UNIVERSITY OF VIRGINIA

# THE ROTUNDA

HISTORIC STRUCTURE REPORT

JOHN G. WAITE ASSOCIATES, ARCHITECTS PLLC

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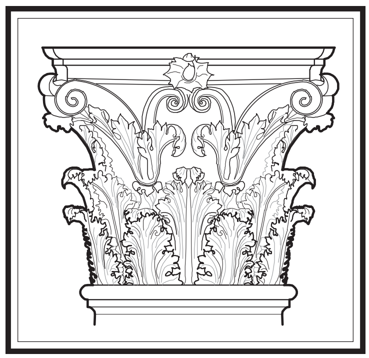

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ARCHITECTS PLLC
2007

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THE ROTUNDA

# INTRODUCTION

When Thomas Jefferson completed his second term as President of the United States, after four decades of public service, he returned to Monticello. There, until his death in 1826, he was occupied with the creation and construction of what became the University of Virginia.

Situated near Charlottesville, Virginia, the new university was designed by Jefferson with the consultation of Benjamin Henry Latrobe, the first professionally trained architect in the United States and Jefferson's Surveyor of Public Buildings (a position that later developed into the Architect of the Capitol). Jefferson also conferred with Dr. William Thornton, an amateur architect who designed the United States Capitol, on the layout of the university. The buildings designed by Jefferson were constructed beginning with Pavilion VII in 1817 and ending with the completion of the Rotunda in 1828.

The Academical Village, designed by Thomas Jefferson for the University of Virginia, occupies a twenty-eight acre site in the rolling hills east of the Blue Ridge Mountains. The original U-shaped complex of buildings is situated on an elevated site with a gentle slope extending down toward the south. At the northern end of the complex, the Rotunda, originally housing classrooms and the library, dominates a greensward, or Lawn. Two rows of buildings with five pavilions each and connecting dormitory rooms fronted by colonnades, form the east and west sides of the Lawn and terminate at the foot of the Rotunda. Beyond the East and West Lawn are parallel lines of buildings, or Ranges, each consisting of three Hotels, or dining rooms, with connecting dormitory rooms fronted by arcades.

The Academical Village has been called the "physical, intellectual and emotional center of the institution" by David J. Neuman, Architect for the University. As the head of the Academical Village, the Rotunda has become the symbol of the University of Virginia and is one of the most recognized architectural icons in the United States. The history of the Rotunda reflects the development of the University as a whole.

The idea for a central Pantheon-like central building for the university was suggested by Benjamin Henry Latrobe who sent Jefferson sketches and drawings not only for the Rotunda, but for the pavilions as well. After Latrobe's untimely death in 1820, Jefferson developed the design for the library and construction began in 1823. It was not completed until 1828, two years after Jefferson's death.

By 1850, it was apparent that the university had outgrown the original buildings, and plans were formulated for the construction of a large classroom annex to the Rotunda. Designed by architect Robert Mills, who had been associated with both Thomas Jefferson and Benjamin Henry Latrobe, the four-story annex extended north from the Rotunda. It was constructed between 1851 and 1854.

One of the most significant events in the history of the university occurred on October 27, 1895, when the Annex, which housed the law school as well as the schools of physics and modern languages, caught fire. The fire extended to the Rotunda, and reduced both buildings to a smoldering ruins with only the brick walls standing. Stanford White, of the New York architectural firm of McKim, Mead & White, was selected to rebuild the Rotunda and to design classroom buildings that terminated the south end of the Lawn. Initially, White intended to rebuild the Rotunda as it was originally designed by Jefferson, but for functional reasons he created an interior consisting of a single, two-story library space. White also designed a monumental portico and staircase on the north elevation, which did not exist in the Jefferson design. The Rotunda, as rebuilt by Stanford White has been the subject of considerable discussion and controversy over the past century.

In 1973, in an attempt to return the building to Jefferson's design, the McKim, Mead & White interior was demolished. The new interior generally followed Jefferson's design; however, twentieth century materials were utilized and modifications were made to address modern functional and building code considerations. Today, much of the work done as part of the 1973-1976 renovation, particularly the installation of mechanical and electrical systems, and the construction of a new sheet metal roof, have reached the end of their serviceable lifespans and need to be replaced before serious damage occurs to the building. Other components of the renovation work have been questioned as to their accuracy and appropriateness.

In 2006, in order to evaluate the Rotunda and present options for its future treatment and use, this historic structure report (HSR) was commissioned by the University. The Rotunda Historic Structure Report is part of the comprehensive evaluation of the original Jefferson buildings, which began with the preparation of a historic structure report for Pavilion I in 1988 and continued with reports for Pavilion IV (1991), Pavilion II (1992), Pavilion V (1994), Pavilion VII (2002), and Pavilion III (2006).

The Rotunda Historic Structure Report is the most comprehensive yet undertaken for a building at the University of Virginia. This is because of the Rotunda's significance as the central building, and focus, of the Academical Village, as well as its complex construction history consisting of the initial building campaign, the addition of a large annex, and two major reconstruction projects. Building on previous studies, the Rotunda

HSR includes a detailed history of the original design and construction, as well as the subsequent modifications and periods of reconstruction. Detailed architectural descriptions of the entire structure, including all exterior features and room-by-room summaries of the existing conditions were prepared. Reference was made to previous periods of construction where relevant, and building evolution studies were developed. All of the elements of the building's fabric were examined to determine what physical problems currently exist and to develop a scope of needed repairs, renovations, or improvements. An evaluation of existing, and historic uses of the building was undertaken. Interviews with university staff members provided a better understanding of the Rotunda's problems, current shortcomings, and possible long-range uses. Measured drawings of existing conditions and sketches of historical conditions have been prepared. Modern photography, as well as historical illustrations, are included in the report as well.

A significant departure from previous university historic structure reports is the inclusion of major sections on the assessment of structural, HVAC, electrical, plumbing, and fire protection systems. An evaluation of the landscape history in the vicinity of the Rotunda has also been incorporated in this report. These sections were prepared not only because of the larger size of the Rotunda compared to the pavilions, but also because of the complicated construction history.

John G. Waite Associates, Architects PLLC was engaged to prepare the Rotunda Historic Structure Report, along with the following consultants:

| | |
|---|---|
| Mount Ida Press | architectural historians |
| Plus Group Consulting Engineering, PLLC | mechanical, electrical, plumbing engineers |
| Robert Silman Associates, PLLC | structural engineers |
| EDAW | landscape architects |

The historic structure reports for Pavilion I, Pavilion IV, Pavilion II, and Pavilion V were prepared by Mesick·Cohen·Waite Architects, the predecessor firm of John G. Waite Associates, Architects. The core team responsible for the preparation of these reports for MCW Architects, dating back to 1988, consisted of Clay S. Palazzo, Douglas G. Bucher, Chelle M. Jenkins, and John G. Waite, who were the principal team for the Rotunda report. This same team also prepared historic structure reports for Rouss Hall and Cocke Hall, two of the three McKim, Mead & White buildings constructed when the Rotunda was rebuilt after the 1895 fire. Members of the team also were responsible for the preparation of historic structure reports, as well as directing the restoration, of the

Baltimore Cathedral and Davidge Hall (University of Maryland), both designed by Benjamin Henry Latrobe; The Octagon, designed by William Thornton; and the Venetian Room, Greenwood Plantation, and Schenectady City Hall, designed by McKim, Mead & White Architects. Diana S. Waite of Mount Ida Press served as architectural historian for all of these reports as well.

This breadth of experience dealing with other Jefferson designed buildings, as well as structures designed by other architects associated with the Rotunda, enabled the architectural team to efficiently deal with the history, building fabric, and problems of repair for the Rotunda. The architectural team, being familiar with the work of the craftsmen who originally built the Rotunda and who had worked on the pavilions, was able to evaluate elements as diverse as molding profiles and roofing details to determine whether they were historically accurate and technologically appropriate. This approach provided the information needed to evaluate in a meaningful way the current state of the Rotunda and make sound recommendations for its future treatment.

THE ROTUNDA

# HISTORY

## THOMAS JEFFERSON AND THE DESIGN OF THE UNIVERSITY AND THE ROTUNDA

Thomas Jefferson's thinking on establishing a public university for Virginia and on its architectural form had taken shape over many years. As early as 1779, while he was governor of Virginia and the colonies were at war with Great Britain, Jefferson had proposed that Virginia create a system of public education beginning at the primary level and capping it with a university. As his thinking developed, so did his intention to create a new architectural form for higher education. The originality and success of his design have been widely recognized for nearly two centuries, from even before the University opened in 1825. Drawing on the expertise of Benjamin Henry Latrobe, Jefferson would make the Rotunda the dominant architectural feature of his design for the University.

As the Virginia General Assembly was debating the possibility of a state-funded university in 1805, Jefferson outlined his ideas not only about its mission, location, professorships, funding, and management but also the "necessary buildings." "The greatest danger," Jefferson wrote, "will be their over-building themselves by attempting a large house in the beginning, sufficient to contain the whole institution." "Large houses are always ugly, inconvenient, exposed to the accident of fire, and bad in cases of infection," he continued. "A plain small house for the school & lodging of each professor is best. These connected by covered ways out of which the rooms of the students should open would be best. These may then be built only as they shall be wanting. In fact an University should not be an house but a village. This will much lessen their first expences."[1]

Five years later, when writing to the trustees responsible for funding the new East Tennessee College, Jefferson further delineated his ideas about the benefits of such an arrangement: professors' quarters, students' rooms, and their connecting covered ways, he felt, would best be arranged around three sides of a lawn, thereby forming "an open square of grass & trees" and making "an academical village, instead of a large & common den of noise, of filth, & of fetid air." Such a plan, he wrote, "would afford the quiet retirement so friendly to study, and lessen the dangers of fire, infection & tumult."[2] In 1814 Jefferson carefully drew a site plan, intended for a proposed Albemarle Academy near Charlottesville, which incorporated these same features—a broad lawn, 257 yards wide, which was bordered on three sides by two-story buildings for the professors and rows of one-story dormitories [*Figure 1*]. When a proposal to establish a college in Albemarle County went before the state legislature and was passed in 1816, the institution was called Central College.

In May 1817 the governing body of the Central College, the Board of Visitors, approved the purchase of the land for the college and adopted the overall layout that Jefferson had prepared three years earlier for the Albemarle Academy. The minutes of that meeting note that the plan called for "erecting a distinct Pavilion or building for each separate professorship and for arranging these around a square each pavilion containing a School room and two apartments for the accommodation of the Professor, with other reasonable conveniencies." The Visitors approved the construction of a single pavilion on either the east or west side of the square and its contiguous dormitories. The minutes did not mention the treatment of the north side of the square.[3]

In these early proposals for the academy and the college, Jefferson did not suggest what form a library building would take or where it would be located within the academical village. Nevertheless, he had long had a library clearly in mind: he had suggested as early as 1805 that if a public university for Virginia were created "on a plan worthy of approbation," then he would convey to it his own personal collection of books.[4] As his architectural plans matured, the library would become the central building of the University.

A few days after the May 1817 meeting of the Board Visitors of Central College, Jefferson wrote to William Thornton, the first architect of the U. S. Capitol, putting forth his overall plan for the college and requesting some help with the design of the pavilions [*Figure 2*]. He asked that Thornton "sketch some designs for us, no matter how loosely with the pen, without the trouble of referring to scale or rule; for we want nothing but the outline of the architecture, as the internal must be arranged according to local convenience." "A few sketches, such as need not take you a moment," Jefferson continued, "will greatly oblige us."[5] Thornton's reply, sent later that month, proposed an important alteration to Jefferson's scheme for the north side of the Lawn, which had three pavilions equally separated by dormitories: instead, Thornton suggested, there should be "a Pavilion for the Centre, with Corinthian Columns, & a Pediment." The other two pavilions on the north side should be pushed aside from that central pavilion and "joined together" at right angles at the corners of the Lawn. Thornton also recommended that there be only "one Pediment, and that in the center." The idea was that a central, pedimented pavilion along the north side would have prominence over the others.[6]

On June 12, 1817, the day after Jefferson received the letter from Thornton, he wrote as a "friendly beggar" to architect Benjamin Henry Latrobe, who had served as the surveyor of public buildings while Jefferson was president; Jefferson included within the text a site plan showing his original scheme, which still indicated three equally spaced pavilions along the north range. He asked Latrobe, much as he had asked Thornton, simply "to take up your pencil, and sketch for us some general outlines of designs no matter how loose, or rough, without the trouble of referring to scale or rule" for "snug and handsome lodges" for the professors. Jefferson asked Latrobe just to think about "the general idea of the external" and hoped he might supply a "few sketches such as shall take you not more than a minute apiece, mere impressions of a first trait of imagination."[7] Latrobe replied at once, commenting on Jefferson's "entirely novel plan of an Academy," agreeing that the plans of other colleges were "radically defective," and promising to transmit to Jefferson soon "all that my professional knowledge enables me to suggest and design towards the execution of Your plan."[8]

