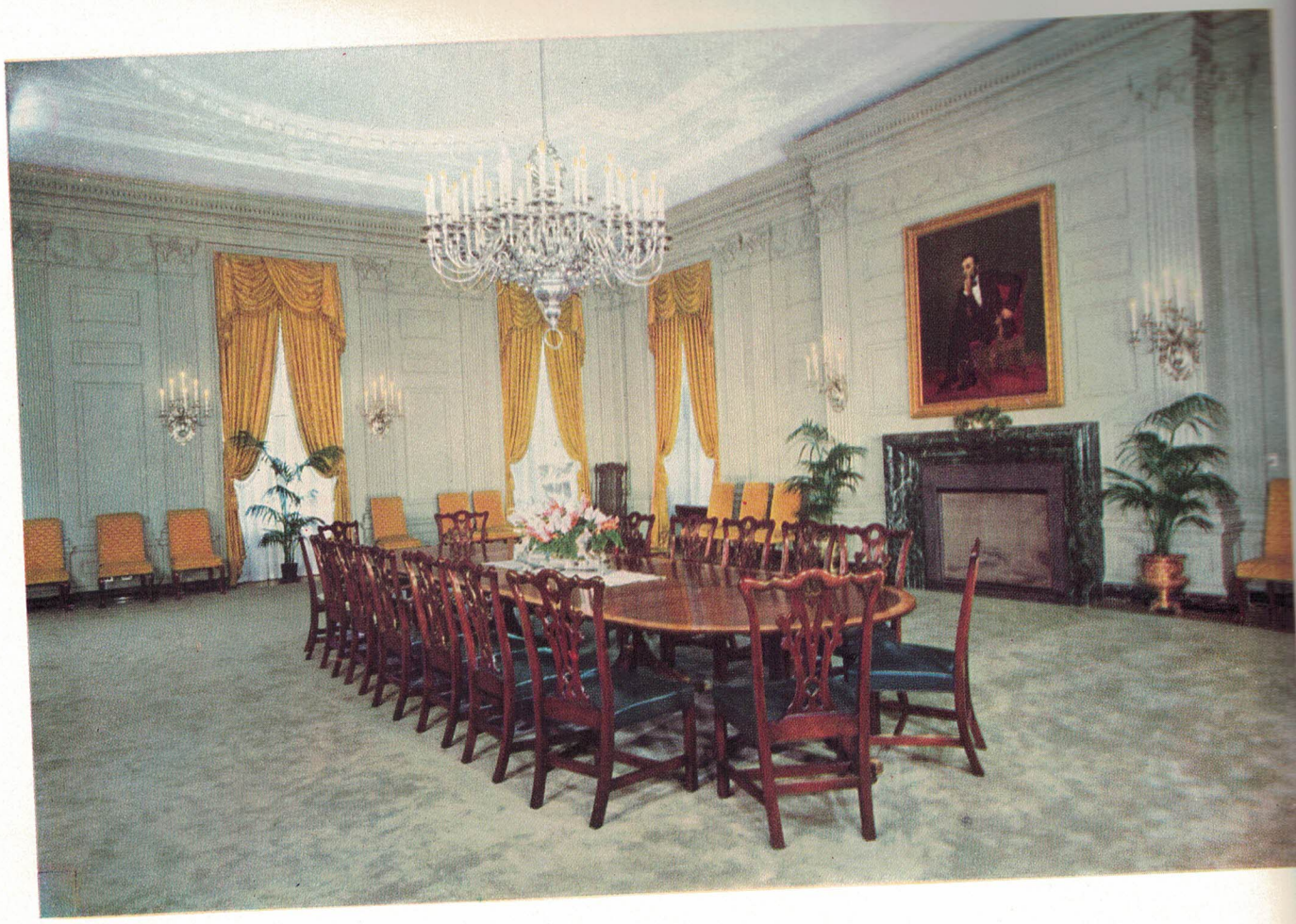
The EAST ROOM. Showing Portraits of George and Martha Washington, Redesigned Cornice and Ceiling, Reconstructed Chandeliers and the Chippendale Sofas

The GREEN ROOM. The Cornice is of the Original Hoban Design. The Adam Mantel with Delicately Carved Caryatids is one of the Italian Marble Mantels ordered by Hoban in 1816

The BLUE ROOM. The Walls are of Blue with Gold Decorative Motif. The Louis XV White and Gold Mantel was Purchased for the White House by Stanford White



The RED ROOM. This Room Has the Hoban White Marble Mantel Similar to that in the Green Room and Cornice of the Original Hoban Design

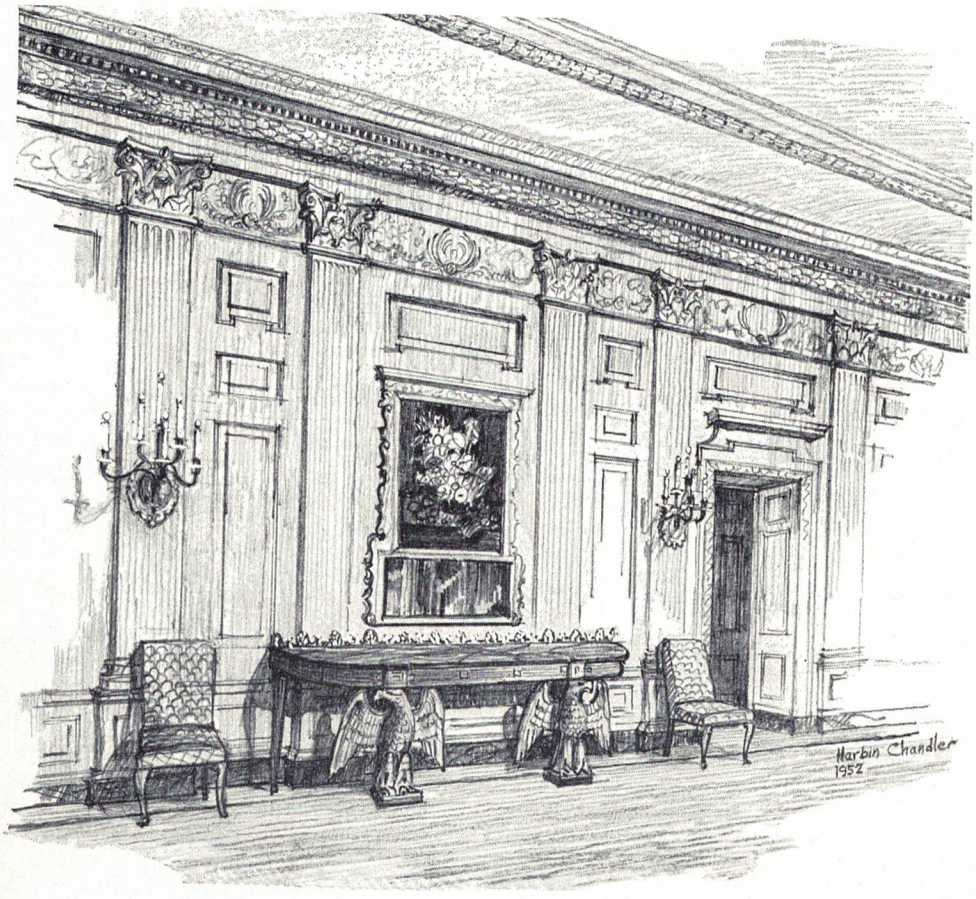


The STATE DINING ROOM. A Room of Warm Dignity with Silver Chandelier, and Pleasant Light Green Walls

The STAIR. The Stair, in New Location, is a Distinguished Feature of the Renovation

The LIBRARY. Its Mellow Wood Wainscot Made from the Former Timbers of the White House. The Tile at the Mantel are the Roosevelt Tile

The LINCOLN ROOM. Victorian Furnishings Preserve the Lincoln Atmosphere



North Wall of State Dining Room

HISTORY OF THE WHITE HOUSE

THE cornerstone of the White House was laid on October 13, 1792 and it was the first public building to be erected in Washington. At the time of its partial completion, in 1800, the city then had a population of 3,210, the nation itself about 5,000,000. The original structure, estimated to cost $400,000, was designed by James Hoban, who won the assignment in open competition with architects of the day, including Thomas Jefferson, whose plans were submitted

anonymously. The fact of Jefferson's entry did not become known until after his death. In addition to designing the structure, Hoban also supervised its construction.

The size of the Hoban project aroused Congress to immediate criticism. Washington, who had much to do with the selection of the site, advised Hoban to reduce his plans to a more acceptable size. Washington then also took an active hand in directing the building's construction. Even in its reduced size, Jefferson still considered the Mansion "big enough for two emperors, one Pope and the Grand Lama". Funds for construction, obtained from the sale of Government owned lands in the District, and from contributions by Maryland and Virginia, were still insufficient for the work, and so the White House was for a long period only partially completed.

The following letter under date of October 20, 1792, quaintly describes the ceremonies at the laying of the White House corner-stone:

"On Saturday the 13th inst. the first stone was laid in the southwest corner of the President's house, in the city of Washington, by the Free Masons of George-town and its vicinity, who assembled on the occasion. The procession was formed at the Fountain Inn, Georgetown, in the following order viz.:

1. The Free Masons in masonic order.
2. The Commissioners of the Fed. building.
3. Gentlemen of the town and neighborhood.
4. The different artificers, &c.

"They proceeded in procession to the president's square. The ceremony was performed by brother Casanova, master of the lodge, who delivered an oration well adapted to the occasion. Under the stone

was laid a plate of polished brass, with the following inscription:

'This first stone of the President's House was laid the 13th day of October, 1792, and in the 17th year of the Independence of the United States of America.

George Washington, President.
Thomas Johnson,
Doctor Stewart, } Commissioners.
Daniel Carroll,
James Hoban, Architect.
Collen Williamson, Master-Mason

Vivat Republica'

"After the ceremony was performed they returned, in regular order to Mr. Sutter's Fountain Inn, where an elegant dinner was provided, and the following toasts given in honor of the day:

1. The fifteen United States
2. The President of the United States
3. Our worthy brothers.
4. District of Columbia: may it flourish as the center of the political and commercial interests of America.
5. The city of Washington; may time render it worthy of the name it bears.
6. Constitutional liberties of the people of the United States of America.
7. The French nation: a happy issue to their struggles for liberty and justice.
8. Marquis de la Fayette.
9. The masonic brethren throughout the universe.
10. The Rights of Man and the author of Common Sense.

11. The fair daughters of America.
12. The memory of those who bled in the cause of liberty.
13. General Wayne and the western army: may their efforts be crowned by a speedy and honorable peace.
14. The governor and state of Maryland.
15. The governor and state of Virginia.
16. May peace, liberty and order extend from pole to pole.

"The whole concluded with the greatest harmony and order."

The building was first occupied by President and Mrs. John Adams in November 1800, some eight years after the corner-stone was laid. At the time of its occupancy, some of the interior, notably the East Room, was not completed. Water was carried by hand into the house from a spring in Franklin Park, a distance of about five city blocks. There were no bathrooms, and Mrs. Adams wrote that "we had not the least fence, yard or other convenience without, and the great unfinished audience room, I made a drying room of, —nor were there enough 'lusters' or lamps, so candles were stuck here and there fore light— neither the chief staircase nor the outer steps were completed, so the family had to enter the house by temporary wooden stairs and platform."

Confirming Mrs. Adams' statement that the East Room was used "as a drying room", there is an incident concerning Henrietta Thomas Bentley, the lady who later was to act as hostess to James Madison on the day when the White House was burned and the President fled to the Bentley home in Brookeville, Maryland. Henrietta, a close friend of Dolly Madison, one day called at the White House and Dolly, who was also a Quaker, took her into the East Room to show her, drying on the line, her Quaker caps "which she had clear-starched herself".

In its early day, the White House was thus poorly equipped, even as to conveniences common to the time. Mrs. Adams complained of the great difficulty of keeping fires going in open grates "to secure us from the daily agues" and the absence of call bells "to assist us in this great castle." It is noteworthy that as late as 1853 certain corners of the Mansion were still cold and drafty. Of one, President Andrew Jackson was allegedly moved to remark that "Hell itself couldn't heat that corner."

In 1807, when he became President, Thomas Jefferson, assisted by the architect, Benjamin H. Latrobe, developed plans for the addition of the North and South Porticoes, and of the East and West Terraces. The terraces made provision for service quarters on each side of the house, and it is recorded that Jefferson himself made these drawings, which showed an arrangement of stables, saddle rooms, ice house and even a hen house disguised behind the classic colonnades.

One might also recall that even at this time the population of the country had risen to only 7 million; and the Washington bureaucracy consisted of but 128 persons. The contrast of government size with that of today has much to do with the functional strain to which the White House, with relatively minor additions, has in later years been called on to withstand.

A fresh start had to be made after the British burned the House on August 24, 1814, the fire destroying the interior and part of the walls. A heavy downpour of rain quickly followed the fire while the masonry was still hot, resulting in much cracking and spalling, evidences of which remained throughout the ensuing years. On this day the President and Dolly Madison, (the first name sometimes quaintly spelled Dolley), disturbed at dinner by the news that the British had entered Washington, fled from the city; she, to Virginia, he "tranquil as usual"

to the Bentley house in Brookeville. There it was necessary for him to stay but a short time. His letter to his wife dated at Brookeville, August 27, 1814, now hanging on the wall of the Bentley house, says in part:

"My dearest:

We pushed on to this place. I have just received a line saying the enemy were out of Washington and were in retreat to their ships, and advising our immediate return. We shall accordingly set out thither.

You will of course take the same resolution. I know not where we are to hide our heads."

One of the ladies of the party which also took refuge at Brookeville wrote in her diary at this time, "It is not likely that Washington will ever again be the capital of our country."