As promised, Latrobe replied at the end of June, having "found so much pleasure in studying the plan of your College" that he had spent considerable effort on developing sketches of the scheme and now found "that the drawings have grown into a larger bulk than can be conveniently sent by the Mail." He had "put the whole upon one very large sheet"; he did not want to double up and fold the sheet, and rolling it around a stick would "make it inconvenient for the Mail bag." He hoped to send it along with people traveling to Richmond.[9] Jefferson, who had been at Poplar Forest in Bedford County, did not respond until mid-July. He was very eager to receive Latrobe's drawing and urged him just to double the drawing and put it in the mail, assuring Latrobe that any folds "may easily be obliterated by the screw press which I possess."[10] Construction was scheduled to begin soon on the first pavilion, Jefferson explained. He also mentioned to Latrobe that "leveling the ground into terraces will take time and labor." There was to be "a distinct terras for every 2. pavilions and their adjacent dormitories, that is a pavilion at each end of each terras."[11]

Latrobe sent his reply almost immediately, on July 24, 1817. Since he had not yet dispatched his large drawing, he used it as the basis of a sketch that he now incorporated into the letter. The sketch showed that Latrobe had retained Jefferson's idea of three buildings separated by dormitories along the north side of the lawn, but he transformed Jefferson's middle pavilion into a large, domed structure with a portico facing south and apses to each side [*Figure 3*]. Latrobe referred to this building as the "Center building which ought to exhibit in Mass and details as perfect a specimen of good Architectural taste as can be devised." Inside, it would have a lower level with "a couple or 4 rooms for Janitors or Tutors, above a room for Chemical or other lectures, above a circular lecture room under the dome."[12]

On August 3, 1817, the day after he received Latrobe's letter with the sketch of the Pantheon-like building, Jefferson wrote to Latrobe again. By that time Jefferson knew that the width of the lawn could be only about 200 feet, not the nearly 800 feet that he had originally intended. Thinking ahead, Jefferson wrote Latrobe in early August, incorporating into his letter a sketch of a site plan showing the east and west rows of pavilions and dormitories. This time he left the north end of the lawn open on the drawing, so "that if the state should establish" on the site of Central College "the University they contemplate, they may fill it up with something of the grand kind."[13]

Latrobe and Jefferson corresponded more during August 1817 about the orientation and the elevations of the pavilions but without again referring to the central building.[14] Latrobe delayed writing again until October 6, when he explained that his large drawing of the University, still in his office, had been damaged by storm-driven water during the summer and that he had recently spent time repairing it and redrawing sections. Once again Latrobe did not mention the central building, but he did send "perfectly studied" sketches of the pavilions and offered to make working drawings.[15] Within a week Jefferson had received Latrobe's letter and thanked him for the "beautiful set of drawings accompanying it." He assured Latrobe that he would "select the fronts" for the next two pavilions from Latrobe's drawings, but he did not mention the central building.[16] In a May 1818 letter updating Latrobe, Jefferson noted that the first pavilion (now known as Pavilion VII) would be finished during the summer and explained that the other pavilions and the dormitories would be built next, but another $100,000, still to be appropriated, would be needed to complete them. Although there were no funds for its construction, Jefferson did refer to the domed building, crediting it to Latrobe as "your central one, which would be reserved for the Center of the ground."[17]

## THE ROCKFISH GAP REPORT, 1818

Meanwhile, the bill establishing a state university for Virginia was passed in February 1818. The wording regarding its location stated only that it was to be "convenient and proper." A board of 24 commissioners was assigned the task of determining the site of the university, its construction, and its curriculum. The commissioners met at the tavern at Rockfish Gap early in August 1818, with Jefferson as chairman, and reached a consensus that Central College was "a convenient and proper part of the state" for the new university. They agreed as well to the general arrangement of its facilities, which were described as follows in the report of their proceedings, which had been drafted by Jefferson:

> it should consist of distinct Houses, or Pavilions, arranged at proper distances on each side of a Lawn of a proper breadth, and of indefinite extent, in one direction at least, in each of which, should be a lecturing Room, with, from two to four apartments for the accommodation of a Professor and his family; that

> these pavilions should be united by a range of Dormitories, sufficient each for the accommodation of two students only…and that a passage of some kind under cover from the weather should give a communication along the whole range.[18]

This was, of course, the plan that had already been adopted for Central College, but the Rockfish Gap report also set forth publicly, evidently for the first time, Jefferson's latest thinking about the treatment of the north end of the Lawn. "A building of somewhat more size, in the middle of the grounds," the report stated, "may be called for in time, in which may be rooms for religious worship, under such impartial regulations as the Visitors shall prescribe, for public examinations, for a library, for the schools of music, drawing and other associated purposes."[19]

## THE UNIVERSITY OF VIRGINA IS ESTABLISHED, 1819

The Virginia House of Delegates and then the Senate finally passed legislation stipulating that Central College be the site of the new university in January 1819. Jefferson welcomed this news, but he was disappointed with the financial support that the state had pledged. Only $15,000 a year was allocated, and Jefferson feared that "we shall fall miserably short in the execution of the large plan displayed to the world, with the short funds proposed for it's execution." The pavilions already authorized would accommodate only four professors, and with the proposed level of new state funding, he worried, "we can add but one a year; without any chance of getting a chemical apparatus, an astronomical apparatus with it's observatory, a building for a library with it's library, Etc." "In fact," he wrote, "it is vain to give us the name of an University without the means of making it so."[20]

The University's first Board of Visitors held their first meeting on March 29, 1819. Four of the members had served on the Board of Visitors of Central College—Joseph Carrington Cabell, of Edgewood in Nelson County, a strong supporter of the University in the state senate and Jefferson's collaborator; John Hartwell Cocke, a very close friend of Cabell and owner of Bremo plantation in Fluvanna County; James Madison, the fourth president of the United States, who had retired to Montpelier in 1817; and Jefferson. The other three members were all graduates of the College of William and Mary—James Breckenridge, of Fincastle, an attorney and former congressman; Chapman Johnson, an attorney in Staunton and a state senator; and Robert B. Taylor, of Norfolk, also a lawyer, who had served in the state militia during the War of 1812 as brigadier general. Jefferson was appointed rector, and he and John Cocke became the two members of the committee of superintendence. The Visitors also appointed Alexander Garrett as bursar and Arthur S. Brockenbrough as the proctor of the University. The property belonging to

Central College was inventoried and transferred to the new University. In the annual report for the University that he prepared in October 1820, Jefferson recited the language about the library that had first appeared in the Rockfish Gap report—a "building of somewhat more size, in the middle of the grounds"—and noted that it would cost "about 40,000 dollars, and its want will be felt as soon as the University shall open."[21] Without additional funding, construction of the library would have to wait until the buildings already underway—the pavilions, dormitories, and hotels, where students would dine—were finished. [22]

## JEFFERSON'S DRAWINGS AND SPECIFICATIONS FOR THE ROTUNDA

Latrobe, who had promoted having a more massive building at the center of the north end of the Lawn, had died in 1820, leaving Jefferson to work out the further design of the library on his own. Several of Jefferson's drawings survive. His plan of the first floor [*Figure 6]* shows a large oval room on the east side of the building and another on the west side. To the north was a smaller oval room; in the center of the building was a hallway; and curved stairways were placed in the area to the south. The first-floor plan also shows the portico on the south side of the Rotunda. At the Pantheon in Rome the portico has eight columns across the front and two additional columns and a pilaster on each side; Jefferson designed the portico for the Rotunda with a similar arrangement on the sides but with six columns across the front, perhaps following the hexastyle portico that Latrobe had shown in his July 1817 sketch. The portico is further detailed in Jefferson's south elevation of the Rotunda [*Figure 5*].

Jefferson's drawings include a plan of the second floor [*Figure 8*], another of the proposed roof framing [*Figure 10*], and a building section [*Figure 9*], which shows the arrangement of the inner colonnade and galleries on the top floor. Also among Jefferson's papers is a fragment of a study for the first floor plan [*Figure 7*].[23] The Rotunda would be 77 feet in diameter, half that of the Pantheon. Unlike the Pantheon, where the base of the idealized sphere, based on the diameter of the dome, would be tangent with the ground floor, the base of the idealized sphere of the Rotunda would fall well below ground, in the basement.[24]

On the back of his drawings Jefferson had worked out specifications for the building. Its overall height would be 58 feet 4-1/4 inches, with the basement story 7 feet 6 inches high, the first floor 16 feet high, and the height of the walls of the library 29 feet 6 inches, with the dome rising an additional 19 feet. The shafts of the columns would be 3 feet in diameter and 23 feet 6 inches high. He calculated the number of bricks that would be needed for the exterior wall, as well as for the two "massive chimnies, serving as buttresses," the thick walls at the north and south sides that would also be buttresses, and the columns of the portico, together making a total of 1,112,675 bricks. Adding a half brick to thicken the walls would require another 84,702 bricks, for about 1,200,000 total, which he thought would be "advisable." For the dome room he worked out the placement of the paired columns and the spaces in between. Finally he laid out the measurements for the curved plate of the roof and for its ribs, which were to be made of four thicknesses of 1-inch plank 18 inches wide, cut into pieces 4 feet long and having breaking joints at every foot.[25]

Jefferson's specification book contained notes on sizing the windows for the Rotunda. "The rule for apportioning the area of windows to the volume of the room is to take the cubic contents of the room in feet, and the square root of that for the area of all of it's windows." He calculated that the "large oval room below" had 17,600 cubic feet; since its square root was 132 square feet and there were to be four windows, then each window should measure 33 square feet. From that information he decided that each window for that room should be 4 feet wide by 8 feet high. To confirm that size, he noted that the "body of the house (shaft & entablature)" was 34 feet 1-1/2 inches high and that the "voids of the 2 windows (below & above)" of the two stories measured 16 feet. Since the voids were "nearly one half" of the total height, he determined that the 8-foot-tall windows were "in good proportion."[26]

Jefferson's drawings were sufficiently worked out by March 1821 that Arthur Brockenbrough, the proctor of the University, could make the following calculations:

Estimate of the cost of the Library –

| | |
|---|---|
| 1,050.670 bricks at 11$. p M | 11.567.37 |
| 10 Bases, 8 half do - 24 Window sills - 2 door do - 1,056 feet of steps running Measure - Pedestal Coping & base & flaging for portico | 2.884.30 |
| Covering Dome & Portico with Tin | 1,840.00 |
| Carpenters Work & Materials 20 circular Window frames 2 door - 4 front Window do — 2 floors Joists & the entire external finish of Portico, Entablature, Dome roof, Attic &c &c | 9,031.19 |
| Total for the Walls & external finish | 25,322.86 |
| Carpenters & Joiners work internally 2 Stories do do and materials | 7,176.30 |
| for terras on each side | 2,500.00 |
| Iron railing | 1,500.00 |
| Painting & Glazing | 1,800 -- |
| Plastering | 2,000.00 |
| Iron mongery about | 1,000. |
| | $41,299.16[27] |

Jefferson's drawings for the Rotunda were placed before the Board of Visitors at their April 2, 1821, meeting, and they agreed that "it is expedient to proceed with the building of the Library, on the plan submitted to the board." However, because the state of the University's finances was not at all clear and because some members questioned the accuracy of the construction estimates, the Board made some stipulations: the committee of superintendence was "to ascertain as accurately as may be the state of accounts under the contracts already made, the expences of compleating the buildings begun & contemplated." The committee was directed "not to enter into any contracts for the Library until they are fully satisfied that, without interfering with the finishing of all the pavilions, hotels & dormitories, begun and to be begun" that they had funds "also adequate to the completion of the Library so far as to render the building secure & fit for use."[28] Funds for the library were to be sufficient "to put up the walls cover it in, & render it secure and fit for use—in which security and fitness for use, are contemplated at least doors, windows, floors, and stair cases."[29]

### STRATEGIES FOR BEGINNING CONSTRUCTION OF THE ROTUNDA, 1821-1822

Some of the Visitors feared that starting the library would leave the other buildings unfinished and the contractors unpaid,[30] but Jefferson remained optimistic, writing that the legislature's approval of a $60,000 loan meant that the pavilions, hotels, and dormitories could be finished and the library begun.[31] He explained to John Hartwell Cocke, who had not been able to attend the meeting, that the others "were all anxious to begin it this year, but equally agreed not to begin it until we have so clear a view of our funds as to be sure they will suffice to finish it so as to be in no danger of asking more money for the buildings." Much of the uncertainty lay with the proctor's bookkeeping; he had kept the accounts by individual contractor, rather than by building, making it difficult to project how much it would cost to finish the pavilions and how much would be left for the Rotunda.[32]

Within a week of the Visitors' April 1821 meeting, Jefferson wrote Cocke that he was hoping to move ahead with making the million bricks that would be needed for the walls of the Rotunda.[33] A few days later Jefferson wrote to Thomas Appleton, the U. S. consul based in Leghorn, Italy, about the capitals for the south portico of the Rotunda, believing that they "would cost in marble there not a third of what they would in stone here." He asked Appleton for a price on ten Corinthian capitals for columns having a 32-4/10-inch diminished diameter and eight "half capitals" for the pilasters; they were "to be copied from those of the Rotunda or Pantheon of Rome, as represented in Palladio." Jefferson wanted the capitals to be done within a year, but Appleton, who was surprised at their large size, replied that they would take nine months to carve once the actual order was received. However, five years would pass before the capitals would finally arrive in Charlottesville.[34]