This opinion lacked due appraisal of national courage. Without hesitation, without dismay, immediate arrangements for rebuilding both Capitol and White House took shape. Restoration of the White House was begun in 1815 by James Hoban, the original designer and constructor. Except for the East Room, and the North and South Porticoes, restoration was completed in December 1817, when President James Monroe moved in. When finally finished and furnished during the first year of Andrew Jackson's administration, the East Room contained twenty large mahogany armchairs and four large sofas, all unfinished, and eight pine tables. The South Portico was completed in 1824, but the North Portico was not finished until 1829.

In 1833 a pipe was laid from Franklin Park into the White House to provide running water, but not until 1859 was water piped in from the Potomac River.

Changes to interiors were rather constant with succeeding admin-

istrations. The supervisory care of the building was changed numerous times by executive order from one government agency to another. At no time, insofar as can be learned, had the agency charged with the duty of making alterations or additions had the opportunity to study the building construction and make structural correction.

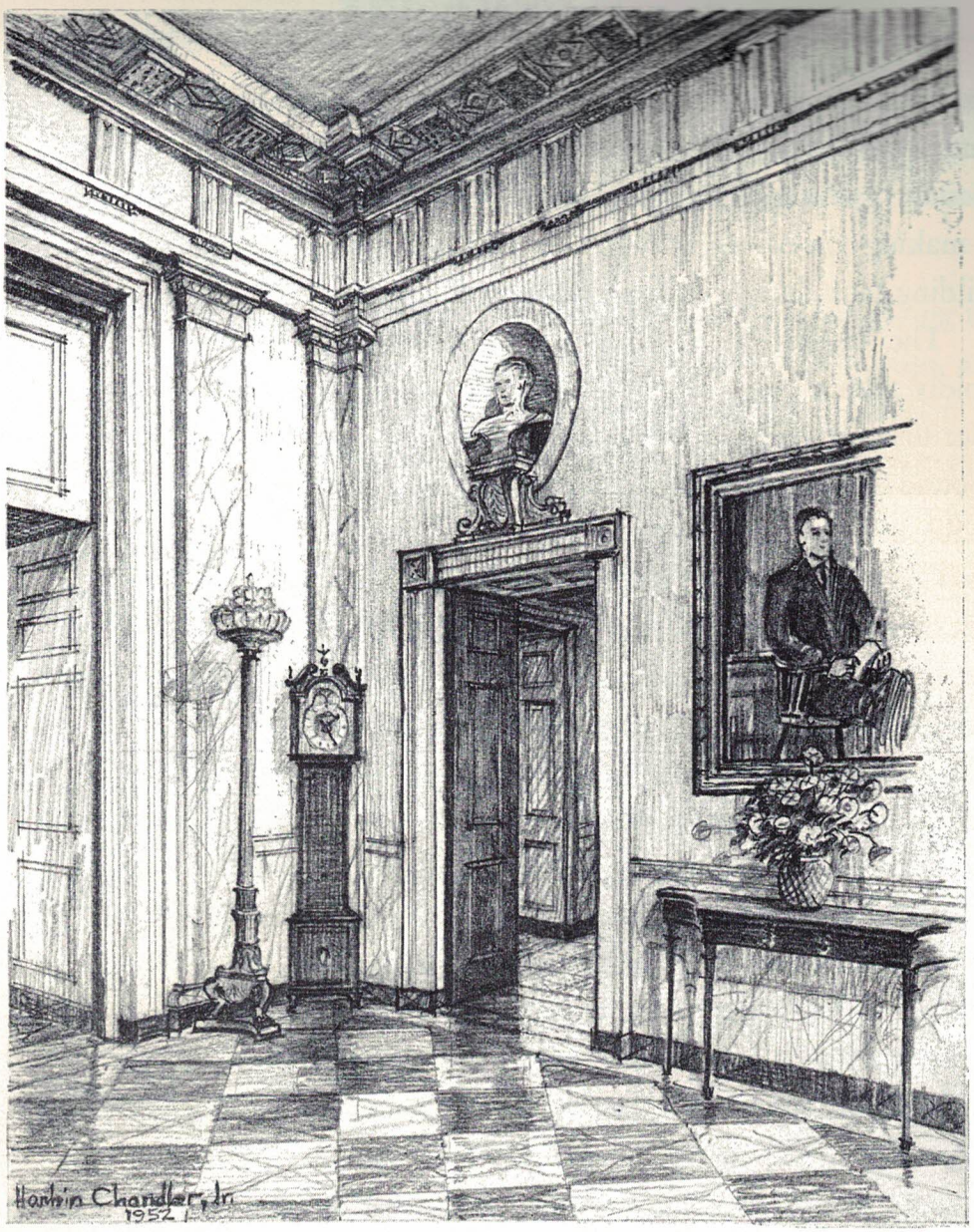
The original interior design concept of the building deteriorated rapidly with various remodellings, and one historian has noted that prior to the alteration of 1902, the East Room resembled the saloon of a Sound Steamer, and the State Dining Room had the decor of a fashionable bar.

Contrary to general belief, the original structure was well built, at least by the standards of that day, and was well reconstructed after the fire. It was adequate, as time has shown, for weights and requirements not too greatly exceeding those it was designed to withstand.

Cabinet and other meetings, held on the second floor close by the President's study, had grown by the time of the War between the States, to such size as to entirely invade the family living space. The area was used freely by secretaries, and office seekers, and the family never really regained privacy in that area, since the quarters were put to more and more concentrated office use as the nation grew in size.

Also, the structure has been constantly subjected to burdens of traffic, inconsistent with original intent. During the times the White House is open to visitors, eight thousand or more sight-seers a day pass through the corridors and state rooms. Large state receptions with as many as 2,000 persons in attendance and even greater crowds at inaugural and New Years receptions, have overburdened the building, putting a heavy strain on structure and equipment.

It was natural that as the mechanical age developed, the White



Clock in First Floor Foyer

House should be provided with modern conveniences. But each time improvements were added, something was sacrificed. Doors, openings and chases were cut, floor joists were bored and altered, always apparently with the idea or hope that there would be enough structure left to support the loads.

The first alteration of major importance after the reconstruction of 1815 occurred in 1902, when, during the administration of Theodore Roosevelt, the main floor was reconstructed and to some extent restored to its original architectural condition. One very significant part of this project was the removal of office functions from the President's residence to "temporary" quarters in a new wing, west of the West Terrace, where they remain today. This separation of residence and executive offices ended the jumble of domestic and official purposes, making the second floor available for sole use as Presidential living quarters and reestablishing the residential character of the building.

With the limited amount of money appropriated for this major renovation, and the limited time, it was not practicable in 1902 to do all of the work that should have been done, and to make a complete and careful examination of the foundations and the main timbers. The principal renovation was the reconstruction of the entire first floor by running steel beams underneath, and by replacing plumbing and electrical wiring. The State Dining Room on the first floor was enlarged by removing a wall, which required the ceiling and floor above to be supported by hanging them from steel trusses in the partition walls above the second floor.

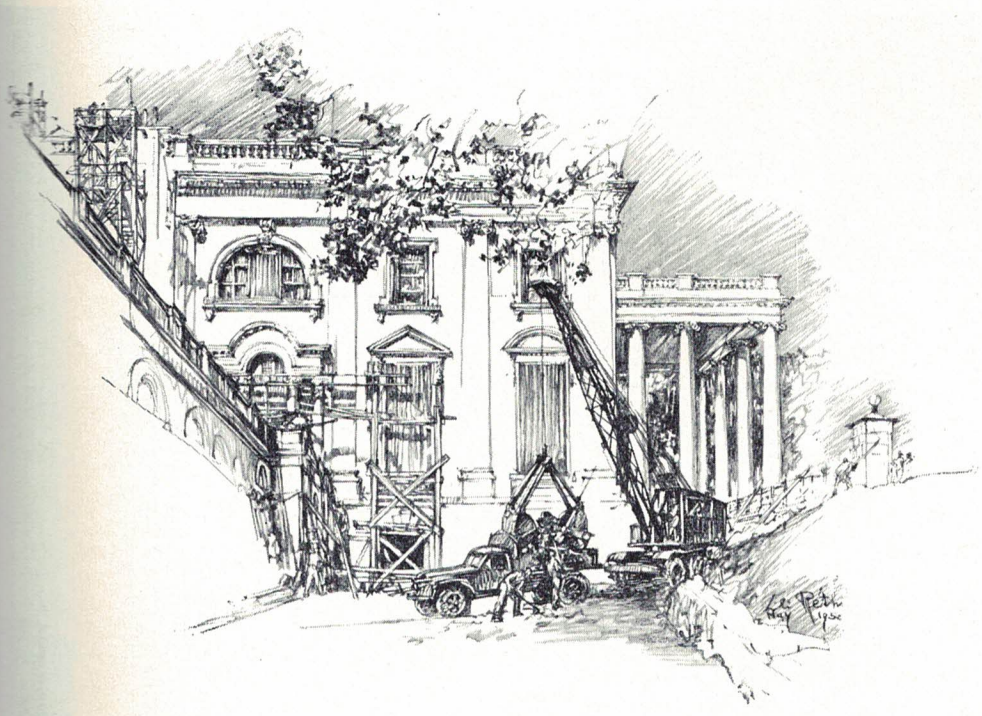
Although the President's living quarters were repaired and modernized, no attempt was then made to replace second floor wooden construction. On the whole, the 1902 renovation corrected only surface

matters, those of a major character being left untouched to develop greater hazard over the years.

The second important change occurred in 1927 when the roof was replaced with steel trusses and a fire resistive third floor installed, the weight of this floor being suspended from the roof trusses. Again, the restricted manner of carrying out this alteration became one of the causes for the radical rebuilding required in the recent reconstruction operation. The old roof structure consisted of large main timbers, spanning from wall to wall, from which the third floor was suspended.

On completion of this alteration, the result was a White House with fire-resistive construction of the first and third stories and roof and, except for an inconsequential amount of non-fireproofed structural steel introduced in 1902, a wood constructed second story dating back to the reconstruction after the fire of 1814.

In this curious blend of adequate and inadequate construction lay the germ of disintegration. As time went on it approached nearer and nearer the line of fatigue, and eventually showed the danger signs which demonstrated the definite necessity for correction.



NEED FOR RECONSTRUCTION

IN January 1948, President Truman became concerned because of a noticeable vibration of the floors in his study on the second floor; and requested the Commissioner of Public Buildings to make a structural survey of the supporting timbers. A cursory examination revealed that some of the timbers under the second floor had been notched out about five inches, causing the uncut portion to receive many times its normal stress.

In February of 1948, therefore, President Truman asked a committee composed of R. E. Dougherty, President of the American Society of Civil Engineers; Douglas W. Orr, President of the American Institute of Architects, and W. E. Reynolds, Commissioner of Public Buildings, to direct an investigation of the structural condition of the White

Cracks in the Northwest Corner and in the North Brick Wall in the West Sitting Room, on the Second Floor, as revealed in investigation prior to the Renovation

House. Lorenzo S. Winslow, White House Architect, and Howell G. Crim, Chief White House Usher, were called in as advisors.

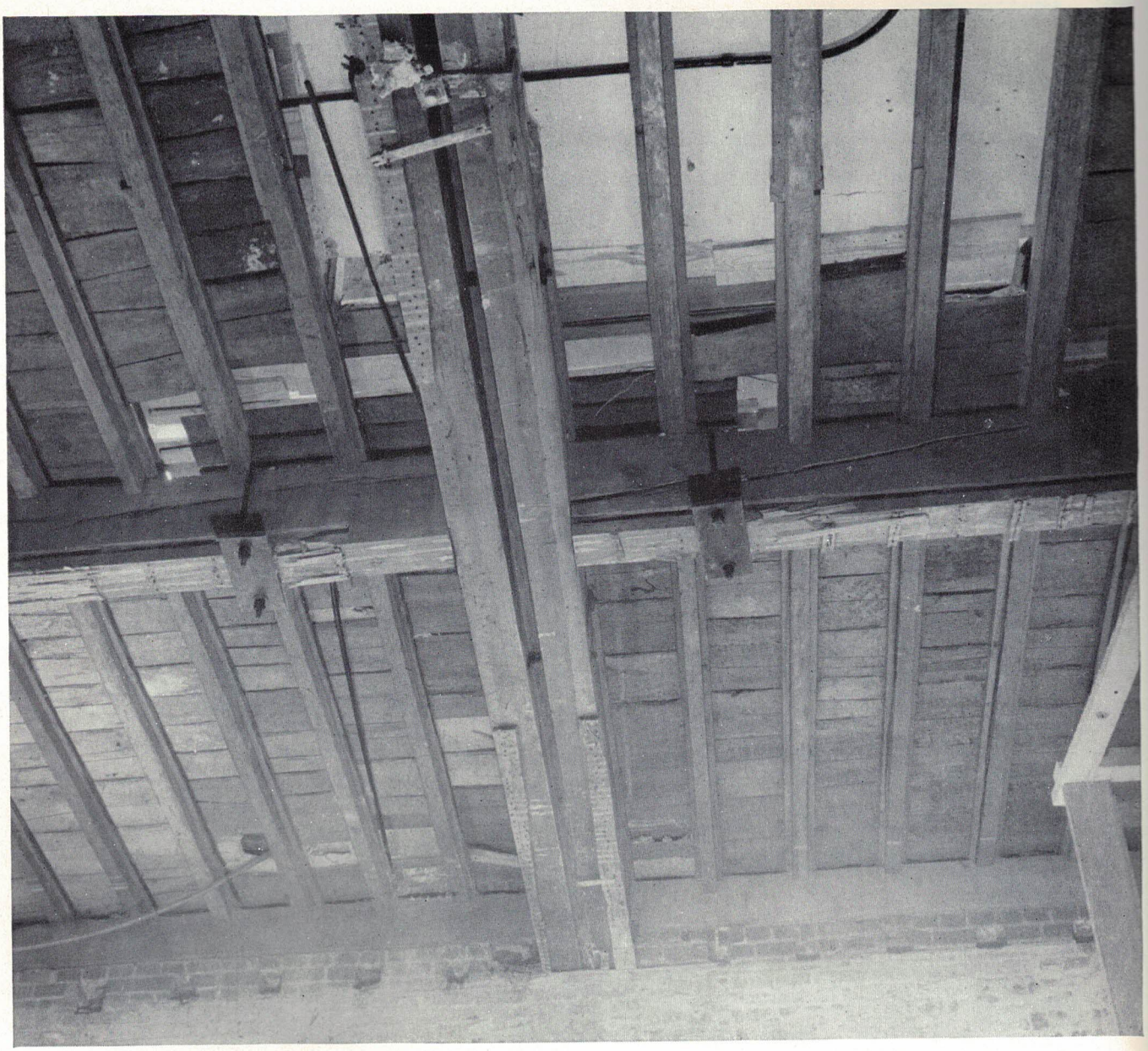
Previous to this date informal investigation had been conducted by Messrs. Barber and Yingling of the staff of the Commissioner of Public Buildings, aided by Messrs. Winslow and Crim.