Meanwhile, Brockenbrough had been busy with his account books, and in September 1821 Jefferson wrote his fellow Visitors that actual costs plus the estimated amounts to complete the pavilions, hotels, and dormitories would total $195,000 and that it would be necessary to use the promised private contributions toward that work. He estimated the cost of the Rotunda to be $43,675, with the "hull" costing $30,200 and the balance needed for the interior. By the time Brockenbrough had compiled the financial information, it was too late in the building season to begin construction of the library. It was also clear that the funds for the library would have to come from the state monies promised for the upcoming three years, not from current funds.[35]

Jefferson wrote James Madison, another of the Visitors, that he was "decidedly of opinion" that they should nevertheless push ahead with the library. "If we stop short of the compleat establishment, it will never be completed." he argued. "On the other hand," he continued, "the stronger we make the mass, the more certainly will it force itself into action. The world will never bear to see the doors of such an establishment locked up."[36] Joseph Cabell, whose support as a member of the state Senate had been critical to the progress of the University, agreed that it was politically important to complete the construction work, writing that "the nearer you now get to the end the better." If the Visitors decided instead to keep the small remaining funds in hand, he thought, that sum "would strike the eye by its insignificance." If construction were completed or nearly so, however, "the great establishment will stand forth a monument to gratify the pride of its friends, & deter the further opposition of its enemies." Rather than going back to the General Assembly for more money, Cabell advised, "a quick, silent march seems to be the most proper, at this time. Presently we shall be done with the buildings, and all complaints on that hand will vanish."[37]

Jefferson's pride in the overall progress so far was apparent in a report that he sent in November 1821 to his former secretary, William Short, telling him that "All its buildings except the Library will be finished by the ensuing spring. It will be a splendid establishment, would be thought so in Europe, and for the chastity of its architecture and classical taste leaves everything in America far behind it." The library, though, was "essentially wanting to give it unity and consolidation as a single object." It was, he continued, "to be on the principle of the Pantheon, a sphere within a cylinder of 70 feet diameter, — to wit, one-half only of the dimensions of the Pantheon, and of a single order only."[38]

Meanwhile, Brockenbrough was preparing a detailed report for the Board of Visitors to review at their upcoming meeting. He explained that "the balance required to complete the present building, exceeds the former estimates." "If this was a novel case in building, I should feel much chagrined at it," he continued, "but as we have numerous precedents before us in all great public works, and indeed in all large private buildings, (occasioned by innumerable contingent and other expenses that man cannot foresee, and which is known to all that are any way conversant in building.) I am the better satisfied.[39]

At their special meeting, held at the end of November 1821, the Board of Visitors agreed to commission an engraving made of the "ground plat of the University including the library," even though work on the library had not begun.[40] The Visitors' annual report for 1821 stated that the "buildings of accommodation" were well along: six of the pavilions were complete and four more "nearly finished"; two hotels were done and four more almost completed; and 82 dormitories finished and 27 nearly so. The total cost to date of the buildings and the land stood at $201,550.70, with another $53,494.79 needed to finish those structures. The library was now estimated at $46,847.[41]

John Cocke reported to Joseph Cabell that before the meeting Jefferson had been convinced that the library should not be begun because of the financial situation,[42] but in a letter early in 1822 Jefferson restated the strategy—to complete all buildings, including the library, before opening the institution, "because, once opened the funds will all be absorbed by salaries Etc. and nothing left to compleat the buildings." "The moment therefore of going into operation," he wrote, "is as uncertain now as it ever was."[43] Later that spring he told Madison that the Rotunda funding had become entangled in the dispute over moving the capital from Richmond to Staunton.[44] The results of the elections held later in 1822, however, promised that new legislators who were more favorably disposed toward the University and the Rotunda would be in Richmond for the next session and enhanced the possibility of funding for the Rotunda. Jefferson saw the Rotunda as "the key stone of the arch."[45]

By the fall of 1822 the Board of Visitors could report proudly that ten pavilions facing the Lawn, six hotels, and 109 dormitory rooms had been completed except for a few details. The bills for this work would have been fully paid except that some private subscriptions were still outstanding. These buildings represented all the construction that had been proposed in the Rockfish Gap report of 1818, with the exception of the library. To move ahead on that front, the Board of Visitors agreed at their October 7, 1822, meeting to direct the proctor to "enter into conferences with such skilful and responsible undertakers as he would approve, for the building of the Library, on the plan heretofore proposed, and now in his possession." He was "to procure from them declarations of the smallest sums for which they will undertake the different portions of the work of the said building, each portion to be done as well, in materials, manner and sufficiency, as the best of the same kind of work already done in the preceding buildings, or as well and sufficiently as shall now be agreed on." The proposals were also to include prices by line item and a phased schedule.[46]

At the same meeting the Visitors approved the draft of their annual report, including in it an appeal for the means to complete the Rotunda, which was "to contain rooms for religious worship, for public examinations, for a library, and for other associated purposes." Still fearing that opening the University would mean that the "whole income of the University will be absorbed by the salaries of the professors, and other incidental and current expenses" and would preclude further construction, the Visitors felt that "it is still better to postpone, for a while, the commencement of the institution, and then to open it in full and complete system, than to begin prematurely, in an unfinished state, and go on, perhaps for ever, on the contracted scale of local academies, utterly inadequate to the great purposes" that had been put forth in the Rockfish Gap report and intended by the state legislature. "In its imperfect state," the annual report continued, the University would "offer little allurement to other than neighbouring students, and that professors of the first eminence in their respective lines of science, will not be induced to attach their reputations to an institution, defective in its outset, and offering no pledge of rising to future distinction." The "present state of the funds," the report continued, rendered the "prospect of finishing this last building indefinitely distant." Half of the University's income was already devoted to interest on funds that had been borrowed. If the state would forgive the loans and if the customary annual funding could be applied to the construction of the library, it could be completed in three to four years and the school then opened. Better yet, more funding would make it possible to push the library construction more quickly and open the school even sooner.[47]

Jefferson sent Brockenbrough a copy of the Visitors' resolutions of October 1822, directing him to solicit bids for constructing the Rotunda and to place a newspaper advertisement appealing to subscribers to fulfill their commitments to the school.[48] By December the proctor had secured prices from the contractors, but the news must have been somewhat discouraging: the earlier estimate of $46,847 had not included the "two considerable appendages necessary to connect it with the other buildings," and these terrace wings could push the estimate up by a third.[49] Some of the news was even worse. Joseph Cabell had seen a letter from contractor James Dinsmore stating that the Rotunda would cost at least $70,000; Cabell had insisted that the letter be burned so it would not to fall into the hands of the University's enemies. While Jefferson hoped that the new legislature would be more liberal with the University than the previous one, Cabell still thought it prudent not to ask the legislature for more than $50,000. A proposal for $70,000, he warned Jefferson, "would probably blow up all our plans," although a "conditional contract for $60,000, might not do harm." Cabell wanted to "ask boldly to be exonerated from our debts by the powerful sinking fund of the state."[50] William Cabell Rives suggested another approach, that unappropriated funds ($66,663.79) then held by the state Literary Fund be sought to build the Rotunda, either as a loan or a grant; once the Rotunda was done and the University opened, he argued, the legislature could not refuse to forgive the loans. Rives urged Jefferson to send the annual report of the Board of Visitors to Richmond immediately: the "sooner we can bring the subject to the view of the Legislature, the better will be our chance of success." [51]

Jefferson dispatched the report to Richmond on December 23, 1822, just four days after Rives had written, and it noted that the earlier estimate for the Rotunda had not included the cost of the terrace wings.[52] Rives had also asked whether it would be a better strategy to push for the remission of the debt or for funds for building the library; Jefferson replied that "of all things the most important is the completion of the buildings. The remission of the debt will come of itself." "To stop where we are is to abandon our high hopes, and become suitors to Yale and Harvard for their secondary characters, to become our first," he wrote. The Rockfish Gap report, he reminded Cabell, "authorised us to aim at much higher things; and the abandonment of the enterprise where we are would be a relinquishment of the great idea of the legislature of 1818, and shrinking it into a country academy." Opening the University "in a half-state of readiness," he continued, would put it "on a subordinate character in the outset, which never would be shaken off." Instead, "taking our stand on commanding ground at once will beckon every thing to it, and reputation once established will maintain itself for ages."[53]

Jefferson thought that Cabell's "idea of a loan and placing it on the sinking fund an excellent one," and he challenged Dinsmore's $70,000 estimate, saying that it was evidence of Dinsmore's "greediness." Jefferson stood by Brockenbrough's carefully calculated estimate, and even with the added cost of the terrace wings Jefferson believed that "we are safe in saying that another loan of 60,000. D. will place us beyond the risk of ever needing to ask another Dollar on that account."[54] By December 30 Cabell had drafted a bill for the loan to build the Rotunda, but he wondered about what dollar amount to propose, worrying that other members of the legislature might question the differences among the various estimates.[55] By February 5, 1823, the loan, for $60,000, had been approved by both houses of the General Assembly.[56]

A few months earlier Jefferson had written his friend Maria Hadfield Cosway that he had been spending his time "laying the foundation of an University in my native state." "I have been myself the Architect of the plan of it's buildings, and of it's system of instruction," he told her. "Four years have been employed in the former, and I assure you it would be thought a handsome & Classical thing in Italy. I have preferred the plan of an Academical village rather than that of a single, massive structure. The diversified form which this admitted in the different Pavilions, and varieties of the finest samples of architecture, has made of it a model of beauty original and unique." There was "still one building to erect, which will be on the principle of your Pantheon a Rotunda like that, but of half it's diameter and height only."[57] With the loan now approved, Jefferson could move ahead with that final structure.

## SIGNING THE CONSTRUCTION CONTRACTS AND BEGINNING WORK, 1823

On February 18, 1823, Alexander Garrett, the University's bursar, wrote to John Hartwell Cocke about how Thomas Jefferson had received the good news that the General Assembly had authorized a loan of $60,000 to the University for the construction of the Rotunda: it had given Jefferson "heart felt pleasure," Garrett explained, with "his manner, conversation, and countenance" all depicting "the joy of a father on the birth of a first and long-wished for son; the day after receiving the news he rode to the University (for the first time he had been on horse back since breaking his wrist)." Jefferson was hoping that the workmen would be able to begin preparations for construction at the University immediately, because otherwise they would be "obliged to be looking out for other work for the season, if their employment here is not soon decided on."[58] "The big house is still his first object," Garrett reported.[59] John Neilson, one of the contractors at work elsewhere at the University, wrote to Cocke a few days later, confirming that he, too, had found Jefferson "in high spirits in consequence of the mony granted by the Asembly."[60]

Neilson also told Cocke that Jefferson was already busily moving ahead, "full of brickmaking ideas at present" and having already engaged, or about to engage, a superintendent for the brickyard, a "Mr. Thorn (a brick-layer who came here in partnership with Mr Ware)." Jefferson, Neilson told Cocke, had been "better pleased" with the color of the brick that were used in Pavilions II and IV." Neilson, already worried that the construction of the Rotunda would be "an unprofitable job," advised Cocke that all the contractors for the Rotunda should be required "to give security for the faithfull performance" of their work "to the full amount of the mony they are to receive"; when work was done imperfectly, a reduction in the price would be "but a small consolation" to the owner. A responsible guide for estimating the brickwork, Neilson stated, would be $9 per 1,000 bricks. Perhaps somewhat obsequiously, he added that he sincerely wanted to see the work "executed in a manner that will reflect credit on all who are concerned with it"; "in short," he wished that the construction work be "equal to the grandeur of the design, which I have never seen equaled."[61]

Jefferson, according to Neilson, was well aware that the $60,000 loan would "barely enable" workers "to close in the building and complete the exterior part of it." Neilson consequently suggested to Cocke some cost-cutting strategies. The steps, for instance, could be built temporarily of brick, and the stonework put off "until a future day." The basement story could be finished "in a very plain manner, that would afford ample convenience for lecture rooms" and could be used while waiting for funds to complete the upper stories.[62]

Jefferson was indeed ready to move ahead. Early in January 1823 he had told his fellow Visitor James Madison that if the loan bill passed, then a special meeting would be necessary, especially in order "to engage our workmen before they undertake other work for the ensuing season."[63] Jefferson wrote to Madison again in late February, stating that the "acceptance of the loan" was "now approved by five of us." He told Madison that he planned to "proceed immediately to have the workmen engaged." Since "there are some very important points to be decided on previously to embarking in such a building," Jefferson had tried to get Cocke "to join me in setting the thing agoing," but Cocke could not help because he could not leave home. Since "the case admits no delay," Jefferson wrote, he would therefore "proceed according to the best of my judgment, and with the aid of mr Brokenbrough, and with all the caution the case admits."[64]

In less than two weeks Arthur Spicer Brockenbrough, the proctor of the University, had entered into the two key contracts for the Rotunda: one with Abiah B. Thorn and Nathaniel Chamberlain, dated March 8, 1823, for the masonry work and the second with Dinsmore and Neilson, executed on March 11, 1823, for the carpentry work, including the domed roof.