Even at its first meeting, from preliminary observation, the Committee was concerned with the serious conditions of the structure, and with the very evident fire hazard. It immediately recommended restrictions of loading of the second floor, extreme diligence against fire, and replacement of the combustible second floor at the earliest practicable time. It further recommended that interim repairs be made and that the investigation be continued and pursued as rapidly as could be, with a minimum of inconvenience to the President and his family.

Even just the reconstruction of the second floor would have been a major operation, since all of the fine ceilings of the States Rooms of the first floor were suspended from its combustible floor construction.

As the exploratory investigations continued, the fact soon became apparent that a thoroughgoing examination of the entire structure was indispensable and so, on April 1, 1948, the President asked the Congress to appropriate $50,000 for that purpose, an appropriation which was approved on May 10.

To conduct this examination, free call was made upon those who had participated in the initial survey, and others, including Edward F. Nield, Architect, of Shreveport, Louisiana. The Public Buildings Service augmented the services of its own staff specialists by assistance from the National Bureau of Standards and the Forest Products Laboratory. Charles B. Spencer, President of Spencer, White and Prentis of New York, was asked for advice when the survey of foundations revealed that



Split in Beam under Room Miss Margaret Truman Occupied as Sitting Room.
Break was the Result of Cutting away Beam at Bearing

the heavy interior bearing walls had settled to an alarming extent.

By September of 1948, it had become obvious that the difficulties were not confined to the second floor alone; but that even more serious faults requiring major operations had in the investigations been unearthed. The new roof and third floor of 1927 put concentrated loads upon interior walls and piers. These walls and piers without adequate or even reasonable footings, bearing as they did on compressible soil, had settled and cracked, a continuing, progressive movement.

This Committee, further, confirmed the fact that the timbers under the second floor were far from adequate for the existing load, and declared that "the building violates principles of good fire engineering practice and presents a definite fire hazard to persons and property."

A clear warning was in the East Room where the sagging of the ceiling plaster and the audible vibration in the area gave convincing evidence of the structural disintegration which was later to be revealed during the early stages of demolition.

So dangerous were conditions that it was considered necessary to evacuate the building at once, close it to visitors, and request the President to take up residence in the Government-owned Blair House across the street.

Therefore, when the President went to Missouri in November of 1948 to vote, the decision was made by him not to return to the White House; and that arrangement should be made in his absence so that upon return he would live in the Blair House for such period as might be required for White House renovation.

The extent and character of the deterioration which the White House had undergone was set forth in considerable detail in a subsequent report to President Truman from W. E. Reynolds, Commissioner,

Public Buildings Service, dated February 7, 1949, which also included a general plan for reconstruction and modernization at an estimated cost of $5,412,000. A copy of this paper with its enclosures is in the appendix of this report.

Although the funds for the project, requested shortly thereafter, were appropriated to the Federal Works Agency, President Truman favored the establishment of a Commission on Renovation of the Executive Mansion which would exercise general care and supervision of the construction work, including approval of plans and selection of contractors. In so recommending to the Congress on March 25, 1949, the President noted that the commission type of arrangement had previously been utilized in connection with the construction of such national shrines as the Lincoln Memorial and the Jefferson Memorial.

On April 14, 1949, Public Law 40 was enacted establishing the Commission on Renovation of the Executive Mansion according to the President's recommendation. It was stipulated that the Commission should be composed of six members, as follows:

(1) Two Senators appointed by the President of the Senate;

(2) Two Representatives appointed by the Speaker of the House of Representatives;

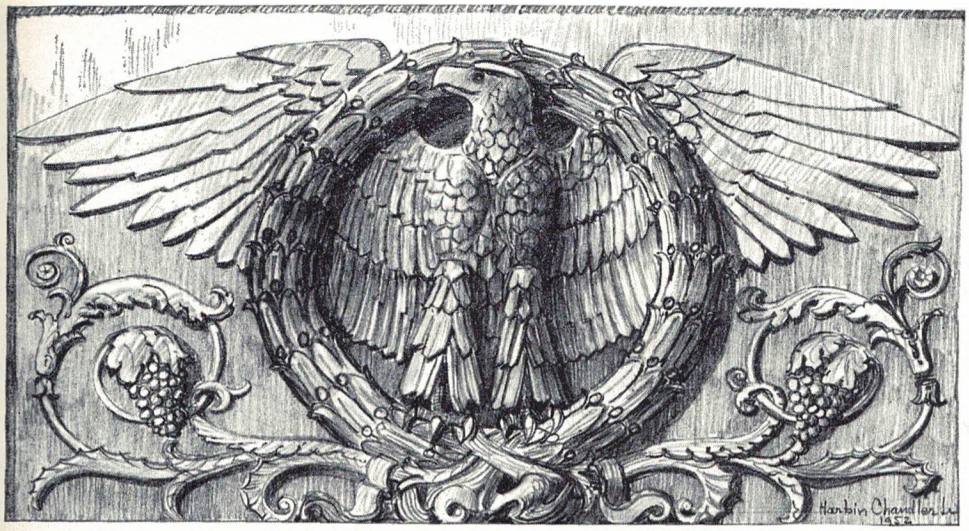
(3) Two persons appointed by the President of the United States from the Executive Branch or from private life.

Such other personnel as were deemed necessary could be employed by the Commission. In addition to supervising and approving construction, the Commission was given responsibility for the segregation of lumber, furniture and other material removed from the White House which were determined to be of such historical importance that they should without any doubt be permanently preserved. The Commis-

Main Support at Top of Main Stair, Second Floor, under Bearing for T_4 Truss

sion was charged with recommending to the Congress and the President a plan for (1) the preservation of historical material and (2) sale, donation, destruction or other disposition of the remainder in a manner consistent with its symbolical value and without commercial exploitation.

As to what type of operation was to be undertaken—partial demolition, full demolition reusing old materials, or full demolition using new materials—that decision, in the provisions of Public Law 119 enacted June 23, 1949, making available $5,400,000 for construction and modernization of the White House, was left to the Commission.



Ornament in Private Dining Room

FORMATION OF THE COMMISSION

THE President of the Senate and the Speaker of the House of Representatives each appointed two members from his body to the Commission, while President Truman appointed two members from private life. On June 3, 1949, when the newly appointed Commission met for the first time in the office of the President, the membership was as follows:

Senator Kenneth McKellar, Tennessee
Senator Edward Martin, Pennsylvania
Representative Louis C. Rabaut, Michigan
Representative Frank B. Keefe, Wisconsin
Mr. Richard E. Dougherty, White Plains, New York
Mr. Douglas William Orr, New Haven, Connecticut

At its meeting on June 15, 1949, the Commission elected Senator McKellar as Chairman and Mr. Orr as Vice Chairman. Mr. Orr and Mr. Dougherty were subsequently designated as a Technical Commit-

Photograph of the Commission, taken with the President at its first Meeting, June 3, 1949

Left to right: Senator Martin, Senator McKellar, Mr. Dougherty, The President, Mr. Orr, Representative Rabaut, Representative Keefe

tee. Acting for the Commission on technical matters they screened all data in connection with architectural and engineering matters.

The Commission selected as its Executive Director, Major General Glen E. Edgerton, U. S. Army (Retired), and as Assistant to the Executive Director, Colonel Douglas H. Gillette, Corps of Engineers. Mr. Lorenzo S. Winslow, Architect of the White House, was designated Secretary of the Commission. Mrs. Helen W. Ganss and Mrs. Bernice H. Tidwell were employed in secretarial capacity, and Major James V. Little served as a special assistant to the Executive Director.

Three consultants were appointed to advise the Commission on architectural and engineering matters, as follows:

William Adams Delano, Senior Partner, Delano & Aldrich, Architects, New York City.

Emil H. Praeger, Partner and Chief Engineer, Madigan-Hyland Co., Consulting Engineers, New York City.

Ernest E. Howard, President, Howard, Needles, Tammen & Bergendoff, Consulting Engineers, Kansas City and New York City.

It would be difficult to pay adequate tribute to the three consultants on whose vast experience and expert knowledge the Commission relied during the entire course of operations. All served the Commission with competence, skill and evident pride in being associated with the project; all of which is deserving of appreciative notice.

At the time the Commission completed its activity in 1952, its membership remained as at the start, except that Representative J. Harry McGregor of Ohio had replaced Representative Frank B. Keefe in January of 1951. Representative Keefe, since deceased, was not a member of the 82nd Congress.

The Commission sought to reassess all facts and to approach the

problem without preconceived opinion. All phases were carefully considered from the point of view of architecture, engineering and cost. The problems of maintaining the present structure during any removal of the old were studied in detail. Soil tests were made and load tests conducted on different strata. The condition of exterior walls was examined, to determine how much, if any, these walls might be chased, how they might be anchored to new steel, and how underpinning could best be done.

Drawings and technical data were generally prepared by the Commissioner of Public Buildings and his staff, in conjunction with the White House Architect and his staff, and checked by the Commission's consultants and technical staff.

These investigations revealed the fact that, while there was no conclusive evidence of settlement in the exterior walls, the interior walls, successively supporting more and more load year by year, had settled considerably and, what was critical, were continuing to settle.

It was at length seen that there was no remedy that would solve the problem other than complete removal of the inadequate interior construction; and thereupon carrying all footings down to safer bearing soil. In other words it meant gutting the building—leaving only exterior walls and the fireproof roof and third floor framing.

All consideration and reconsideration showed that such procedure was essential. Since the remedy was so far-reaching and so costly, there was a difficult period of deliberation, resulting in the bringing forward of five plans which resolved themselves under three brackets all pointing toward the remedy and involving the same approximate cost, within about 10 percent, and about the same elapsed construction time.

(1) To preserve in place outer walls, roof and third floor, to remove

existing interior construction below the 3rd floor; to underpin or extend all walls downward, and thereafter to reconstruct within the house so as to bring it generally to its former condition.

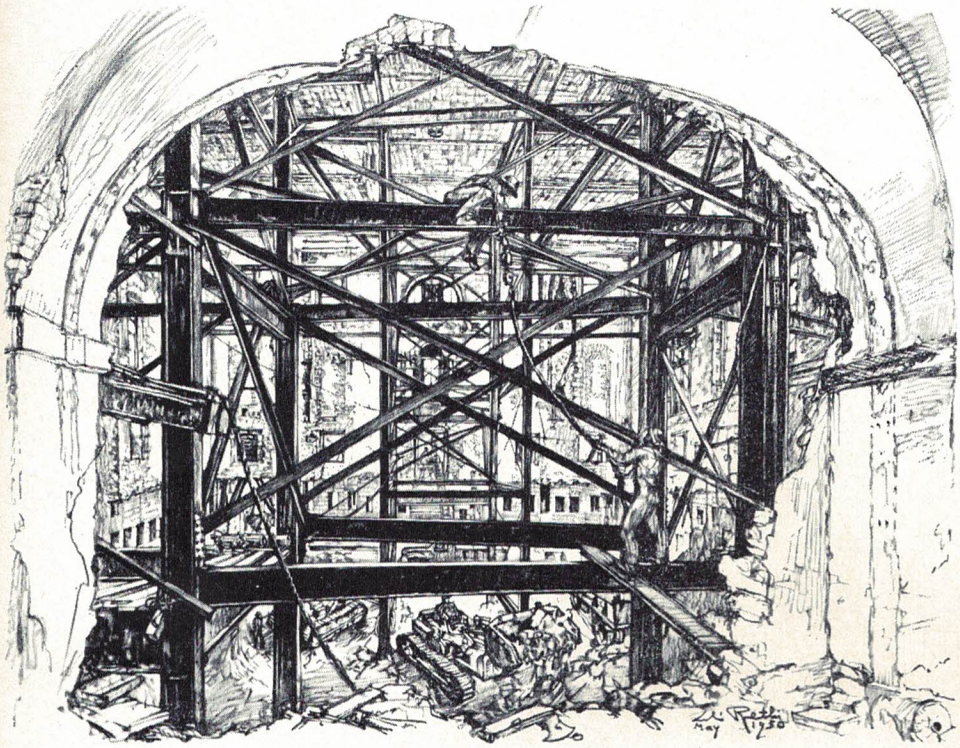
(2) To demolish the building, preserving and storing the exterior stones for later replacement; and to reconstruct the entire building.

(3) To demolish the building without intent to use any of the existing material; and thereafter to reconstruct it, in identical design, of new material, (one plan for marble, one for limestone, one for granite); and to reconstruct within, all as in any new building.

Five careful and detailed estimates were made upon the above: one for retaining exterior walls in place; a second for demolition and reusing exterior materials; a third for demolition and rebuilding in marble; a fourth for demolition and rebuilding in granite, and a fifth for demolition and rebuilding in limestone.

The decision between these plans presented a matter of not inconsiderable complexity, especially since there were involved, not only the construction factors, but the compelling sentimental aspects of the matter. Doubt had been expressed by many who gave study to the problem as to the practicability of salvaging all the exterior stones for reuse. The foundation consultant, Charles B. Spencer, the two engineer consultants, Ernest E. Howard and Emil H. Praeger, the Architect of the White House and the architectural consultant William Adams Delano, all strongly urged retaining the existing exterior walls.

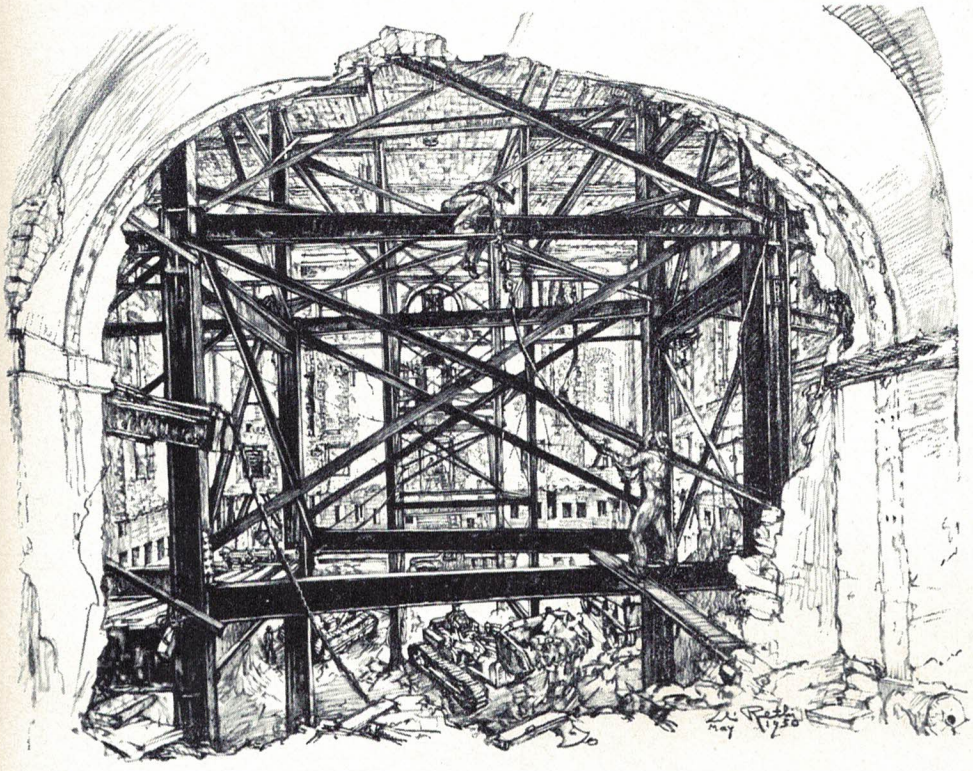
At length, after investigation, deliberation and expert advice, the Commission arrived at a conclusion which has since seemed to receive almost universal approval: to preserve in place the outer walls and to reconstruct the building within, following the same plan and the same general interior design as historically existing before.



RECONSTRUCTION

UNDER the adopted procedure, the Commission functioned as control agency for the Government. The Commissioner of Public Buildings acted as contracting officer, charged with supervising the operations of the general contractor and subcontractors, and paying accounts. His office prepared the structural and mechanical drawings and was responsible for the development of specifications and drawings, in coordination with the White House Architect, who prepared the architectural drawings.

It was necessary, in conformity with the decision to preserve the existing exterior walls, to underpin these walls with concrete piers having footings at varying depths of 24 to 27 feet below the ground level



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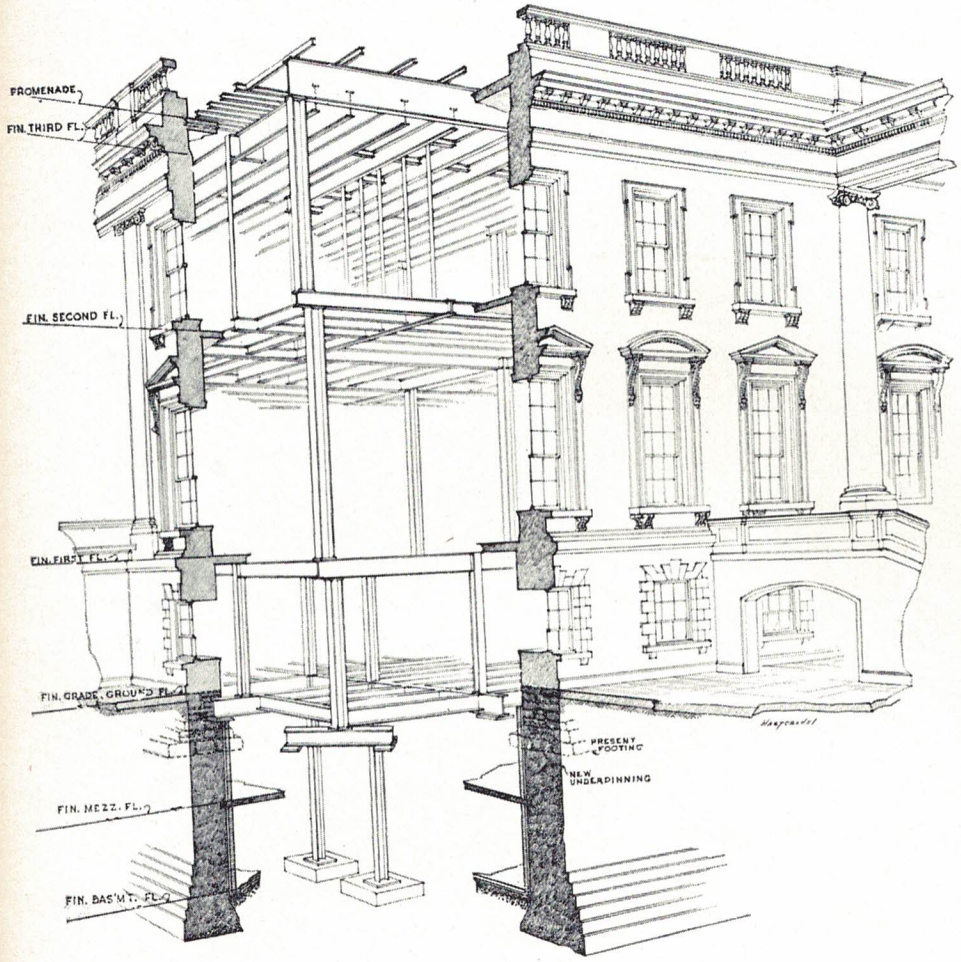
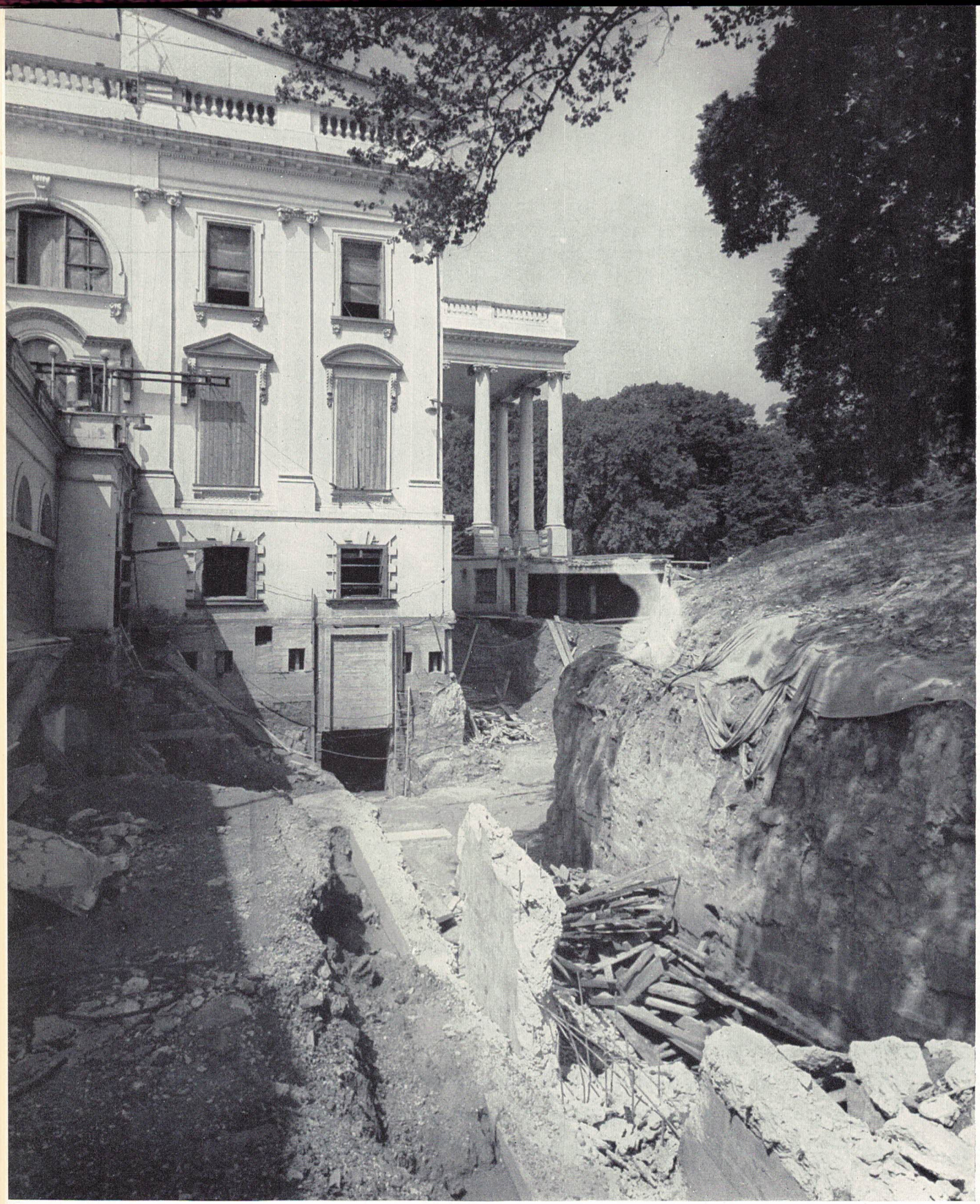


Diagram Showing Wall Underpinning and New Steel Construction

at the front of the building, where bearing was obtained upon a sand and gravel strata, considered to be much superior to the clay upon which the walls formerly rested.

In the work of the contract for renovation, which started on December 7, 1949, the first major step was the underpinning of these outer walls.

The reports on this work were closely examined. Carefully placed marks had been established all around the building and variations in



Construction and Excavation at Northeast Corner

their elevations during the underpinning operation did not exceed five-sixteenths of an inch in the greatest settlement noted.

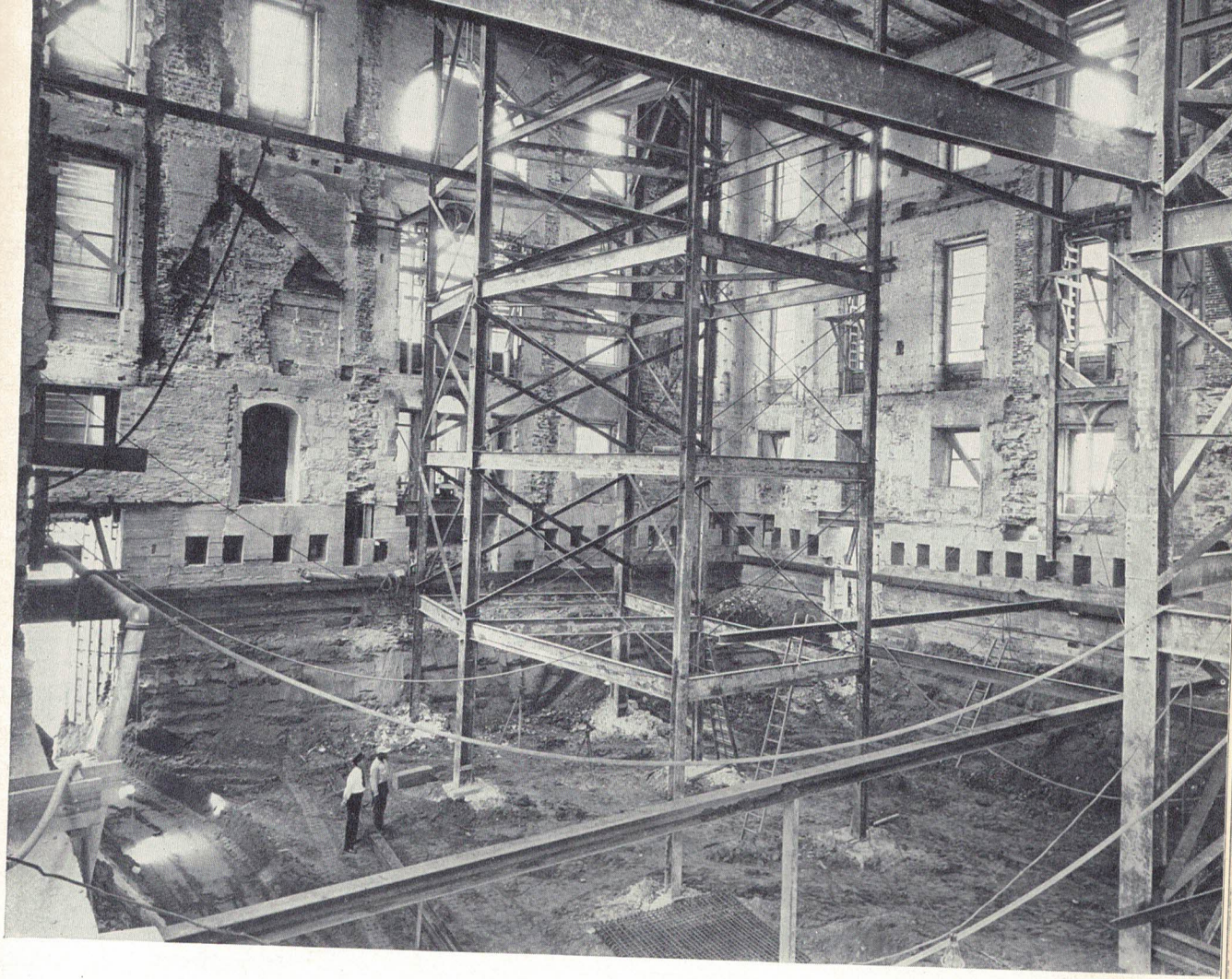
In carrying this underpinning down and in making preparations to carry the new interior column footings down to the same general depth as the wall footings, complete excavation to about that depth was practicable. An advantage appeared in that the excavation thus provided basement space approximately 20 feet in height, which became useful for mechanical equipment, public toilets accessible from the Ground Floor, storage and other purposes. Some of these facilities were included in a basement mezzanine, which proved to be an economical use of space.