The agreement with the masons stated that the University was to supply the bricks, the lime and sand for the mortar, and the scaffolding. Thorn and Chamberlain agreed "to have the work done on the following manner, viz they are not to put in the wall any samel bricks, nor to use more than one bat to five whole bricks, the bricks to be layed in what is called flemish bond that is header & Strecher alternately." The walls were "to be solidly grouted from bottom to Top and in every course if deemed necessary by the Proctor with cement of a fourth lime and three fourth good pure sand." The mortar for the exterior work was "to be made of a third lime and two thirds good sharp sand." The bricks used on the exterior walls were "to be of the best rubed stretchers and equal in quality and regular colour to the fronts of the Pavilions No 2 and 4." All walls were "to be run perfectly plum and true, under the penalty of being taken down and put up correctly by other persons" if the contractors refused to redo the work. Thorn and Chamberlain were to put up the scaffolding "in a good & substancial manner" and to leave it in place for the carpenters to use. The masons were responsible for finding the "labourers to make up the mortar and attend the brick layers." Only "experienced and compitent workmen" were to be engaged in the laying the brick. The masons were to be paid $2.75 for every thousand bricks laid. The measuring system used to determine payments was to follow the standard procedure at the University, "with one half of the openings deducted from the solid contents." In a postscript to the contract, Thorn agreed to provide the "necessary instructions" for setting up the brickyard and then to supervise the making of all the bricks for the Rotunda.[65]

The contract with Dinsmore and Neilson provided similar stipulations about the carpentry and joinery. They were to provide the centering for the brick work, the framing and sheathing of the portico and the roof, the "Corinthian entablature all round complete," the cornice, and the "steping on the roof" at the base of the dome. They were also responsible for "All the Window frames & sashes, the two principal floors, the out side doors including the outside finishing," the staircases, and "the wood bricks and bond timbers &c that may be required hereafter for the finishing of the inside work." All of their work was "to be executed in the best and most substantial manner." As in the masonry contract, the University was to provide the construction materials, but Dinsmore and Neilson were to handle the contracts for the lumber, which were to be negotiated "on the best possible terms"; they were to have the lumber "well seasoned before it's used, to take care of the same and see that there is no unnecessary waste."[66]

Brockenbrough planned to rely upon the carpenters as inspectors of the masonry work, giving them the "right to examine into the correctness of the work as it goes on and to notify the Proctor if any thing be going on wrong in time for correction." In addition, the brick work was "to be layed off at the commencement" by Dinsmore and Neilson, and they were "to examine the correctness of it as it progresses, and if not done agreeable to their directions to notify the Proctor in time for correction, but if any part of the brick work done agreeable to the directions of the said Dinsmore & Neilson or either of them, should be found wrong," then they had to "pay for the necessary alteration of the brick work, including the loss of materials & labour."[67]

The pricing for the carpentry contract had taken some thought on Brockenbrough's part and presumably some negotiation. The prices were "to be governed by the average prices of work in Philadelphia undertaken between the time of signing this contract and the completion of the work." Two mutually-agreed-upon measurers from Philadelphia were to travel to Charlottesville to calculate the completed work; the prices were to "be fixed agreeable to the present prices of work in Philadelphia that is at the percentages above or below their price Books." For work not covered in the price books, the measurers were to "be guided by what they shall deem justice to both parties." In the meantime the carpenters were to receive payments periodically for their workers and themselves.[68]

Brockenbrough sent the contracts off to Jefferson immediately, with a special explanation about the Dinsmore and Neilson agreement. The plan for measuring the work, Brockenbrough explained, offered advantages over other methods: it would ensure the "faithful performances of the work, by Men competent to the task"; otherwise, even reliable contractors like Dinsmore and Neilson would have had to bid high to protect themselves, and any alterations would have proved very costly to the University.[69] Brockenbrough was betting that the current pricing in Philadelphia was then 10 to 25 percent below the price books and that there would not be much change before the Rotunda was completed. It must have been a relief to Brockenbrough when Jefferson returned the carpentry contract, agreeing with Brockenbrough's reasoning and adding that it was important to have benchmarks "at certain stages of the work to ascertain the exact state of our funds, that we may stop where they fail." Jefferson thought that bringing in measurers from Philadelphia might present "some obstruction" but expected that it could be worked out.[70]

Jefferson followed up on March 12, 1823, with a letter to his fellow Visitors, telling them that he had "authorized Mr. Brockenbrough to engage the work of the Rotunda and have it commenced immediately." There were "only two bricklayers and two carpenters capable of executing it with solidity and correctness," he explained. All had limited financial resources, so instead of asking them to put up the capital for "so great an undertaking" or having the University risk giving them a 50 percent advance with little security, Brockenbrough had settled on terms that would, Jefferson thought, "make our money go the farthest possible, for good work." The contracts were "only for the hull compleat," in other words for the foundations, walls, floors, and roof.[71]

The construction was expected to take three years, Jefferson explained: "we can pay for it, see the state of our funds and engage a portion of the inside work so as to stop where our funds may fail, should they fail before it's entire completion." Jefferson's strategy was that once the envelope of the building was complete, then it could "rest ever so long, be used, and not delay the opening of the institution."[72]

Madison told Jefferson that he approved Jefferson's plan, "in order to avoid a loss of time in executing the Rotunda,"[73] and Joseph C. Cabell, too, agreed, writing that "I am at all times disposed favorably to every thing which you think best for the University." Cabell warned Jefferson, though, that at the upcoming meeting of the Visitors Cocke might propose adopting "a course of proceeding somewhat different from the one you seem to have adopted": to pay off existing debts and then "adapt the plan of the Library to the residue of the funds." Cabell also warned Jefferson to avoid another appeal for funds to the Legislature, where, he had heard, patience with the University's building plans was wearing thin.[74]

When the Visitors met on April 7, 1823, Cocke was not in attendance to present any objections, and Jefferson's plan prevailed: the Visitors agreed to accept the loan of \$60,000 from the General Assembly and to request \$30,000 of that amount immediately.[75] Jefferson had calculated that \$14,000 of that sum was needed to pay off debts and that the balance of \$16,000 was needed "for lumber & other advances for the Rotunda." Further requests would be made in January 1824 and January 1825.[76] The day after the meeting Cabell wrote that “we had a pleasant meeting, and the Rotunda goes on, and Mr. Jefferson is delighted.”[77] At the same time Jefferson recognized that the $60,000 loan was not enough to complete the Rotunda, and he believed that it would be “prudent to contract only for a part at a time, so as never to go beyond our funds.” [78]

Meanwhile, Brockenbrough was busy lining up additional workers for the job, including slaves owned by others. Writing John Cocke on March 13, 1823, that he would like to hire from him the “one or two brick moulders and a few boys that would answer as bearers off.” Brockenbrough had estimated that, not including the terrace wings, a million bricks would be “amply Sufficient for the building.” He had already contracted for 400,000 hard bricks, with 120,000 scheduled to be ready soon, “by the time the weather will permit their being laid.”[79]

By the end of the first week in April 1823 Brockenbrough was able to report to Cocke that “we have commenced making bricks and hope in one week more to get well underway.” He wrote Cocke twice again, asking him to “send up your Moulder and Six boys as soon as possible.” He had tried to get a “first rate moulder” from the North but so far without success.[80] Cocke replied that he was sending along Charles, who apparently was a brick moulder, and six “boys,” probably slaves—”Anthony, Giles, Mike, Frank, Mat, & Ben.” All except Ben had had “more or less experience in bearing off bricks.” Cocke intended that another “boy,” Gilbert, would help carpenter John Neilson; if, however, there would be an opportunity for the helper to have “occasional employment with tools,” then Cocke requested that Anthony work with Neilson, because “he is an industrious & Steady boy.” Cocke agreed to part with another moulder in about two or three months, particularly if he would gain experience laying bricks at the University.[81] By the end of November 1823 Brockenbrough was able to report that so far the University had produced between 800,000 and 900,000 bricks for the Rotunda.[82]

Brockenbrough also told Cocke that “Mr Gorman wants one or two of your stone cutters, and wishes to know on what terms you will let him have them.”[83] Cocke replied that his stone cutters were then busy doing work at his own properties but that they could be available after a couple of months. One, he wrote, was “adequate to cutting any plain moulding,” but the other two were only “rough hands.”[84]

## REFINING THE DESIGN OF THE ROTUNDA

Jefferson’s plan for the Rotunda provided that both the ground and first floors would have two large oval classrooms, one on the east side and another on the west side, with a smaller oval classroom filling in the north portions. The top floor would be a domed space, intended for the library. While traveling together after the April 7 meeting at the University, Joseph Cabell and George Loyal, a fellow Visitor, had spoken about the planned arrangement of the classrooms. Cabell, writing later to Madison about the discussion, suggested—provided it "not interfere too much with Mr. Jefferson's views"—that one or two of the classrooms be "fitted up with seats running around the rooms parallel to the walls & rising one above another, so that the Lecturer's eye & voice would distinctly reach the eye & ear of every student present." Cabell proposed that more "convenient accommodation for the greater classes of Chemistry, Natural Philosophy &c. which from their numbers require space, & from the necessity of witnessing experiments demand seats rising one above another." This configuration was, he explained, "the approved modern construction of large lecturing rooms at the principal Universities in Europe & in this country." The only disadvantage of such an arrangement, according to Cabell, was that the classrooms would not be appropriate for dancing, which, he thought, "should be taught rather more in the background of the scene." Based on his observations during travel in Bologna and elsewhere in Europe, Cabell believed that the scientific apparatus itself would probably also require more space than Jefferson had allotted.[85]

Jefferson responded in some detail to these suggestions. If University officials had known how many students would attend the University and what classes they would take, then the classrooms could have been designed quite precisely. However, these numbers were not known, so the lecture room in each of the professors' pavilions had been designed, Jefferson stated, for approximately 150 students. The oval rooms in the Rotunda, on the other hand, were large enough to hold 300 students, Jefferson stated, making them "too large for the Lecturing voice." "No human voice can be habitually exerted to the extent of such an audience," he wrote: professors cannot be expected "to bawl daily to multitudes as our strong orators do once a year." Instead, he thought, a large class should be divided, and the lecture repeated.[86] It is difficult to understand Jefferson's high estimates of the capacity of these spaces.

Jefferson acknowleged that while lecture rooms for some disciplines, such as natural philosophy, chemistry, and anatomy, would "be better with rising seats," that arrangement would be "not at all necessary for lectures in languages, history, ethics, metaphysics, belles Lettres, Law, Politics Etc." Once it was known which classes would be held in the pavilions and which would meet in the Rotunda, then "the rising benches can be readily set up" for classrooms where the "*eyes* as well as the ears are to be employed."[87] With the numbers of students uncertain, their "conjectured accommodations" would undoubtedly be found to have been "miscalculated" and "require modifications"; meanwhile, Jefferson wanted to have a plan that would "admit much facility of adaptation to varying circumstances."[88]

With regard to the space for the scientific equipment, Jefferson suggested that that the professors who offered lectures in their pavilions and needed more space should take over an adjacent dormitory room. Of the apparatus needed to teach natural philosophy, he wrote, “even the fullest does not occupy much space, not more than may be arranged on shelves along the walls of the lecturing rooms.” The furnaces and stoves needed for experiments by the professor of chemistry could be placed “under the Oval rooms of the ground floor of the Rotunda where there will be abundant space.”[89]

Meanwhile, James Dinsmore had been consulting with Jefferson about the exterior entablature of the Rotunda and the windows. Jefferson had found “no reason to substitute any other than that of my original drawing for the main entablature,” which he had based on plate 26 in the first book of Palladio [*Figure 15*]. The base was to come from plate 23 [*Figure 14*]. Jefferson noted that he had “examined carefully all the antient Corinthian in my possession, and observe that Palladio, as usual, has given the finest members of them all in the happiest combination.” Palladio’s “plates 35. [and] 36. give the handsomest entablatures for windows that I can find any where,” Jefferson continued, “but I would adopt the architrave at the left hand bottom corner of pl. 35, give it a plain frize instead of his swelled one, and the dentil cornice at the bottom of pl. 36 [*Figures 16, 17*].” Assuming there would be no disagreement from Brockenbrough, Jefferson asked that he send word of these decisions along to Dinsmore and Neilson, who were waiting for the instructions to go ahead.[90]

Over the next two weeks John Neilson was working out more specifics related to construction and studying drawings of the north façade and the “flank view.” He wrote to Jefferson in early May about exactly how high the base of the idealized sphere shown on Jefferson’s drawings should be from the actual ground level of the building. In the drawing of the north façade the “lower edge of the Architrave” was aligned with the center of the idealized sphere, making the base 10 feet high. If this height were too great, then Neilson proposed to Jefferson either elevating the idealized sphere, thereby showing a “greater portion of the roof above the Steps” of the dome, or making the portico columns taller.[91] Neilson did not suggest “depressing the Sphere in the earth,” for he understood that Jefferson would not approve of that alternative. A month later Jefferson initiated a change in the hallways to eliminate the acute angles formed by the intersections of the elliptical walls of the large classrooms with the those of the small north rooms.[92]

The top floor of the Rotunda, an open, domed space with a gallery, would house the library. In August Jefferson discovered a flaw in his design for this story, telling Brockenbrough that he had “omitted to place a door in front, opening under the Portico.” With the brick walls not yet having been built up to that level, Jefferson had fortunately noticed the mistake “in time to correct it.” He provided Brockenbrough with detailed instructions about the door: “it should be of the width of the main door below, and it’s soffite of the height of the soffites of it’s coordinated windows.” There should be a "folding sash door so as to give light when shut," but there should not be any type of gallery in front of the door, for such a projection "would injure the grandeur of the portico." Instead, across the lower part of the opening there should be an "open panel either Chinese or iron."[93] Brockenbrough had already had made a "stone Sill & window frame" and thought that a window would be better than such a door, but Jefferson disagreed, saying that a door would be "greatly preferable to a window both as to appearance & use, exactly such as in my parlour, except that the bottom panels had better be of wood."[94]

Jefferson's plans for the Rotunda also included two broad, one-story wings, or terraces, each about 30 feet deep, which extended out from the portico about 80 feet to connect with the porticos of Pavilions I and II. The facades of the terrace wings were open arcades, with the interiors intended to be used as gymnasia by the students. Martha Jefferson Randolph, Jefferson's daughter, explained to her son-in-law how in these covered areas the "young men may exercise in bad weather protected equally from the sun & the rain" and that "manual exercise will be a regular branch of their education." This scheme, she wrote, "occurred to my Father during a fever that confined him upon the sopha. he immediately sent for Mr Brockenbrough and gave him every direction onto the plan when he was actually so weak that he could not sit up to draw it himself."[95] John Neilson prepared a drawing of the north façade of the arcade on hand-ruled graph paper [*Figure 24*]; on the back of the drawing Jefferson noted in late April 1824 that there were actually nine arches rather than the eight shown.[96]

## COMPLETING THE MASONRY SHELL OF THE ROTUNDA, 1823

The contractors were soon at work at the construction site. Jefferson was able to tell Cabell on July 4, 1823, that "the Rotunda is rising nobly,"[97] and Brockenbrough reported at the end of July that the "walls are partly up to the upper floor."[98] A month later Neilson reported that "the work of the Pantheon goes on rapidly" and that "we have set our last window frames." After a visit to the construction site, Jefferson wrote on August 27 that the walls would "reach full height in the course of another month."[99] Because the dome would transmit a strong outward thrust on the walls, the plan was to allow the masonry to cure until the summer of 1824 and then construct the dome. The interior, he thought, would take another year to complete.[100]

Jefferson's pride in the progress was evident in a letter that he sent to artist John Trumbull, who was planning to visit Monticello. Jefferson promised that a visit "to our university" would prove to be "well worth the trouble of your journey." "I can assure you," Jefferson continued, "that, as a specimen of architecture strictly classical, you will find it unrivalled in this country, and possessing the merit of pure originality in the design."

He was eager to have it "seen and judged" by men like Trumbull. He warned Trumbull that the rotunda, the building that "is to be it's greatest ornament, and in fact the key-stone which is to give Unity to all that is already done, will only have it's walls compleated the present year, and will not recieve it's roof until the next: but this your experience eye will supply." He hoped that Trumbull would find it "a subject worthy of your pencil and of the burin of Mr. Durand," even suggesting that "it would be a very popular print."[101]

Meanwhile, Jefferson had compiled the annual report of the Board of Visitors to the state Literary Fund, submitting it on the same day as the Board's fall meeting, October 6, 1823. Over the past building season the masons had completed the shell of the Rotunda, and Jefferson stated in the report that the "walls are now ready to receive their roof." However, he also explained that since the roof was "of hemispherical form, and pressing outward in every direction, it has been thought not advisable to place it on the walls, in their present green state, but rather to give them time to settle and dry until the ensuing season, when the roof will be ready, and the walls in proper condition to receive it." He now predicted that finishing the interior would take longer than the upcoming year.[102]

The financial reports that accompanied the annual report detail the first expenses, which include payments in April and May 1823 to Martha Terrell for hauling sand, to Moses Green and others for carting brick and sand, to Thorn and Chamberlain for brick work, and to various vendors for cords of "brick wood" to fire the kilns. Beginning in May payments were made for lumber, most frequently to Robert McCulloch, and in June for scaffolding materials and installation. William B. Philips was paid $500 for bricks in June, and John Laurence was paid $350 for lime in July. At the end of June a ship captain was paid for "freight of 10 window sills," and in September Thomas B. Conway was paid for 21 window sills.[103] Payments were made later that fall for flooring and other lumber, for hauling more sand and lime for mortar, to John Neilson, to Thorn and Chamberlain, for the services of blacksmith Uriah Leonard, and for one and a half tons of iron.[104]

As 1823 drew to a close, Arthur S. Brockenbrough prepared an estimate of the annual cost of labor and recommended to Jefferson that the work force be reduced for 1824: in 1823 many of the laborers had been focused on making the upwards of 900,000 bricks needed for the walls of the Rotunda. Those workers would not be needed in 1824, he believed, "unless we go into the brick making business again the next year."[105] Jefferson, however, thought the labor force should remain at the same level, since there was still a "great deal of work to be done yet on the grounds."[106] Over the winter of 1823-24 payments were made for various vendors for lumber and lime, to the masons and carpenters, and to William B. Phillips for bricks.[107]

## ORDERING THE MARBLE COLUMN CAPITALS AND BASES FROM ITALY, 1823

By early September 1823 Jefferson had drafted a contract with Giacomo Raggi, an Italian sculptor who had come to do work at the University in 1819, for the ten bases for the columns of the portico and for the two "half bases" for the pilasters, and on September 8 Raggi had signed a contract with the University for this work. The bases were to be of Carrara marble, equal in quality to that in the capitals that had recently been received from Italy for the pavilions. According to the contract, the bases for the Rotunda columns were to be "proportioned to a column of three English feet in diameter, to be modeled with the utmost exactness according to the Bases of the Pantheon in Rome as drawn by Palladio in his book of architecture." Since the columns of the Rotunda would be made of brick, the bases were to incorporate a cavetto and listel, the quarter-round, concave moulding and the narrow, flat band at the top of the base that were normally considered part of the shaft of a stone column. The bases were to be dressed, "polished and finished in the best manner," and each base was to be carved from "a single and sound piece of Marble." The two bases for the pilasters were to have "a front & flank with returns of ten minutes at each angle" where they joined the wall. All were to be packed well and put on board a ship for the United States by June 1, 1824. Raggi was to be paid $65 for each column base and half that for each pilaster base.[108] When the Board of Visitors met on October 6, 1823, they not only confirmed this contract but also recommended that the capitals of the columns be made of Carrara marble and further suggested that the portico be paved with marble if the cost would be competitive with paving of "country stone."[109]

On October 8, 1823, just two days after the Visitors' meeting, Jefferson dispatched a letter to Thomas Appleton, the U. S. consul based in Leghorn, Italy, asking him to arrange for the carving of the Corinthian capitals, which were "to be copied exactly from those of the Pantheon, as represented by Palladio. B. 4. chap. 20. pl. 60. Leoni's edition." Jefferson explained that the "diminished diameters" of the columns and pilasters both would be "2 feet 8 4/10 inches English measure" and sent along a sketch showing how the pilasters were to be "cut diagonally thus so as to present a front and flank each at the corner of the building." Since the columns were to be made of brick rather than stone and therefore could not be carved, Jefferson also detailed how the astragal, including the cavetto and listel would have to be made part of each capital. In the same letter Jefferson asked Appleton to provide prices for paving the portico floor with marble tiles, each one foot square, to be "polished and accurately squared ready to be laid down." He also asked Appleton to superintend Raggi's work on the bases.[110] In November 1823 the University sent Appleton $4,000 as a progress payment for the carving of these capitals and bases.[111]

Jefferson's letter did not reach Appleton for more than three months, but by February 8, 1824, Appleton had "given all the requisite instructions, to the Artist" who would be doing the carving of the twelve capitals. He carefully explained to Jefferson that each capital would weigh at least 10,000 pounds and that therefore large capitals "are never, nor Can they be work'd in a Single peice; for to Sculpture them, they must be intirely Suspended, So as to be turn'd at the will, and Convenience of the Sculptors, and to prevent any possible Contact of their foliage with any other body." "All the great Capitals of Rome and of Italy," he continued, "are of two, and many of three pieces." The capitals for the Rotunda thus would be made of two parts, with the division made horizontally, with the "upper member falling into the ornaments & foliage below." The separation, he promised, would "not be visible, even to a near examination and of consequence, to the Smallest injury, or Detriment to its beauty, or Solidity." Undoubtedly trying to forestall objections from Jefferson, Appleton pointed out that the capitals already received at the University for the pavilions were the "largest ever made, in Carrara, of a Single block." Carving the astragals, cavettos, and listels would add $20 to the earlier estimate for each capital, and the shipping fees brought Appleton's revised estimate to $6,140, substantially more than the $4,000 that the University had sent to Appleton. Since the work would have to be done during the short days of two winters, Appleton thought the June 1824 shipping schedule would be difficult to meet.[112]

The squares of Italian marble for paving the portico would cost $22.50 per hundred.[113] In May Brockenbrough supplied Jefferson with an estimate of the marble paving that would be needed: 1,150 square feet for the portico floor and 160 square feet for the "Platform of the back Steps." Another 40 square feet should be added to the order to cover breakage, making a total of 1,350.[114] Jefferson dispatched a letter two weeks later, on May 17, to Appleton, asking him to send 1,400 squares of marble, each one foot square.[115]

## FRAMING THE INTERIOR AND THE DOME AND COVERING THE ROOF, 1824

At the end of March 1824 Brockenbrough wrote Jefferson that Dinsmore and Neilson had "proceeded to purchase scantling and have framed the upper gallery floor of the library" beneath the dome without consulting him; they were "now about to raise it," even though this work was not part of their contract. Meanwhile, Jefferson told Brockenbrough to warn Neilson and Dinsmore "that if they do any thing more than what was proposed to be first done, there will be no funds to pay for it."[116]

In any case, before the carpenters did much more, Brockenbrough wanted to suggest a change in the design of the library room to Jefferson. Brockenbrough was concerned that the upper of the two galleries, or balconies, for books would conceal part of the dome itself; instead, he proposed a single gallery with columns 10 feet tall.[117] With the circumference of the library room being about 229 feet and the height of the wall to the spring of the arch about 18 feet, there would be more than 4,000 square feet for bookcases with just one gallery. Jefferson told Brockenbrough that he had "considered maturely" this suggestion but nevertheless saw "no advantage in altering the original plan," explaining that "besides the 4000 feet for presses below the entablature of the columns, we can have another tier of presses above the entablature, of one half more of the space." Furthermore, the "original peristyle by it's height & projection from the wall has the advantage of hiding a portion of the vault of which too much would otherwise be seen," Jefferson stated.[118]

Jefferson was worried about how the frame for the dome would be constructed, writing to General Joseph G. Swift in May 1824 asking for help in supplying a copy of a 1576 book entitled *Nouvelles inventions pour bien bastir et a petits fraiz, trouvees n'agveres*, which illustrated Philibert DeLorme's scheme for making the ribs of domes of laminated wood members. Jefferson explained that he had "once owned this book, and understood the principles of his invention," but he had sold his copy to Congress and now his recollection of DeLorme's illustration was "not particular enough in every thing"; the "workmen are strangers to it," and, Jefferson feared, "we may go wrong."[119] (In notes dating from 1823 Jefferson had described "the ribs of the roof to be compleat semicircles of four thicknesses breaking joints."[120]) Swift loaned the book to Jefferson, who had consulted it and was ready to return it by June 21.[121] In the end Jefferson may have relied substantially on his memory and the carpenters' expertise, for on May 31 he had reported that work on the Rotunda was advancing well: "the frame of the roof is up, and nearly the whole wooden work ready to put up." He expected that it would be put into condition "of safety and use this season."[122]

Meanwhile, Arthur Brockenbrough was busy trying to locate sheet metal for covering the roof of the dome. In response to his query, the Richmond firm of D. W. and C. Warwick told Brockenbrough that they had copper available in both 18-ounce and 20-ounce weights, but that they did not stock sheet zinc.[123] To install the roof Brockenbrough was planning to hire Anthony Bergamin, who, he told Jefferson, had been "strongly recommended as an excellent workman." A Frenchman, Bergamin had installed the roof on the dome of the Richmond city hall. He was expected to arrive in Charlottesville on May 5, 1824. Since he was not very fluent in English, Brockenbrough asked Jefferson to come to the University the next day to interview him; "the job," Brockenbrough knew, "requires a man well skilled in the working of metal."[124]

John Brockenbrough, Arthur's brother, wrote that he had convinced the Warwick firm to sell sheet copper to the University at a substantial discount, provided that they ordered a considerable quantity. If Bergamin would use 18-ounce copper (at 10 cents a pound), John Brockenbrough assured the proctor, "you cannot have a better covering than he will make you in this way." Instead of gutters he advised extending the "copper over the parapet wall." The proctor, however, was also investigating the possibility of using tinplate, which the Warwick firm offered to furnish for $11.50 a box[125]; John Brockenbrough told his brother on May 3 that "zinc might be somewhat cheaper, provided it could be procured sufficient thin, but we know nothing of its' durability." The University finally decided to use tin, and by June 14 Warwick had shipped to the University thirty boxes of tinplate.[126]