The matter of the safe load of the soil at this lower level presented a serious problem. While the soil at the new footing level was sand and gravel of satisfactory bearing quality, it was discovered by borings and test pits that fifteen feet below was a silt stratum about eight feet thick. Concern was felt that settlement might occur, since the wall loads with their deeper footings would now be closer to this layer.

Professor D. M. Burmister, head of the Soils Mechanics Department of Columbia University, whose services were secured by Emil H. Praeger, tested samples and reported as to expected settlement. He submitted a most accurate report and it is of more than usual interest to note that, working at a distance in a laboratory at Columbia University in New York, he was able to predict the actual settlement after construction to within 1/25th of an inch of the settlement as it really occurred.

The investigations proved that no dangerous condition existed in the presence of the silt. Actually the stratum upon which the footings were designed to rest turned out to be of semi-cemented character, offering an even better support than had been anticipated.

The structural design required new footings at this stratum and



Permanent Steel and Temporary Bracing
in Interior of White House

a new supporting structural steel frame was erected on these footings within the existing masonry walls of the building, thus changing it from a wall bearing construction to a modern steel frame. For the most part the columns at the walls were to run within or close to the walls, but in a few cases the walls were cut back to receive the columns.

To give some idea of the full scope of the reconstruction there are listed the steps which were in the beginning set down as diagramming the extent of the work.

These steps were: Underpinning of outer walls; Removal of inner walls and shoring the outer walls and roof; Construction of a steel frame within the outer walls; Supporting all interior loads upon this new steel; Providing a new basement; Replacing all floor construction; Replacing interior partitions and facilities in the ground, first and second floors; Constructing vaults under the front lawn for mechanical equipment; installing modern heating, air-conditioning, plumbing and electrical facilities; Extending elevator to the basement and providing additional elevators; Restoring architectural appearance of the Ground 1st and 2nd floors; Eliminating fire hazards; Maintaining exterior appearance; Rehabilitating North and South Porticoes.

This list required patience, and careful consideration. Someone recently stated that the completed White House was a meritorious accomplishment in interior decoration, missing completely the fact of the critical construction problems that have been overcome.

Precision and care were required in the underpinning. Excavation to the ultimate low level was made under a short section of the wall, the footing and underpinning placed and the operation then repeated on another similar section. In all approximately 126 pits were dug and piers placed. Where this method of underpinning and footing came at

the location of a new steel column later to be installed, suitable footing and pilaster arrangement were made to receive the column.

The designing of the footings and underpinning was a matter of continued and careful study. The first design, in the light of the structural responsibility involved, tended to be somewhat larger and more expensive than need be. But careful rechecking and restudy resulted in more and more refinement to the method and a consequent economy, without loss of efficiency. This earnest, patient and effective restudy is a tribute to the skill and evident conviction, among all who were concerned with the renovation, of the importance of properly reconstructing the valued building.

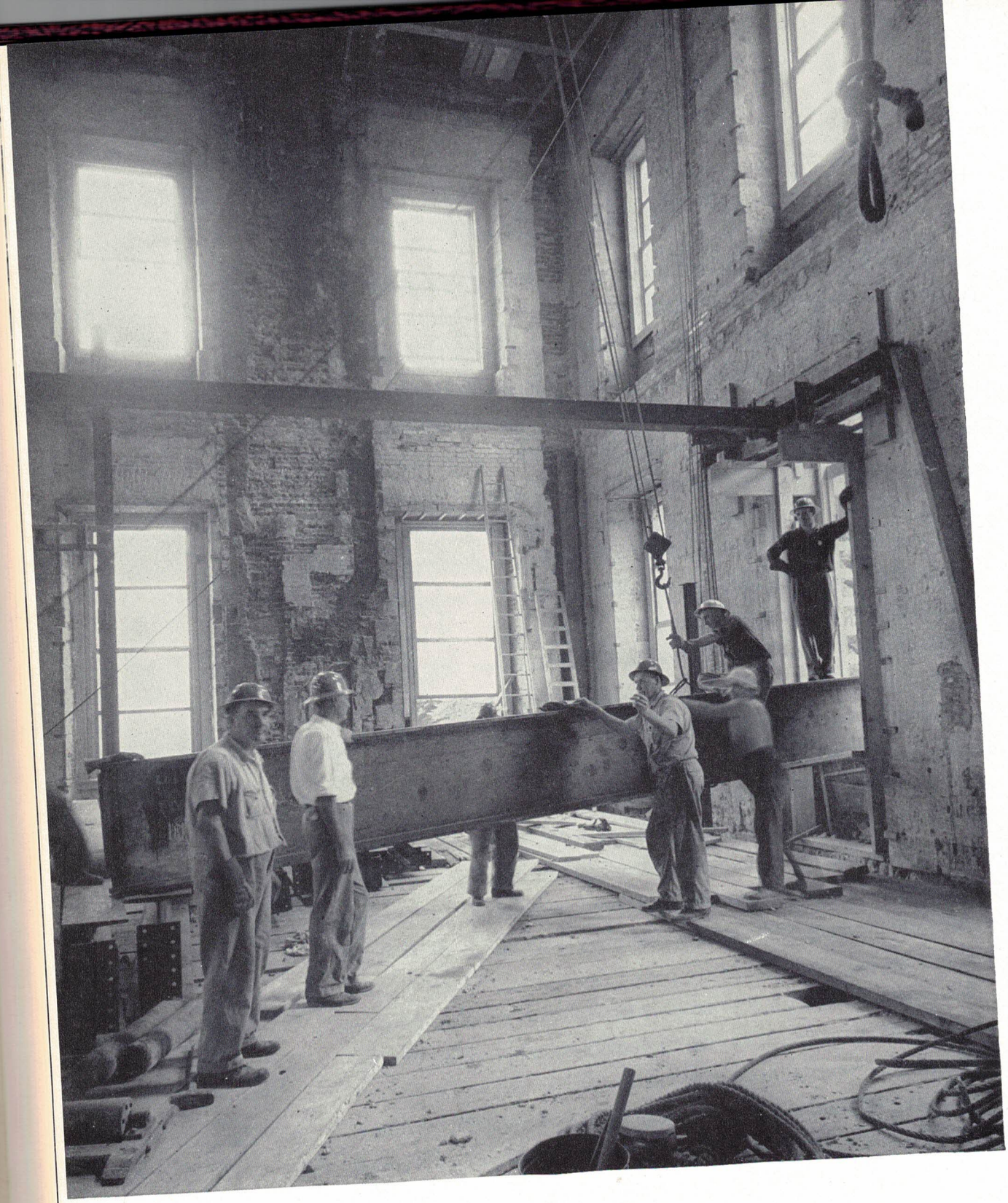
The razing and removal of all interior construction proceeded concurrently with the progress of the underpinning. As interior walls were removed, temporary struts were installed to protect against any tendency of movement in the outer walls.

The Bureau of Standards made tests upon the stone, the brick and the mortar of the exterior walls to determine their suitability to remain. An investigation had been made as to the strength of the trusses installed in 1927 when the new fireproof roof was installed. Detailed care was given to every phase which might have ultimate effect on the result of the work.

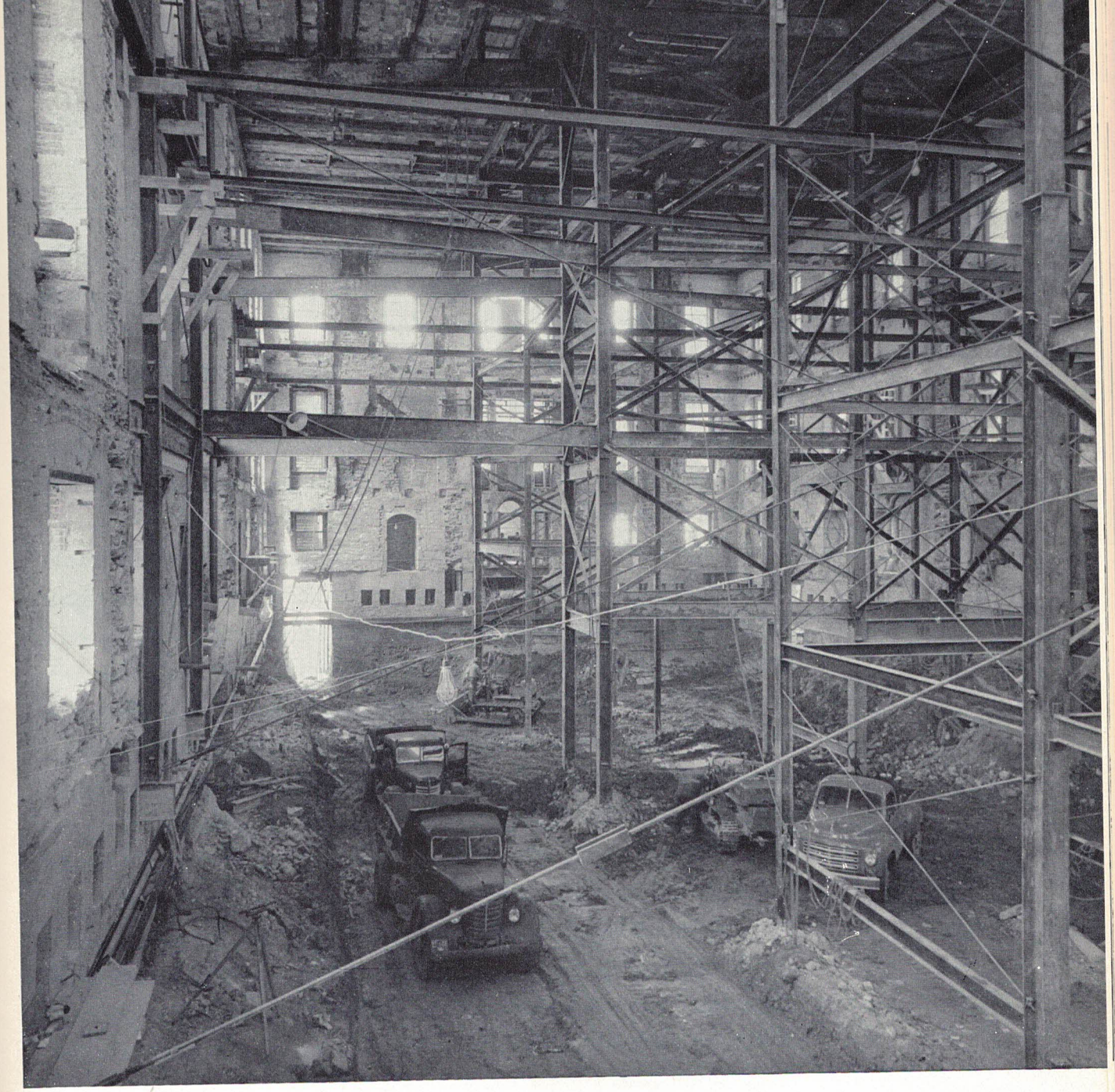
The necessity existed of shoring the exterior walls which were, after the complete removal of all inside construction, without the bracing formerly provided by floors and brick cross partitions.

The heavy fireproof third floor, deprived of its interior wall bearings, had to have temporary supporting construction. This was provided and was later removed as permanent support was installed.

The new floors were to be of reinforced concrete supported upon



Structural Steel Brought in Through Window



Excavation by Bulldozers. Looking West in Interior of White House

the steel frame, to which the outer walls were to be anchored. The walls were strengthened by raking out the joints and repointing them with cement under high air pressure.

These operations within the building, of necessity carried on in piecemeal fashion, involved careful and patient work. But, even though complex and requiring close supervision, the plan to retain the outer walls intact proved to be a satisfactory one, both financially and from the point of view of elapsed time.

Close study was made as to the possibility of making the second floor all on one level, since the raised portion at the east end had always been a disadvantage. But any considerable lowering of that portion of the floor would cut down the stately height of the East Room. At length a restudy of the framing of the floor above the East Room resulted in a design requiring less construction depth, thus enabling the second floor above to be lowered so that an easy ramp could replace the steps that had previously furnished access from lower to upper level.

When the contract for the fabrication of the structural steel was let, the contractor began the preparation and submission of about 350 shop drawings. It became the responsibility of the Commission and those working on the project with the Commission, to check these drawings. As a result of this careful reviewing the fabricated structure showed a satisfying exactitude, which, in view of the cramped conditions of installation, was helpful to the Commission's problem.