A week letter Bergamin wrote Brockenbrough that he had been delayed by work in Richmond but would leave on June 25; meanwhile, his colleague would travel to Charlottesville and could "proceed to the preparative" of the tin.[127] On June 14 Warwick had also sent along 20 sheets of copper, each measuring 30 by 60 inches and weighing 16 pounds. This may have been the "Brazier's copper…for gutters or pipes" that Bergamin had said would be needed.[128] In early July Warwick sent another 75 sheets of brazier's copper and 50 sheets of copper sheathing.[129] In mid-July more tin and copper were dispatched from Richmond.[130] In mid-September Bergamin was paid $283.69 for his work on the Rotunda and another $225.15 at the end of the month, indicating that a substantial amount of roofing work had been accomplished. Bergamin's work included "Copper Roof Gutters, tining on Dome, Cover to Level Cornice, Cutting out Mortar to let in Tin, Gutters to Gymnasia."[131] More tin was sent from Richmond during October and November. [132]

At their April meeting the Board of Visitors agreed that it should "take such preparatory measures as can be taken at this time" to fulfill the state government's directive that the University "be brought into operation with as little delay as practicable."[133] In a letter written a few days after the meeting Jefferson noted that the walls of the Rotunda would be "covered in within the course of the summer, and finished so far as to be in a state of safety and use until funds may occur to compleat it." The capitals and bases would not arrive until 1825, so the portico columns could not be constructed until that time.[134]

On May 25, 1824, John M. Perry, a brick maker who had worked on other buildings at the University and on the serpentine garden walls, signed a contract with the University to make 300,000 "hard well shaped bricks" for $4.50 per thousand bricks. The order included the specially shaped bricks for the Rotunda columns (to be "shaped agreeable to a mould to be furnished") and "smooth well shaped bricks" for paving at the Rotunda and the gymnasia. Perry was to pay the proctor for the wood already gathered to fire the kilns and for the clay already dug by the University's laborers. Perry was entitled to use the University's brickyard, shelters, and clamps to make the bricks.[135]

At the beginning of June Thorn and Chamberlain were starting "to lay bricks of the attic of the Rotunda," and Brockenbrough had another new proposal for Jefferson: "had we not as well," he wrote, "put reservoirs in the two North corners of the Attic by arching over the present openings, thereby making the reservoirs nearly the depth of the Attic and as large in diameter as the space will admit of." In case of a fire, the water could be diverted "to any part of the building below the domes by pipes or hose." He asked for Jefferson to let him know as soon as possible if he approved of this scheme. Information on whether these reservoirs were installed in 1824 was not located, but later records indicate that reservoirs were built in 1855.[136]

On April 5, 1824, doubtless in conjunction with a meeting of the Board of Visitors held that day, Brockenbrough prepared a report of actual costs to date for constructing the Rotunda and of the projected expenses to complete the work. To date, Brockenbrough reported, the masonry work had cost $9,761.72, with $6,905.47 of that amount being for materials and the balance paid to Thorn and Chamberlain; he calculated that another $1,000 would be needed to complete the brick work. The column bases and the capitals and the freight from Italy would cost about $10,165. The sum of $255 had already been paid for the stone window and door sills, and another $1,200 would be needed "to complete the stone steps on the back & Terras Stonework." The cost of other materials, including iron and nearly all of the lumber, so far was $6,165. He estimated the expense of covering the roofs of the portico and the dome with tin and copper at $2,000 and the cost of glass and glazing, including the skylight atop the dome at $500. The total of these expenses was $31,046.72; not included were nails, other hardware, painting, and bills from other workers, but he assumed that they would not push the cost much over $41,000.[137]

The University's account books show that during the spring and summer of 1824 substantial amounts of lumber were procured for the Rotunda, some probably for the framing of the dome. In June a bill for sheeting plank, probably for sheathing the dome, was paid. Neilson and Dinsmore received a substantial amount, $6,000, for their work.[138] At the end of September Uriah Leonard was paid for blacksmithing at the Rotunda.[139] John Gorman, a mason, also worked on the Rotunda in 1824, apparently on the north steps.[140]

By September 1824, with the exterior entablature now in place, Jefferson was finally ready to order architectural ornaments for the soffit from William J. Coffee, an English sculptor working in New York City. "Composition will not stand the weather," Jefferson noted in his letter to Coffee, "and lead is expensive. We conclude therefore in favor of the material of which you made those for us before," probably a reference to Coffee's "burnt composition." He instructed Coffee that the ornaments should take the form of roses, and the design was to be copied from plate sixty in the fourth book of the Leoni edition of Palladio, which contained details of the exterior of the Pantheon, the same plate that Jefferson had told Appleton to use for the capitals of the portico. Jefferson explained to Coffee that of the two forms of rosettes shown in that plate, he liked "the corner one best," in which the petals were overlapped rather than being separated. He also sent along to Coffee "a paper on which the pannel to receive the rose" had been drawn to full size; it measured "6.9 wanting 1/16." The roses, Jefferson thought, "should not quite fill" the panels. Then, he continued, "We shall plant these roses on plain panels not figured ones like those of Palladio."[141]

Jefferson had tabulated that 330 rosettes would be needed, plus 10 or 15 more to allow for breakage. He asked Coffee to undertake them with "the greatest dispatch in your power, because the rest of the entablature is put up, and the soffite reserved till we can receive these ornaments."[142] Coffee replied that he could not "Say at the moment the time you may expect the Ornaments" but would "Say for your Satisfaction that no other business Shall Interrupt your 'roses' till the number is Compleat." He requested information on the distance at which the ornaments would be seen, so that he would know how bold to make the relief.[143] Jefferson responded that the soffit was "32. f. above the floor of the portico & platform of the terrasses, and 40. f. above the level of the lawn" and explained that the rosettes "will be principally & equally viewed at these two heights."[144]

The Visitors gathered in Charlottesville for their fall meeting in early October 1824, and Jefferson again submitted the board's annual report to the Literary Fund. A year ago, he noted, the walls of the Rotunda had been nearly completed, and during the present building season it "has received its roof, and will be put into a condition for preservation and use." The interior, however, was not yet finished.[145]

During the same meeting the Board of Visitors officially decided that the "upper circular room of the Rotunda shall be reserved for a Library," while the "larger elliptical rooms" on the second floor were to be used for "for annual examinations, for lectures to such schools as are too numerous for their ordinary schoolrooms, and for religious worship." Other rooms on that level could be "used by schools of instruction in drawing, music, or any other of the innocent and ornamental accomplishments of life; but under such instructors only as shall be approved and licensed by the Faculty." A chemical laboratory was to be located in the basement, but the other rooms were not assigned. The "open apartments," in the terraces at the ground level on each side of the portico, were set aside for "Gymnastic exercises and games of the Students," including military exercises. The Visitors also approved a proposal that faculty could hold its meetings "in an apartment of the Rotunda."[146] Later that year Brockenbrough supplied Jefferson with the dimensions of the dome: it was 27 feet 5 inches "from the top of the last step to the center of the Sky light."[147]

A few days after the October 1824 meeting of the Visitors, a young man en route to South Carolina, Henry Marshall, passed through Charlottesville and recorded his impressions of the buildings of the University in his diary. With regard to the Rotunda he wrote:

> The rotunda is said to [be] modeled after the Pantheon at Rome. It is 75 ft in diameter & about 80 ft or more from the ground to the top of the dome. It has a portico fronting towards to the college yard. On the ground floor are two elliptical rooms 50 ft by 30 ft (guess) & one much smaller. There is the same arrangement in the second floor. The 3[rd] story with the dome is all in one. From the college yard you go up steps the whole breadth of the portico directly into the second story. From the lower story is a covered way & terrace to the dormitories. The rotunda is decidedly the most elegantly proportioned building I ever saw. It is the only public building I have seen in this country that is high enough.[148]

### ENTERTAINING LAFAYETTE AT THE UNIVERSITY, 1824

For Jefferson one of the unquestionable highlights of 1824 was the visit by the Marquis de Lafayette to Monticello and the University of Virginia as part of his sixteen-month-long triumphal tour of the U. S. The two men had not seen each other for thirty-five years. In August 1824, not long after he had arrived in New York, Lafayette wrote Jefferson that he was now "on American ground, welcomed in a manner that exceeds the power to express what I feel."[149] Lafayette's plan was to visit Boston and the Hudson Valley and then go on to Philadelphia before heading south to Virginia. In early October, as he awaited Lafayette's visit to Charlottesville, Jefferson wrote to Thomas Appleton in Italy that the "arrival of genl. La Fayette in this country has kindled a flame of enthusiasm such as hardly ever was seen before," with town after town presenting "manifestations of affection which shew the gratitude of our country for his former services & sacrifices."[150] Jefferson's plan was to host Lafayette and his traveling party at Monticello and entertain him with a public dinner at the University, where, Jefferson stated, the "Rotunda is sufficiently advanced to receive him." The Rotunda, however, was far from finished. The domed roof had been completed, but the windows had not yet been glazed; Jefferson later described the building as "open and uninclosed."[151] The "academical village," Jefferson explained to Lafayette, "this Athenaeum of our country, in embryo, is as yet but promise," since it was not yet open to students.[152]

Lafayette traveled from Richmond for Monticello, where he arrived on the afternoon of November 4. The next day Jefferson, James Madison, and Lafayette rode in a landau drawn by four gray horses to Charlottesville, where they were welcomed by hundreds of villagers. A procession that included the Board of Visitors, cavalry, junior volunteers, and citizens on horseback and on foot escorted the three honored men along the road at the east side of the University to the south end of the Lawn. At the top of the Lawn stood the Rotunda, where one eyewitness stated, the "first objects that struck the view, were three flags floating on the top of the Rotunda." The largest flag read "Welcome our Country's Guest." The procession, on foot, then "moved slowly up the lawn to the steps of the Rotunda, the General gracefully bowing to the ladies as he passed." An official walked down the steps of the Rotunda to address Lafayette, calling the University "their future temple of literature and of science" and "a fruit of our glorious revolution." Lafayette responded that he was very pleased "to receive the kind welcome of the citizens of Albemarle. . .under the beautiful pantheon of this rising University."[153]

Lafayette, having rested for a short while in the "apartments prepared for him," then "walked on the terraces, among the ladies" along with Jefferson and Madison. At three o'clock the party climbed the stairs to the top floor of the Rotunda, where four hundred people were gathered for a dinner. The tables were arranged in three concentric circles, and over Lafayette's seat was an arch of laurel, "entwined around two columns, that supported the gallery." The first toast to Lafayette was enthusiastically cheered, and the "lofty dome of the Rotunda re-echoed back the sound," rolling "in billowy volumes around the spacious Hall, and sunk in the deep stillness of enthusiasm."[154]

Scores of other toasts followed. In responding to the toast in his honor Jefferson recounted how, during his service as America's minister to France, Lafayette proved to be his "most powerful auxiliary and advocate"; Jefferson urged the guests to honor Lafayette "as your benefactor in peace, as well as in war." Lafayette, "moved to tears," grasped Jefferson's hand and "sobbed aloud." James Dinsmore, the contractor, offered another toast to Jefferson as the founder of the University. The banquet concluded at six o'clock, and a hundred cavalrymen escorted Jefferson, Madison, and Lafayette back to Monticello.[155] Writing to his family in France a few days later, Lafayette mentioned the "beautiful and good university," whose establishment and construction was occupying "the honorable old age of our illustrious friend." [156]

## OPENING THE UNIVERSITY BUT NOT THE LIBRARY, 1825

While the construction of the Rotunda had been "sufficiently advanced" to receive Lafayette in November 1824, many components were still incomplete. A month after the festivities, for example, Jefferson was still prodding William Coffee to deliver the rosettes for the soffit. Jefferson complained to Coffee that the "whole scaffolding of the building is obliged to be kept standing only to enable the workmen to put up these small ornaments." The University would "certainly be opened" to students on February 1, 1825, Jefferson wrote, and it was essential that the Rotunda be finished.[157]

Coffee replied from New York that the ornaments were ready to be packed and shipped; he had made the quantity ordered (the 330 actually needed with 15 extras "to meet Chances" on site) and was also sending an extra 10 to cover any breakage by the shippers. Coffee thought it unnecessary to provide any instructions for the University's craftsmen, except to say that it would be "proper to use round headed Screwes for the purpose of Puting them up" and thus avoid splitting the rosettes during installation. If other types of screws were used, he explained, then the "heads must be filed off on the Side."[158] Coffee claimed that the rosettes were "very hard and will be found to last as long as any Part of the Building." The ornaments were shipped on December 29 and evidently arrived safely: Coffee was reimbursed $45.67 a month later, probably for freight,[159] and another $150 in April 1825 "for composition ornaments for rotunda." [160]

The tin roofing was also presenting problems. In March 1825 John Brockenbrough wrote from Richmond to his brother the proctor that roofer Anthony Bergamin had told him that the "roof was perfectly tight during the September rains, and that the leaking must be owing to the screws, since put in the Tin, to fasten the supports to the <u>steps</u> raised around the base of the Dome." Bergamin also alleged that "he remonstrated against perforating the tin when he was about the work" and now believed that the "roof will never be secure unless the steps are covered with metal."[161]

Meanwhile, Jefferson was becoming anxious that the university would not be able to meet its goal of opening on February 1, 1825, since three of the professors had not yet arrived in Charlottesville.[162] Jefferson was at last able to report that while the delay had prompted some students to enroll elsewhere, "we began on the 7th of March with between 30. and 40" students; since then, he continued, "they have been coming in and are still coming almost daily. They are at this time 65." He confided that he hoped "they may not get beyond 100 this year, as I think it will be easier to get into an established course of order and discipline with that than with a greater number."[163]