The first piece of the final permanent steel construction was placed on February 14, 1950. This was one of the main columns, near the main stairway, a column approximately 22 feet long. Other steel had been erected previously as temporary support. The new column was painted a different color from the temporary steel and thereafter all permanent

and temporary steel followed the scheme of distinguishing colors, to prevent any error, however remote in possibility, in steel removal.

When in December of 1950 the permanent steel frame was fully installed, the building was then generally ready to proceed as in ordinary construction. There was, however, one controlling factor of unusual importance. Final planes of finished interior wall surfaces were fixed by rooms to be reproduced which must retain their historic aspect.

These wall surfaces, in general, could not be broken into nor violated. Therefore the utmost carefulness in structural and mechanical engineering design had to be exercised. Seldom have more strict rules for location of steel, piping, ducts and conduits been laid down, not only in relation to walls, but in relation to floor and ceiling levels, all of which were almost inflexibly fixed.

Limitations are present in the construction of all buildings, but in this case the flexibility that is possible in other buildings simply did not exist. The Commission gave much thought and discussion time to saving an inch here or there by alternate design method. It is an achievement that the heavy steel frame, the air conditioning ducts, the mechanical and electrical equipment piping and conduits should have been installed all within spaces in general set up many years ago, when no thought of such practical necessity and usage was present.

Ducts were fitted, pipes and conduits were installed, slabs were poured, partitions were erected, all with consideration for the time when their location would be an important factor in the exact placing of the important interior finish.

Meanwhile, concurrently with the erection of the structure and the installation of the piping and ducts, the preparation for the interior finish was going on. It was felt necessary to redesign and simplify

much of the plaster-work, particularly the ceilings of the East room and of the State Dining Room, to present a more restrained appearance. The plaster ceilings existing before the renovation, particularly in the East Room, had proved to be too heavy in ornamentation, both from a practical and an aesthetic standpoint. Some of the decorative plaster in the East Room weighed as much as seventy pounds per square foot, which was an actual hazard.

Some of the ornamented plaster was either preserved or exactly reproduced. The cornice mouldings of the entrance hall were very satisfactory and were generally reproduced. In the East Room the Lee Lawrie panels were carefully preserved. One of them was considerably broken as it was removed, but skillful restoration work by the modelling shop made it into a good panel.

Messrs. Winslow, Chandler, Bachschmid, Albright, Wheeler and Galante, of the office of the Architect of the White House, had made in 1948 a measured set of drawings of the interior showing the house as it appeared before the reconstruction.

The State Dining Room, an example of fine interior wood finish, was measured and careful drawings made of its design. When the wood finish was removed, each piece was indicated on these drawings and given a number, and the actual piece given the same number, marked either by painting or by a brass number stapled into the material. In the later replacing of this finish, an astonishing lack of the difficulties which might have been expected, was encountered.

Wood panelling and pilasters fitted the spaces neatly. Air-conditioning ducts were so located in advance that their registers came at the centers of panels. Electric outlets, painstakingly placed, appeared through the finished woodwork in the necessary decorative locations.

In viewing this room one should be impressed with this achievement in recording and replacement.

The Green Room and the Red Room originally had ceilings higher than the Blue Room. Confronted with the problems of air-conditioning, the Commission lowered these three ceilings to a common level and in the space thus gained installed air-conditioning ducts. The room cornices, of the original Hoban design; and the rooms, in spite of or perhaps because of the changes, have a stately grace.

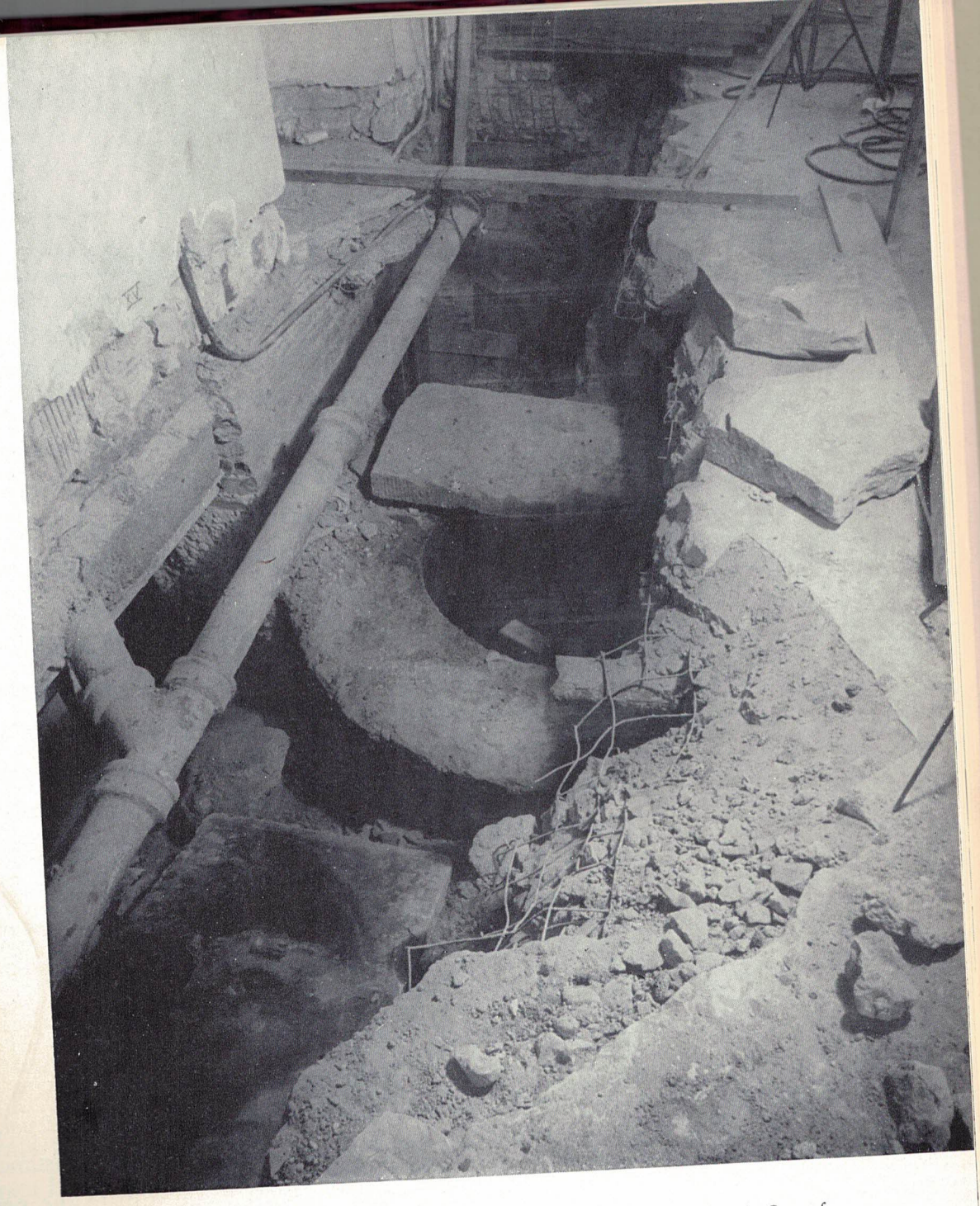
The replacement of the plaster-work represented a difficult problem. To solve this properly a model shop was set up on the grounds of the White House and a competent plaster modelling force recruited, from a profession which, because of the current sparsity of building ornamentation, is dwindling toward eventual non-existence.

In this shop recreating of old cornices and mouldings, or recreating with changes to fit new conditions, took place. In some cases the old plaster, rescued from the building, was so thick as the result of many coats of paint that the character of the mouldings and ornament was completely lost.

An interesting feature was the niches in the Entrance Hall, drawing of one of which appears as a heading to a chapter of this report. As the demolition proceeded it was discovered that the remodelling of 1902 had placed a smaller niche within the original niche without demolishing the former. The Commission felt that the original one was more in keeping and more satisfactory in design than the later one, and careful removal permitted the earlier arrangement to be followed in the completed decorative scheme.

The woodwork as far as possible was preserved. The solid mahogany doors were all removed without mishap, suitably marked and

Hoban's Original 1817 Ornamental Plaster Cornice, High-lighted in Gold, in First Floor Centre Hall. Shown Exposed Behind 1902 Plaster Cornice



Old Well discovered at the East Wall of the White House. This is One of Two Wells Placed at the Direction of President Jefferson, through the Architect Benjamin Latrobe

returned to place as part of the completed work. In the interest of permanence all the outside sash were replaced with new sash of Honduras mahogany.

The relaying of the parquetry floors was a difficult task. Pattern floors of short pieces in full flooring thickness are not usual in present design practice, and specialists in this type of work had to be brought in, many quite advanced in years because of the fact that younger men are not learning this art.

Following the outbreak of the war in Korea extraordinary increases occurred in the costs of construction work generally, and uncertainties, real or apprehended, soon began to affect seriously the willingness of subcontractors to make forward commitments for work to be done at fixed prices. This attitude was reflected in the responses received to invitations for bids, which declined rapidly in number after the war began. In most instances less than half of the bidders who were invited to bid actually submitted bids; in several instances only one bid was received; and in a few, no bids at all were submitted by the time set for the opening of bids. The reluctance of bidders to make firm proposals appeared also to affect the readiness of those who did bid to accept the specifications as written. Exceptions to the specifications, omissions of items of work, and reservations of various kinds, were usual, rather than unusual, in the bids that were received. In these circumstances the Commission found it necessary to resort frequently to the negotiation of subcontracts, either in whole or in part.

Until shortly after the Korean hostilities, the work was well ahead of schedule. By July 1, 1950, the preparatory work, the dismantling, and underpinning the exterior walls were substantially completed. The temporary shoring and the excavation were not complete, and but

75 percent of the footings for the columns of the steel were finished. The erection of the structural steel which was well under way at the beginning of the fiscal year, was completed in December.

The original contract completion date of September 26, 1951, had a 30 day and certain other minor extensions which brought the required completion date to about the middle of November. The national emergency, as noted above in this report, impaired labor conditions and material procurement so that pressing the work forward toward completion was surrounded with difficulties. A plasterers' strike also further complicated the situation, so that it was March 27, four months behind schedule, before the President was able to move into the White House.

Thus after many months of difficult design discussion, the White House was again restored to its former condition and appearance, with the exception that now, within and unseen, there exists a strong and firm structural supporting framework.

Anonymity envelopes the structural engineer, whose work is later concealed by eye-arresting materials. Buried behind aesthetic surfaces is structural framework. The observer will not be made aware of the difficult discussions that went on as to design of its individual members and their interrelation. Structural engineering, like surgery, is best when the completed work is hidden.

Mr. Ernest E. Howard, consulting engineer for the work, observed that the general scheme provided "a reconstructed and modernized White House of sound and enduring character worthy of its importance to the Nation and to its every tradition" and that the "outer walls which have stood for more than a century—will endure for centuries more." Mr. Emil H. Praeger said the structure "will satisfy all conditions and

the building should have as long and satisfactory a life as is possible to obtain by any method known to me."

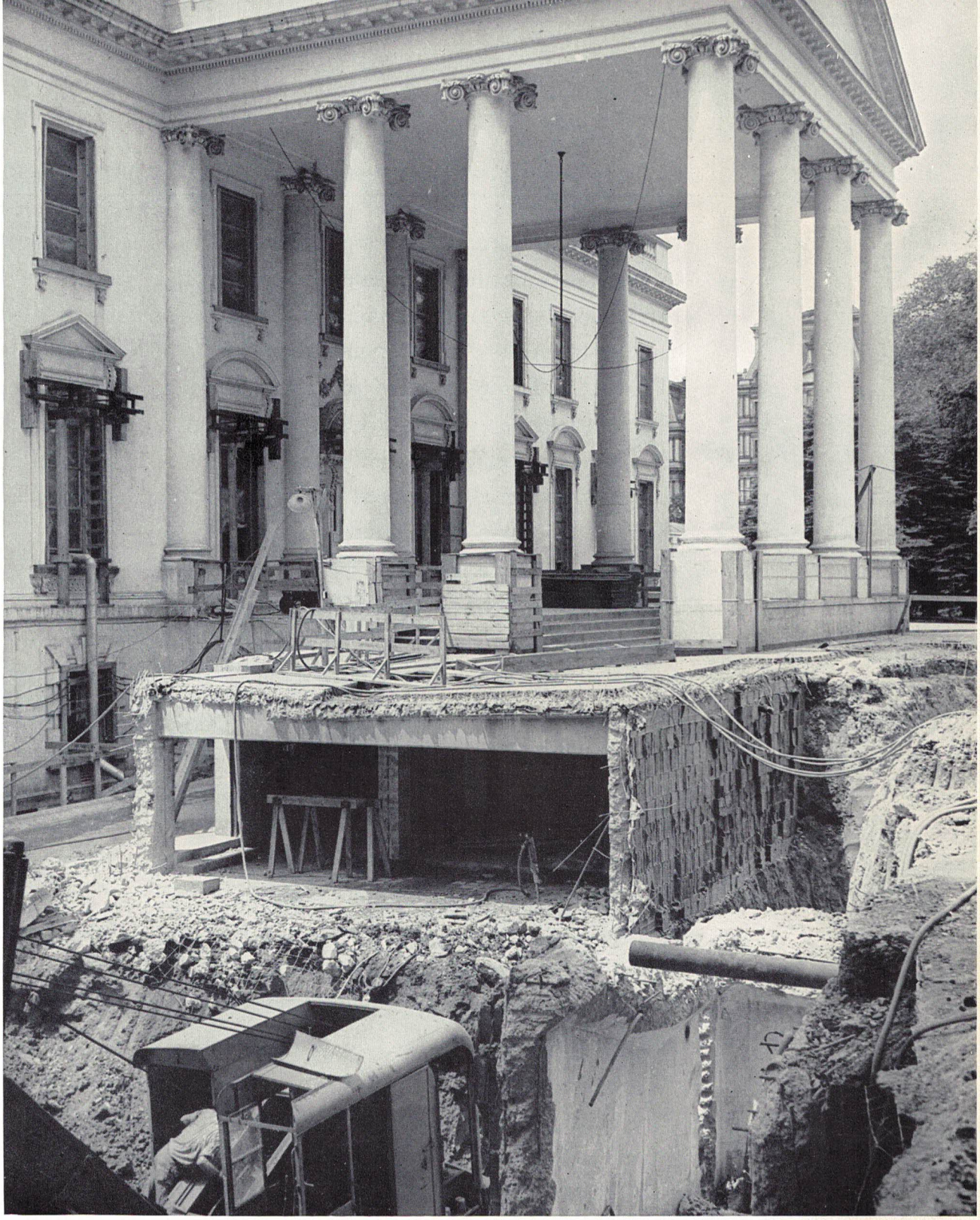
Also of importance is the mechanical and electrical engineering of the White House, which was required to have precision and correctness. P. J. Furlong of the Public Buildings Administration put great effort into the design of this work; and actually there are few buildings, no matter how modern in conception, which can boast mechanical and electrical equipment superior to that now in operation in the White House.