The window glass for the Rotunda arrived at about the same time as the students. The windows had not been glazed at the time of Lafayette's celebratory dinner the prior November, and in April 1825 Jefferson described the building as still being "open and unenclosed," in part because of a mix up with the University's order at the glass factory.[164] In early January 1825 Thomas May, the Richmond-based agent of the Boston Glass Manufactory, told Brockenbrough that he had just received nineteen boxes of glass; the order included 236 panes measuring 16 by 12 inches, 354 panes measuring 15 by 12 inches, and 176 panes measuring 20 by 13 inches. They were shipped to Charlottesville that same month. By mid-February Brockenbrough had returned the four boxes of 20-by-13-inch glass, and May acknowledged that the factory had made a mistake while "making the transfer of the order to their order Book, there putting it down 20 x 13 instead of 14 x 12." By March the 14-by-12-inch replacement lights had arrived in

Richmond, along with 24 other pieces to replace glass that had been broken en route and a crate of 6 sheets of double-thick glass, perhaps to be used in the skylight.[165] Another shipment was made in late July, three boxes of double crown glass "Cut to pattern," which included 2 pieces measuring 21 by 14, 16 pieces measuring 18 by 14, 16 pieces measuring 17 by 12, 1 piece at 14 by 10 inches, 12 pieces at 13 by 9 inches, 5 pieces 12 by 9 inches, and 3 larger sheets; since it was cut into some special sizes, some of this glass may have been intended for the skylight.[166]

On August 15, 1825, Benjamin Blackford, of the Isabella Furnace, submitted an invoice for 104 large sash weights, another 34 sash weights that apparently were somewhat larger, some of which may have been intended for the Rotunda. Blackford also shipped "6. Boxes with grates," perhaps to be used in the fireplaces in the Rotunda and in the chemical ovens.[167]

Despite the arrival of the students the domed library room in the Rotunda was not yet finished. At their March 5, 1825, meeting the Visitors agreed that once more funds were received, then up to $6,000 should be advanced "for the purpose of finishing the interior of the library room."[168] Soon after the meeting Jefferson wrote Brockenbrough that it would be "worse than useless to procure books without a place to arrange them in." It would be acceptable, he thought, to use other government funds for bookshelves, tables, and "other necessaries for the library room."[169] James Dinsmore and John Neilson estimated the cost of finishing the woodwork in the library at about $3,000; in addition the columns would cost about $2,000, and the plastering and painting another $1,000.[170]

In January 1825 Jefferson had told Cabell that it would cost another $25,000 to complete the Rotunda.[171] A week after the Visitors' March 1825 meeting, Jefferson, ill and very worried about the overall finances of the University, asked Brockenbrough to bring to Monticello the data needed to prepare a financial report of past and projected expenses and income.[172] Jefferson drafted the report on March 15, and it included $3,000 still outstanding to be sent to Italy for the marble capitals, bases, and pavement and the $6,000 to finish the library room.[173]

## THE ARRIVAL OF THE ITALIAN MARBLE CAPITALS AND BASES, 1825

Jefferson had written to Appleton in mid-May 1824, urging him to superintend Raggi in his work on the bases of the columns. Jefferson wanted to have the bases delivered to Charlottesville during that same summer so that the workers could "get up our columns this season" and so that the "columns may have time to settle before their Capitels are put on them."[174] Raggi finally arrived in Leghorn in May, penniless and in debt, but with an "ardent Desire" to carve the bases, and Appleton told Jefferson that they would probably be finished in August. Raggi made good progress in the first weeks, but one

June evening while asleep in a chair after supper, he tumbled to the floor, breaking his clavicle and becoming unable to use his arms for several months. Appleton therefore directed his own sculptor to proceed with the bases and hoped they would be ready to be shipped, along with the marble paving squares, in October. The capitals would be finished in February 1825 and would probably arrive in Charlottesville in May; thus, Appleton told Jefferson, the bases and columns "will follow each other in just proportion of time."[175] Jefferson, recognizing that another building season had been lost, reluctantly told Appleton in October 1824 that if the bases did not come until the spring of 1825, "we must be content," but he hoped that by then also the "capitals and paving squares will be coming to us."[176] In an update posted to Jefferson in October Appleton reported that the capitals were moving along "fully to my satisfaction" and asked Jefferson to send him an urgently needed progress payment.[177]

Thomas Appleton had dispatched a letter from Leghorn to Jefferson on May 12, 1825, announcing that the marble elements for the Rotunda were finally complete. On board the first ship, the *Caroline*, were nineteen cases holding 1,400 marble tiles for paving, and another twelve cases containing the bases for the columns and pilasters. Appleton, who had taken the responsibility of engaging his own sculptor to carve the bases when Raggi was not able to fulfill his contract, paid his sculptor half of his usual fee and hoped that Jefferson would not object to that additional cost. A second vessel, the *William Gray*, also bound for New York, would carry the capitals, which Appleton boasted, "are pronounc'd by the most intelligent, of uncommon beauty of marble, & Superior workmanship" and would "be found of a Superior Stile of workmanship, to any in the United States."[178] They had been packed, Appleton told Jefferson, "with most extraordinary care & Attention; they are so firmly fix'd inside the Cases, with appropriate Supports of wood, that it is impossible they should move a hair's breadth—they might even be rol'd over, like a barrel, if there was necessity, without Danger of injury." As the time for sailing approached, however, the captain of the *William Gray* refused to carry the crates with the capitals, having seen "their great size & weight." In June Appleton finally convinced the master of the brig *Tamworth* to accept them, but he was bound for Boston, not New York, resulting in more delay.[179]

Three months passed before the paving squares and the column bases had safely crossed the Atlantic. Jefferson had written Brockenbrough in late July 1825 that the bases should be arriving soon and advised him that "everything should therefore be got in readiness to run up the columns immediately."[180] He alerted Brockenbrough at the end of August 1825 that the bases were now in New York and warned that transporting the marble from Richmond to Charlottesville would be "extremely difficult and expensive" and that "special measures should be provided for it." The marble itself would weigh thirty tons, plus the heavy cases. He instructed Brockenbrough to ship the marble bases first, so that "instantly on their arrival" workers could start work erecting the columns.[181]

In early September 1825 Henry A. S. Dearborn, son of Jefferson's Secretary of War and collector of customs at Boston, wrote Jefferson that the *Tamworth* had arrived in Boston with the capitals, "nicely packed, in strong boxes," and that he would "ship them by the first vessel, bound to Richmond" with instructions that they should "be handled with great caution." Appleton had told Dearborn that the capitals "will be found, probably inferior in dimensions, but certainly equal in architectural perfection, to any in the U.S., & that they were copied from those of the Pantheon at Rome."[182] By September 20 the capitals were aboard the schooner *General Jackson* en route to Richmond. Since he considered this "a boisterous Season of the year," Dearborn had taken out insurance on the capitals.[183] Dearborn also told Jefferson that he thought that Congress should exempt the University from all of the import duty on the capitals just as it would duty on books, philosophical apparatus, and sculpture imported for schools of higher learning; he felt that "while they are to embelish the University," they would also "present Superb models of antient Architecture."[184] The University paid $885.08 on October 17, 1825, for the freight and related charges incurred at Boston.[185]

The Board of Visitors passed a resolution in October 1825 to petition Congress for a remission of not only a new fifteen percent duty imposed on imported marble (arguing that the capitals had been ordered before the duty was enacted) but also from the preexisting duty as well, in the interests of "a just encouragement to science." The Visitors agreed to execute a bond for the duties due in order to have time to make an application to Congress, but at the same time they also ordered the proctor to have funds available to pay the duty, in case their application failed.[186] In November 1825 Jefferson was still expecting that the federal government would be charging a tariff of $2,700 for the capitals and bases, but a few months later he received word from Washington that Congress had approved the remission of all of the duty on the marble.[187] The Visitors intended to authorize the purchase of a clock and bell, to be placed in the Rotunda, if the duty was retracted.[188] It had been two years since Jefferson had written Appleton to order the capitals, and now another building season had passed, precluding the construction of the portico until 1826.

## SECURING A BELL AND A CLOCK FOR THE ROTUNDA

Meanwhile, Jefferson pushed ahead with other tasks to complete the Rotunda. In April 1825 he contacted Joseph Coolidge Jr., who lived in Boston and was married to Jefferson's granddaughter, asking for help with securing a bell; Jefferson wrote that it was his understanding that the "art of bellmaking is carried to greater perfection in

Boston than elsewhere in the U.S." He explained that the University needed a bell that could "*generally* be heard at the distance of 2 miles, because this will ensure it's being *always* heard in Charlottesville." A larger bell would be unnecessary: greater size would only "add to it's weight, price and difficulty of management."[189]

Jefferson had drawn up specifications for the bell, as well as for a clock, for the Rotunda, and sent them along to Coolidge. The bell was to weigh 400 pounds and be capable of being heard "with certainty" for one and a half miles, as he had explained to Coolidge. The face of the clock was to be made of metal and be approximately 6 feet 2 inches in diameter; it was to be placed in the tympanum of the south portico. The dial plate was to be about 5 feet in diameter. The weights for the clock were to be about 100 feet long; they were to extend straight back for about 30 feet, then turn at a right angle for about 21 feet, and then descend through a 5-foot-diameter hole for 50 feet. The rope for ringing the bell was to follow a similar path on the opposite side of the portico.[190]

Joseph Coolidge replied in August 1825 that the clock would cost $800; he had obtained this price from "the best clock-maker in this place," Simon Willard, who had made clocks for Harvard College and for the House of Representatives. He promised to produce "as good a clock as can be found in america"; the movement would be made "of purest brass, and of cast steel." It would take two months to manufacture, and Willard would travel to Charlottesville to install it.[191] Jefferson, disappointed, replied that the cost was beyond the present means of the University, especially if Congress insisted on collecting the duty on the Italian capitals and bases for the portico, so the University would be "obliged therefore to do without until our funds are improved."[192] As a interim measure Jefferson directed Brockenbrough to hang a "temporary bell" atop Pavilion VII, which was being used as the interim library, and to place a clock in the same building with its "face so near the window as that it's time may be read thro' the window from the outside."[193]

Jefferson had promised that the contract for the clock would go to Willard, hopefully in February 1826, but it was spring before Jefferson knew that Congress had remitted the duty on the marble.[194] In May he told John Cocke that "we are now to take measures as to the clock"[195] and at about the same time reported to Brockenbrough that he was prepared to "write to Boston to engage a clock and bell"; first, though, he needed "very exact measures of the dimensions of the tympanum" and "the diameter & depth of the well, for the descent of the weights."[196] On June 4, 1826, just a month before his death, Jefferson told Coolidge that he was "now authorised to close with mr Willard for the undertaking of the clock" and asked Coolidge to act as the University's intermediary for this project, to "abridge the labors of the written correspondence, for there will be many minutiae which your discretion can direct, in which we have full confidence, and shall confirm as if predirected."[197]

In less than three weeks the arrangements had been confirmed, and Jefferson confirmed to Brockenbrough that "Mr Willard undertakes our clock, and, without regard to price, says that it shall be as good a one as the hand of man can make." Willard would travel to Charlottesville to "set it up, observing that the accuracy of the movement of a clock depends as much on it's accurate and solid setting as on it's works." He would also purchase a bell on behalf of the University, estimating that one weighing 400 pounds would be sufficient. The total cost, Jefferson estimated, would be about $1,000, with $800 for the clock, $150 for the bell, and the balance for Willard's travel expenses. The work was to be finished in September 1826.[198] This letter may have been Jefferson's last written communication about the University.