The equipment for heating, ventilating and air-conditioning covers a condition of usage quite different from that for the normal building, where there is no extremely great variance in the number of persons using the space. The variation in the White House, however, is from a small number, consisting of the official family and household personnel, to great throngs during visiting hours or at receptions.

Because of the fact that the variation in occupancy occurs to its greatest extent on the ground and first floors, those two floors have separate air-conditioning systems which also take care of heating and ventilating. The living quarters on the second and third floors are supplied by a separate system. The heating on all floors is supplemented by wall convector units, which permit close regulation by thermostat since it was felt that, when outer wraps were discarded and the occupants were relaxed, very positive heat sources were needed.

Refrigeration compressors for the air-conditioning are located in a vault which has been reconstructed under the north drive. These chill water for the air-conditioning systems. Automatic adjustable control maintains a normal temperature of 78 degrees in summer and 72 degrees in other seasons.

There is a system for reception of radio and wired music, either



Excavation East of North Portico for Installation of Air-Conditioning Equipment

from within or without the house. Each room has a telephone-type dial to dial any station and to regulate volume of sound. There are only two fixed television sets, but wiring and conduits for future installations allow instruments to be set up in almost every room. There are on the roof eight antennae, designed to be inconspicuous, six of which are television antennae, one for each local channel. Actually, two television sets have been installed on the second floor, including co-axial cables thereto. Provision also has been made for television and radio broadcasting from certain of the rooms.

Since all piping above the basement is concealed in places where its renewal would be difficult and expensive, brass pipe was used to reduce to a minimum the necessity for getting at the piping for repairs. To furnish uninterrupted water supply duplicate utility services from different streets were brought in, so that in event of failure of the one the other would continue.

In addition there are also kitchen and laundry equipment, vacuum cleaning, incinerator and fire-alarm systems. It is believed, after completion of all phases of the work at the White House, the scheme decided upon to correct structural difficulties and to install services has been such as to justify the effort and study from which it resulted. The New York Herald Tribune, commenting editorially, said, "The Commission members have done well. Heaven alone could have offered them safe refuge had they done otherwise."

INTERIORS

THE most important and best liked space in the White House, because of its stately spaciousness, is the East Room. Careful concern was exercised in its detailed redesign, the spirit being retained, but a certain gentle simplification of its former bold high-relief ornament having been worked out. The gold-plated chandeliers, resplendent in their expanse of crystal, have been equipped with small candle-like bulbs which, when lighted, give a restful and efficiently diffused light. A dimming device makes it possible to reduce their full brilliancy through a range to a pleasant candlelight glow. These chandeliers, formerly very large, have been reduced to a more graceful and appropriate size.

The scheme of the room is white and gold, the caps and other ornamentation being, in general, carved wood instead of cast plaster. The white panelled walls, with their six Lee Lawrie low-relief panels, the quaint eagle over the entrance, together with the restrained patrician ceiling, give an air of fine stateliness.

The hangings at the windows are of a white and lemon-gold silk damask woven from an old example characteristic of many used in the 18th century. Seven pairs of draperies with festooned valences were made and hung beneath the restored old gilded cornices.

Pleasant and rather exciting notes of blue in the otherwise almost completely white and gold decorative scheme are the two upholstered and delicately carved sofas. These are a donation. They were designed by Robert Adam and made by Chippendale. Their carving is exquisite, with ram's head at the two forward legs and with appealing tracery carving in which a lace-like effect is secured by the carving having voids completely through the wood.

These sofas appear below the stately portraits of George and Martha Washington whose delicately designed gold frames now fit into the panelling arrangement. The George Washington Portrait is the one by Gilbert Stuart which Dolly Madison in 1814 removed from its frame and took with her in her hasty flight to Virginia.

The four brownish-red Rouge Antique marble mantels, a little less veined perhaps than might have been wished, are nevertheless a satisfying warm-color note. The room has a feeling of completeness, after passing through years of pine tables and Sound Steamer decor, and seems now to have fully reached achievement.

There is a gentle hush reminiscent of so many great things. In the room stood Lincoln, receiving a long slow cordon of hand-shakers. Far

down the line an impatient man called out, "Mr. President, in my state they say the welfare of the nation depends on God and Abraham Lincoln." To which Lincoln replied, "My friend, you are half-right."

In the adjoining Green Room is the cornice of original Hoban design, to which has been added a delicate Greek fret against the ceiling. There is an Adam mantel in this room and one in the Red Room, similar in design, which were originally in the State Dining Room, and, as shown by a document in the White House, were part of an order in 1816 by Hoban for 24 mantels. This order was through a Baltimore firm for Italian Carrara marble, the carving done by Italian workmen in Leghorn, Italy. The detail is of appealing fineness and grace, particularly the wonderful caryatids supporting the decorated shelf. The floor covering of the room is a hand-tufted rug, reproduced including the President's seal from the old Aubusson rug originally on the floor.

The Blue Room is distinguished by its satisfying oval shape. The mantel is a striking Louis XV white and gold one, purchased by Stanford White at the time of the 1902 remodelling. The crystal chandelier is a gift and, designed to harmonize with it, are the valuable Waterford glass side-lights, each pleasantly surmounted by a glass star. The walls of the room are a blue silk satin material with a large classic motif in gold.

The Red Room, spectacular in its color, has the Hoban white mantel; and the cornice is the original Hoban design with the added Greek fret. Over the mantel is the gilt bronze clock, intricate in its detail and symbolism, presented to the White House by the French Government. As a part of the gift are two quaint gilt-bronze candlesticks.

A sofa dating back to 1850, upholstered now in red to match the room, flanks the fireplace. In this room also is the portrait of Theodore Roosevelt, by Sargeant.

Carved Wood Ornamentation for White House in Cabinet Shop

At the west end is the State Dining Room, somewhat less formal than the East Room, but full of a warm dignity. The great silver chandelier against the gentle green tones of the decorative walls sparkles with myriad of candle-flame small electric lights. On the west wall is the strong simply-designed verde-antique marble mantel.

An especially pleasant note is the soft light green with which the former dark oak panelling has now been painted, giving the room a sunny brightness and intimacy somewhat lacking before.

In the center, under the chandelier, appears the Hepplewhite table, a beautiful thing set with its service and glass. At the north end of the room on the wall table rest the two gold candlesticks and, above, the quaint mirror with the floral still-life painting as a part of it, which were the gift of King George VI.

Adjoining the State Dining Room is the private dining room, a smaller, pleasantly square room which has been faithfully restored. In this is one of the most striking of all the chandeliers, an actual chandelier in that it is not wired for electricity but furnishes light by means of candles. Against the east wall is a fine mirror of the date of 1810.

The Entrance Hall is plain and impressive with no furnishings except two formal walnut Louis XV benches and at the right of the doorway a beautiful grandfather clock, which was a gift to the White House.

The most distinguished phase of the renovation is the formal marble stair, sweeping upwards from the center bay at the east of the Entrance Hall, a beautiful example of monumental stateliness, a decorative improvement over the old stair, which started from the darkness at the east of the transverse hall. At the start of the new stair are the seals of the thirteen original states.

The President's seal is no longer in the floor as heretofore, but is now more appropriately located over the entrance to the oval Blue Room. It is in strong but pleasant color. On the floor inlaid in brass are the four construction and reconstruction dates: 1792, 1817, 1902 and 1952.

The silk damask draperies, which were new just before the closing of the building, have been rehung; and the red chenille rug in the east-west portion of the hall is again in place extending from State Dining Room to East Room.

In the China Room on the ground floor, there is an English bottle once containing rum, found some years ago in the waters outside of Yorktown and dating back to Revolutionary times, which was presented to President Franklin Roosevelt. Though its colors are now beginning to fade somewhat, it shines with a peculiar rainbow iridescence obtained through its century and a half in the deep water.

In the room are interesting examples of all the presidential china from the Washington set to the present. There are also the John Quincy Adams rum glasses and his large pictorial platters.

Surprisingly included in the display are two ornaments made from Dolly Madison's hair. There are pieces of the Madison blue and gold china and that of Lincoln, with lavender border and eagle; a centerpiece from Millard Filmore, a piece of the Polk china and the beautiful Jefferson blue and white soup tureen.

Adjoining is the Diplomatic Reception Room, an oval room with well-designed walls wainscoted with the old wood and painted, resulting in a charmingly dignified small room. It was from this room that President Roosevelt made his Fireside Chats.

Across the hall is the old kitchen made over into a broadcasting room, vaulted and having a stone fireplace at each end. Two courses in

each fireplace are old stones with original Masonic emblems carved on them by workmen who were engaged in the early construction.

Perhaps the most interesting of the ground floor rooms is the Library, a well-proportioned square room, containing a book collection started in President Hoover's time. President Franklin Roosevelt used frequently to visit the room, often bringing his dog Fala and they would both browse among the books.

It is appropriate therefore that at the fireplace in this room are the Roosevelt tile on which design he spent so much time. He wished to have tiles which would represent in aesthetic form scenes in the life of a President. William Hartgroves, of the Public Buildings Service, made pen-and-ink sketches which were transferred, by a seldom-used process, to tile. Intended for the Hyde Park library they were after President Roosevelt's death placed in this location by President Truman.

The main stair, now opening from the lobby, leads to the second floor, where the hall is divided into thirds, the center third being hallway proper and the two ends sitting rooms.

The Oval Room, immediately above the oval Blue Room of the first story, has green walls and green hangings and a new oval rug. Adjoining it, the Monroe Room is distinguished by 18th-century type of fruit-and-flower print in the draperies and the slip covers. The Lincoln Room has a Victorian carpet of yellow roses with green leaves and the general scheme of the room is yellow and green.

The treatment of the second floor expresses informality. The hangings are reproductions of 18th century fabrics. The old furniture of the house has been done over and used, and where new pieces were necessary 18th century reproductions were obtained.

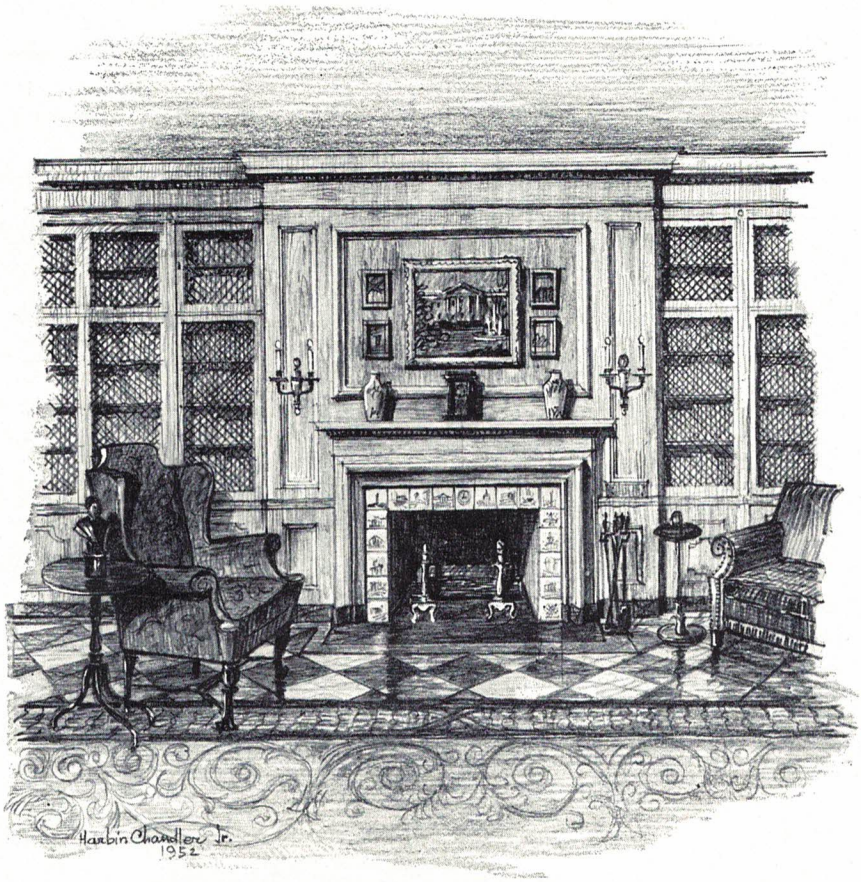
The second floor bathrooms are decorative in color, with struc-

tural glass wainscots and tile floors. The third floor baths are somewhat smaller, strong in color, with tile walls and floor. The third floor bedrooms, smaller than those on the second floor, provide pleasant guest accommodations. They are furnished in a carefully informal manner with 18th century reproductions of furniture and draperies, some of the pieces being reproductions of the Williamsburg Collection.

Renovation of existing furnishings and procurement of additional articles required expert judgment in the examination of existing articles, determination of the nature and cost of repairs and appraisal of the original and the added furnishings. The extraordinary nature of this work was recognized in the law, which authorized exception from the usual requirements of competitive bidding. It was impossible to specify in advance the extent of the work precisely enough to permit competitive bidding. In addition adequate examination by prospective bidders would have been difficult.

Under these circumstances, it was advisable to negotiate a contract for this work to be done by a firm which had previously done work in the White House and during this renovation had stored, cleaned, and cared for, much of the furnishings and hangings. From experience this firm was felt to be well qualified and its completed work in the building supported this premise.

Persons familiar with the White House over a long span of years find the present renovation satisfying. Perhaps one wishes that some of the historic occupants could return to see it: Adams, having lived in it in its most rugged condition; Jefferson, whose hand sought to improve it; Madison, who saw it after burning. Most important of all, one might pause for a moment to wish Abraham Lincoln could see it.



CARE IN DEMOLITION

ONE of the most difficult phases of the work was the careful removal of the materials in the White House. Almost all of these were of irreplaceable value: stone, woodwork, marble mantels, chandeliers, hardware and the many things, hidden and visible, which required preservation for reconstruction and for strong sentimental reasons.

The requirement to remove, mark and store construction and architectural materials does not, when thus simply stated, seem a project of

great difficulties. Yet the average workman, in the matter of demolition of buildings, is trained to use strong tools and muscular power. Breakage in things removed is accepted as axiomatic. If nails, dowels, tenons or cement hold things firmly in place, leverage and muscular persuasion must be brought into play until either the material to be removed or the material which prevents its removal surrenders.

In the usual demolition endeavor, therefore, the result is a very considerable amount of wreckage. A certain percentage of the substances, through intervention of Providence and the inflexible law of averages, emerges from the walls in unbroken condition. A percentage, usually larger, is split, fractured or pulverized by the use of long, heavy-leverage instruments, which, overcoming all adhesion, cohesion, cementation and interlock, result in the material coming free as a unit or as a fragment, either condition being fully satisfactory to the wielder of the instrument.

It became necessary, therefore, for the workmen who attacked White House demolition to gear down power, to install into their strong hands the delicate jeweller's touch. As one of the contractor's foremen remarked, if a workman selected for the demolition procedure proved to be of too heavy gesture and firm intent, resulting in breakage, he was transferred to be pilot of a wheelbarrow, where the tissues of the arms and legs became of greater importance than the tissues of the brain.

By such a process of elimination and replacement, the delicate touch came to the forefront. Percentage of loss dropped. Precious materials came from their firm location in unbroken and reusable form. Fragile finishes, placed by original builders to stay until Gabriel's call, emerged smoothly. Wood panelling, mortised and tenoned with the tight skill of a former age, was persuasively loosened.

Southwest Corner of East Room Showing Careful Removal of Materials

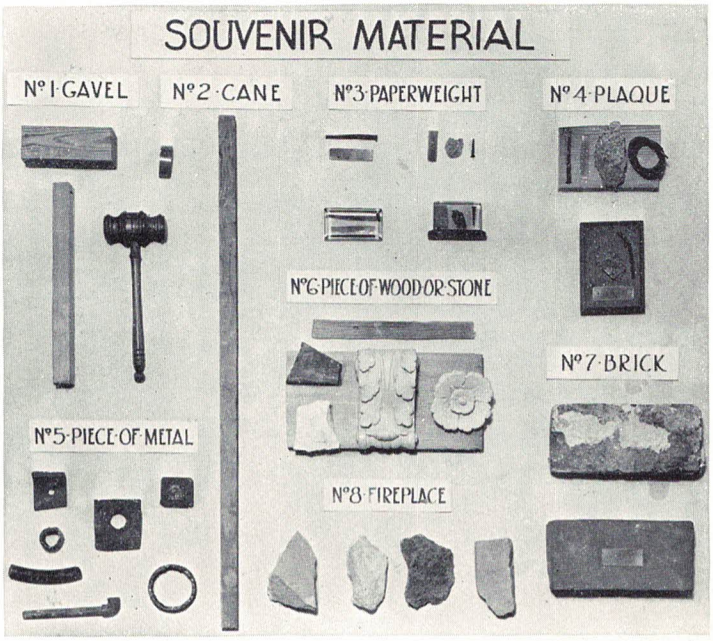
Chandeliers descended without catastrophe. Plaster ornamentation was skillfully removed, or casts were made of it. As skill and training increased, greater feats of legerdemain were performed.

Carrara marble mantels in the Green and Red Rooms, of an almost egg-shell fragility, were persuaded from their supporting walls with a minimum of damage; and, as they now stand replaced in original position, they have the serene air of having never been removed.

Generously ornamented ceilings of the first floor rooms, symbols of a period of more patient craftsmanship, were faithfully diagrammed, and taken down. They were restudied and redesigned to give delicacy; and in new form canopy the rooms beneath.

The crystal chandeliers, also, preserving the stateliness of that other era, were detached with patience, and were, in some instances, remodelled by understanding craftsmen. Restored to position, they hang with sparkle and the difficult phases of removal, burial and resurrection are by no means apparent.

This phase of the work, together with the painstaking librarian's touch which catalogued, filed and stored the things removed, is an unheralded and little praised effort. Yet this rebuilding of sentiment into accurate restoration, by use of the actual materials formerly in place, is the result of the patience and the carefully acquired skill of the battalion of workers, many of them previously just wielders of hammer and chisel, who eased valued shapes from their places and after many months, carefully eased them back into their former locations, so that they gave no indication of the far-reaching structural operations that had gone on during their absence, indeed gave no indication that they had ever been absent.



SOUVENIRS

ONE of the important duties of the Commission has been the disposition of articles and material removed from the White House and not required for re-use in the building. Following the specific provisions of law on this subject a comprehensive plan of operations was developed and approved by the President on February 17, 1950.

Subsequently a supplement to the plan was approved on October 1, 1950. It deals specifically and in detail with the distribution to the public of pieces of wood, stone and metal which had no tangible value but which were desired by many people for preservation as mementos or souvenirs of the historic building.

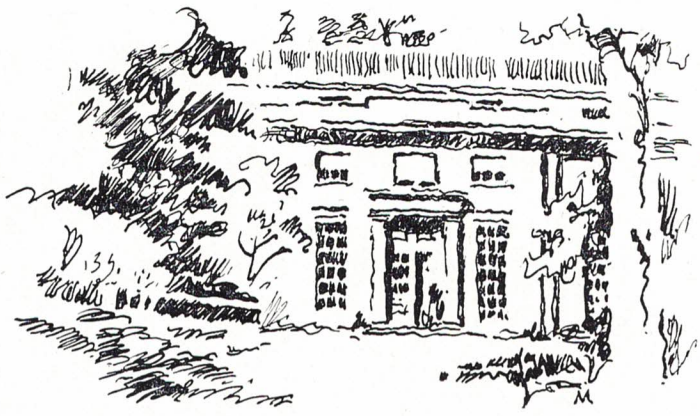
In accordance with the plan and supplement, articles of historic importance and value were allocated to museums and similar institutions for display to the public at large. Articles and materials of value

for practical purposes were transferred to governmental agencies for use in their regular work. The souvenir material was distributed to individual applicants at the estimated cost of distribution. Material of no use or value for any purpose was destroyed or disposed of otherwise in a manner which precluded its exploitation as a relic of the White House.

Movable property, such as furniture and furnishings, which are carried on the regular inventory of White House property, was not disposed of by the Commission. All such property has been left for use or disposition, when it is no longer usable or needed, by its legal custodian in accordance with law and regulations governing such matters.

As contemplated by the plan, the operations thereunder were entirely self supporting. Mainly because the demand for the small souvenirs exceeded the expectations, receipts exceeded the expenses by approximately $10,000. The excess has been deposited in the Treasury.

A detailed report of the operations under the plan is included in the appendix to this report.



NEEDS OF THE PRESIDENT'S OFFICE

THE Commission, under the law, has been concerned primarily with the White House, itself, exclusive of the two wings and the connecting terraces. However, in the three years of its existence, the Commission has observed the functioning and needs of the White House operation, including the Office of the President; and believes that it is appropriate to point out here that the completion of the renovation of the White House leaves other related problems of importance untouched.

Until 1902, the executive offices were maintained on the second floor of the main structure and a half century ago they were removed to the then designated "Temporary" wing at the west side of the building.

In the past 50 years little has been done to provide executive space commensurate with the growth in importance and function of the President's office. The direct office facilities of the Chief Executive are not only insufficient but the whole arrangement of scattered offices and personnel is inconsistent with efficient and well coordinated management of the Executive Branch of the Government.

Space for important uses such as conference rooms, filing of confidential and important letters and documents, Cabinet meetings, Press

Conferences, and the like, is entirely inadequate.

A general estimate of office space required for the Chief Executive and functions directly or very closely related to him, indicates an area of approximately 120,000 sq. ft. to house approximately 350 persons. This does not include the Bureau of the Budget, the Council of Economic Advisors, the National Security Resources Board, the Office of Defense Mobilization, the Central Intelligence Agency, and some other agencies closely associated in their duties with the President's office. If such agencies as these were to be included, 1200 to 1300 people would be involved.

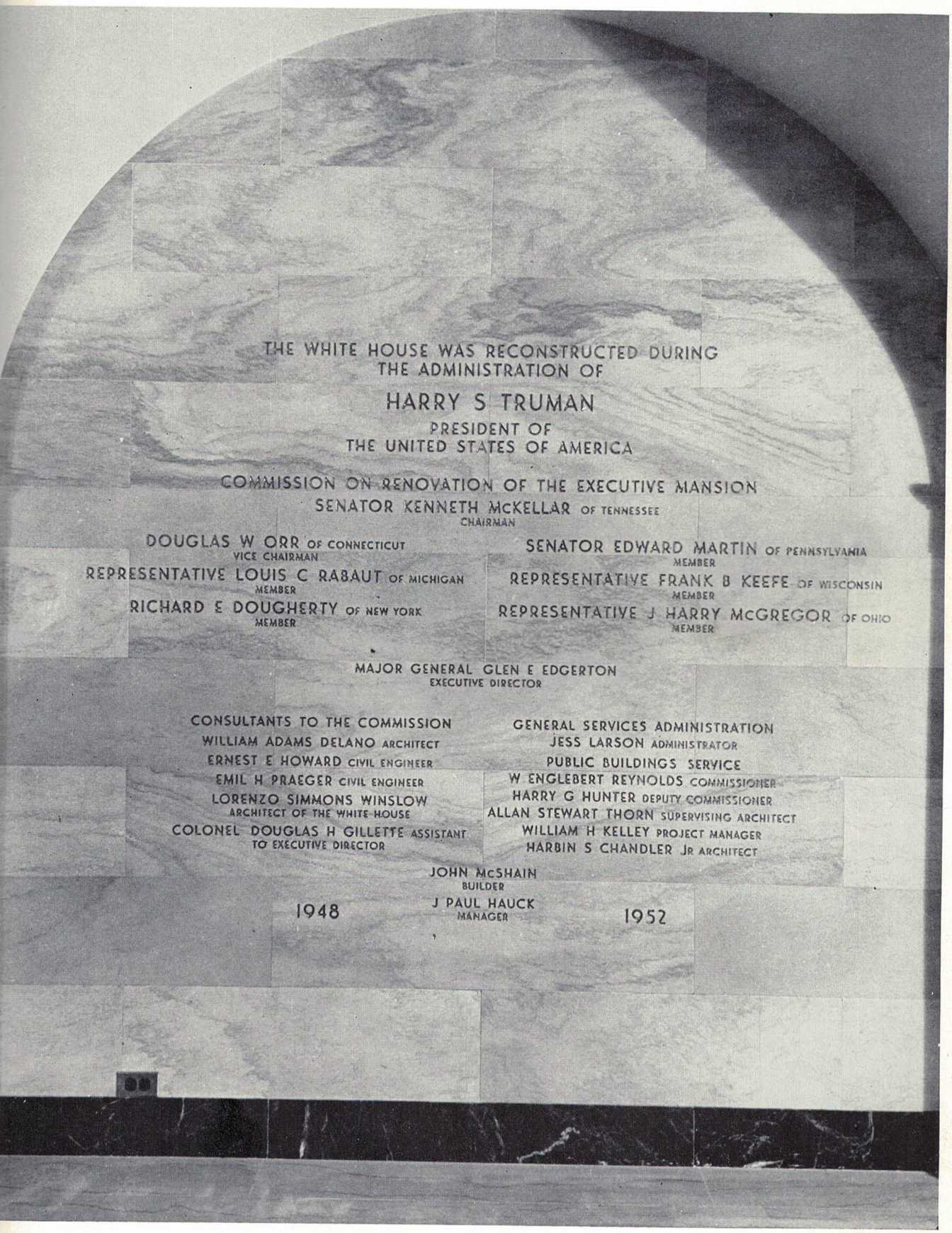
Obviously the problem is one of magnitude and importance. It appears almost equally obvious that a structure adequate to meet the needs could not be provided on the White House grounds without great detriment to the beauty of the building and its surroundings.

Beyond this, the space that might be evacuated if the office functions were removed from the grounds could very properly be integrated into direct use with the White House itself.

There is nothing in this situation that would suggest changes in the work recently completed in the renovation of the White House. This Commission considered carefully the possibilities of other plans, and found that the renovation as undertaken was a necessity without regard to any other requirements of the President's office.

This Commission, therefore, recommends that a comprehensive study of the problem of suitable space and location for the office of the President be made to develop specific detailed recommendations so that the Congress may have precise information of the action that is needed.

It is believed that the study could be made most effectively by a special body, with representation from the Legislative Branch as well as the Executive Branch, created for that particular purpose.



Panel at Ground Floor