## MORE WORK ON THE INTERIOR, 1825

Arthur Brockenbrough, meanwhile, was trying to complete the interior of the Rotunda. In June 1825 he asked Jefferson about how he wanted to safeguard the entrance to the library room: did Jefferson want to have a "partition around the well hole of the Stairs and a door in the front of landing or a lobby extending to the rear of the columns next the stairs?"[199] Jefferson replied that the "wells of the staircases are to be secured by a ballustrade" and sent along "a very beautiful form of a balluster" to be used there and on the staircases. [200] Brockenbrough, though, felt that Jefferson had not understood the security issues related to the library, so he wrote to Jefferson again, explaining that "without a partition at the head of the stairs any person entering the building, will have free access to the Library." People using the basement classrooms, he pointed out, would be able to mount the stairs and gain easy access to the books at times when the library was closed. It would be necessary, Brockenbrough wrote, to have some arrangement "to prevent any & every person from Enteri[n]g except with the Librarian," but no response from Jefferson has been located.[201] At the end of June 1825 Thomas Fadley was paid $16.50 "for turning executed for the rotunda, &c.," perhaps for these balusters.[202]

Meanwhile, Dr. John Emmet, the chemistry and natural history instructor, stated that he was "much dissatisfied" with the proposed facilities for his laboratory and lecture space in the Rotunda. He first suggested that a separate building having a lecture room and a wing with a furnace be constructed, but this proposal did not meet with approval. Looking again at the Rotunda, Emmet maintained that the small room that had been set aside for his laboratory would "not answer the purpose for the want of room & light."[203] Jefferson acquiesced to Emmet's appeal that he have use of both large oval rooms in the basement, writing that they should be "arranged as he pleases for his chemical purposes." One of the basement oval rooms had been intended for use as a museum, but Jefferson now told Brockenbrough that the museum could simply be moved to one of the upper oval rooms.[204] These changes were evidently not finished at the end of 1825, for Emmet told Brockenbrough in January 1826 that the space “should be looked to—the tin-man promised most seriously to have the stove-pipe made & put up—as well as the dampers, grate-doors &c—In raising the Stove pipes—let him secure the hanging shelf with Sheet iron—he may then fasten the pipe to the shelf.”[205] Charles Bonnycastle, professor of natural philosophy, wished to use a lecture room in the Rotunda, rather than in his pavilion, so that his students could see experiments being done with instruments; he also needed a secure room in the Rotunda for storing the valuable instruments, so they would not have to be carried back and forth from his pavilion for each lecture. Despite the sanction of the Board of Visitors for this work and the fact that it was a minor request, the work was still not complete in April 1826, when Bonnycastle complained to Brockenbrough that “No preparations are yet making for plastering—or, I believe, for any thing else.”[206]

Jefferson and Brockenbrough were also busy with arrangements for the decoration of the dome room. This matter had been on Jefferson’s mind for some time: two years earlier, in October 1823, for instance, Jefferson had told Thomas Appleton that “40. Composite capitels of *wood*, for columns whose dimished diameters are 15 11/16 Inches English, to be copied from Palladio B. 1. c. 18. pl. 30.” would be needed for the library room of the Rotunda.[207] Appleton, however, rebuffed this idea, recommending marble or mastic-covered columns because they would be more durable; furthermore, he wrote, “in no temple, or public edifice I have Seen, are there any Capitals of wood.—in the interior of all our churches in Italy, there are columns of brick or Stone, over which, is cover’d a mastic, which imitates So precisely every Species of marble, that it is utterly impossible, without being prob’d, to Distinguish, if they are marble, or of mastic.” The cost, however, would be 100 dollars each, making a total of $4,000 for the carving alone. Even forty wooden columns, which would cost $44 each to carve, would be expensive.[208]

In June 1824 Brockenbrough had written to Philip Sturtevant of Richmond about carving composite capitals of wood for the library. Sturtevant was eager to do the work, proposing to carve the capitals including the “Neck Moulding in Every respect Out of the Best Timber and in the Best Manner” after plate thirty in the first book of Palladio. Sturtevant was so interested in the project that he begged Brockenbrough not to award the contract to anyone else without contacting him first; despite his “Extremely Low” price of “Seventy five Cents Per inch Measured By Girting the Collum or Capital at the Neck,” he would do the work at a lower price “Rather than Miss of the Job.”[209]

Sturtevant finally began work in 1825, telling Brockenbrough in June that he had been very fortunate in securing white pine from Maine for the capitals; he had already measured the “Smallest Part” of the column as being 14-3/4 inches, but asked that Brockenbrough or Neilson confirm that dimension to him. In the same letter Sturtevant reported that he had already "Drawn the Capital and Shall Commence Cutting up my Stuff tomorow."[210] He was paid $500 in February 1826 and another $700 in August for the capitals.[211] He told Brockenbrough in November of that year that he had "never worked so Hard in all My Life Before" and had "Worked Nights till 12 and 1 Oclock Even in July and August until I Got them done."[212]

Other architectural ornaments for the museum room were discussed with William J. Coffee, whose composition rosettes had been installed in the soffits outside. Joseph Antrim, who had done much of the plastering at the University, had visited Coffee in New York early in the summer of 1825, bringing along drawings of the work to be done in the Rotunda. Coffee then provided prices for composition and lead elements for a Corinthian cornice, including husks, leaves, rosettes, and ox skulls.[213] Brockenbrough told Jefferson that Antrim had reported after his trip to New York that "there is so little of that kind of work done there, he could not find any other person in the habit of making composition-work."[214] Jefferson, however, suggested that if Brockenbrough thought Coffee's prices were "extravagantly high," then he might be able to locate other "workmen in that line" in Washington, Baltimore, Philadelphia, or even Boston. He also suggested that a motif incorporating "the spread eagle of Delorme would be best."[215]

Coffee, meanwhile, had been offered a contract to make ornaments for a new cathedral in Montreal and pressed both the proctor and Jefferson for a decision on the work for the Rotunda.[216] Having learned from Jefferson that Brockenbrough thought his prices were too high, Coffee wrote the proctor in September that while his proposal was "not higher than w[h]at such work commands at this time in this city," he would offer a discount of twenty percent, because he had "done all the other ornaments" and "should not wish that any other work of this kind [be] introduced in the University."[217] Brockenbrough was eventually able to eke out an even better deal with Coffee, boasting to Jefferson that he had negotiated a fifty-percent discount. Coffee now proposed that he would "execute those Ornaments [for] the whole of the frieze (except a very small Part of the small Parts)," as well as the rosettes in his "Burnt Composition." The leaves of the modillions would be of "thick Lead." He was eager to move ahead, since the project would take him three months, and he already had commitments for other projects beginning in March 1826.[218] Brockenbrough still hesitated, though, wondering whether the expenditure "would be prudent or not in the present low state of our finances."[219] Coffee had not mentioned the spread-eagle motif, but in October, soon after Coffee had submitted his revised proposal, Jefferson had made a note to Brockenbrough "get Ne[i]lson's drawing of the Eagle ornament for Frize."[220] Documents on whether or not the University proceeded with a contract with Coffee for this interior work were not located.

In September 1825 Jefferson had sent Brockenbrough a list of questions pertaining to various University matters. One question dealt with the amount of money needed to complete the Rotunda. Brockenbrough replied that $42,000 had been spent so far, "exclusive of the circular room," and that another $15,000 would be needed to complete it.[221] As the year drew to a close, Jefferson acknowledged that he was failing in tracking financial matters: "I have so completely lost sight of our accounts that I do not understand these papers," he told Brockenbrough, "and must hereafter depend entirely on your self and the committee of accounts for such general statements as it may be necessary to give to the public."[222] Jefferson's fragile health had also precluded his attending the reception at the University and the "sumptuous dinner" in the Rotunda when General Lafayette returned to Charlottesville late in August1825.[223]

At the end of 1825, as he compiled his annual expenses for the University, Brockenbrough again proposed to Jefferson that the labor force be reduced, noting that in the past year workers at the University had made 800,000 to 900,000 bricks for the Rotunda. The University's accounts for 1825 show substantial expenditures for lumber and for masonry, including payments to bricklayers Thorn and Chamberlain in March and April. Contractors Dinsmore and Neilson were paid $2,000 in September 1825. Other expenses, in addition to the costs related to the Italian marble, included tin work done by James Clarke, plastering by Joseph Antrim, and $1,000 paid to D. W. & C. Warwick for tin, copper and other supplies.[224]

The 1825 annual report to the Literary Fund stated that the "indispensable" uses for the spaces in the Rotunda at that time were the library, two rooms for the chemical Laboratory, a museum of Natural History, and a room "for examinations, for accessory schools and other associated purposes." At the time of the report, early October 1825, Jefferson wrote that, along with an anatomical hall, the university was "endeavouring to put them into a bare state of use, although with some jeopardy as to the competence of the funds."[225] The 1822 annual report of the Board of Visitors stated that the Rotunda was intended to be used for religious worship; this topic was brought up again in 1824, but by 1825 Jefferson had changed his mind and dissuaded Brockenbrough from pursuing any use of University buildings for religious gatherings.[226]

## JEFFERSON'S FINAL PUSH TO COMPLETE THE ROTUNDA, 1826

The dome room was still not operational as the library during the winter of 1825-26, and Jefferson was impatient, writing Brockenbrough on January 3, 1826, that "it is high time to have our bookcases in hand, and to be pressed as the books cannot be opened until the shelves are ready to recieve them." He had recently learned that the books from France had already arrived in New York and been shipped on to Richmond.[227] With little hope of winning additional funds from the Virginia General Assembly, Jefferson wrote Joseph C. Cabell in early February that he had gone "immediately to the University and advised the Proctor, to engage in no new matter which could be done without, to stop every thing unessential in hand, and to reserve all his funds for the book room of the Rotunda and the Anatomical theatre." "Till the latter is in condition for use there can never be a dissection of a single subject," Jefferson wrote, "nor until the bookroom and cases be completely done can we open another box of books." Crates of books were arriving from abroad and piling up: "we have now 5 boxes on hand from Paris unopened, 5 more from the same place are supposed to be arrived in Richmond, 7. from London are arrived at Boston, and a part of those from Germany are now in Boston," Jefferson wrote. Still more boxes were expected, and they all had to "remain unopened until the room is ready, which unfortunately cannot be till the season will admit of plaistering." Moreover, Jefferson continued, the "joiner's work goes on so slow that it is doubtful if that will be ready as soon."[228] Between November 1825 and March 1826 Thomas Fadley was paid $108 for "turning columns" and other turning for the library room."[229]

In April 1826 Jefferson was charged with the task of telling Brockenbrough that the Board of Visitors was losing confidence in him. Apologizing for being the bearer of the news, Jefferson wrote that the Visitors were "not satisfied with the slowness with which the buildings have been conducted the last year, and particularly with respect to the Library, and the Anatomical theatre," which, they thought, "ought to have been done before this, the books remaining packed so long in their boxes it may be feared are at this time, in a progressing course [of] injury, in add[ition] to the loss of their use to the Professors & Students." "A greater force of workmen," he continued, "ought to have been employed, and it is now requested that all which can be employed be immediately put into action first for the completion of the Library room & Shelves, and next the Anatomical building." Furthermore, transporting the marble capitals to Charlottesville called "pressingly for exertion."[230]

Jefferson expanded on his views about the slowness of the work in a letter of May 20, 1826, to John Cocke: he was "extremely dissatisfied" with the "pain in which our works at the University are going on, and were it not for my great confidence in the integrity of those we employ, I should be unable to resist the suspicion of a willingness in them to make the job last for life." Jefferson was too ill to visit the University as frequently as he felt was necessary, so he sent along to Cocke "some notes of things of strong urgency" and urged him to come to Charlottesville to review the situation. Even though Jefferson found himself "always injured by the ride there," he still hoped to accompany Cocke and "endeavor to apply a spur to those needing it."[231]

The crates packed with the marble bases and capitals had finally made their way to Virginia; payments for freight were made in February and April 1826, but they still had not been installed. Jefferson wrote Brockenbrough in early May that the bases should be hauled first and then he should get the "bricklayers immediately to begin the columns." Then, while the shafts were being built, the capitals could be hauled up to the University.[232]

Meanwhile, by the spring of 1826 the roof on the Rotunda was leaking. Jefferson told Cocke that "the Dome leaks so that not a book can be trusted in it until remedied." Jefferson's own opinion was that it would be best to install "another cover of tin laid on the old one." He felt strongly that A. H. Brooks, of Staunton, "whose competence to it we know," should be employed for the repairs, not the original installer, Anthony Bergamin, telling Brockenbrough that "we ought not to trust to people of whose skill we know nothing, the ignorance of the Frenchman is what costs us a new roof." Jefferson estimated that the price of a new roof would be $800 to $900. [233]

At the end of May Jefferson drew up a list of instructions for Brockenbrough. Included was the directive that he was to hire Brooks "to come immediately & put another cover of tin on the Dome-room of the Rotunda, without disturbing the old one." [234] Brockenbrough carried out this order in a timely manner, asking Brooks to come to Charlottesville and to give him a price for the work. Brooks replied immediately, telling Brockenbrough that he could not provide an estimate because he had never "done any work of the kind" and because he would need to see "what is to be done." Brooks suspected that the "old Covering must Come off," but in the end he may have simply patched it, for the annual reports show that in August 1826 he was paid only $23.86 for "covering the dome of the Rotunda," much less than what a complete new covering would have cost.[235] Meanwhile, in June 1826, the University purchased ten boxes of tin plates "of the next quality better than those formerly Sent."[236]

As soon as the roof was repaired, Jefferson wrote, the completion of the dome room was "to be pushed by every possible exertion."[237] He instructed Brockenbrough that "we must cover the ill appearance of the plaistering," evidently meaning the water stains on the interior surface of the dome, "by a whitewash, either of lime or Spanish white." [238] In another document Jefferson wrote that the plaster ceiling was then "to be coloured uniform with Whiting."[239] These instructions are at variance with Jefferson's undated notes specifying that the "Concave cieling of the Rotunda is proposed to be painted skyblue and spangled with gilt stars in their position and magnitude copied exactly from any selected hemisphere of our latitude." Jefferson had provided detailed instructions on how to determine each star's "exact position" and specifications for "a seat for the Operator movable and fixable at any point in the concave." However, the planetarium scheme was apparently not carried out.[240]

Visitor John Cocke and Alexander Garrett drew up a statement of anticipated expenses for the University at the end of May 1826. Among the items included were

$120 for William Phillips to build the portico columns of brick, $100 for John Gorman to install the bases and capitals, and $500 for Joseph Antrim, the plasterer, to put a smooth finish on the columns.[241] Antrim was paid $350 for plastering at the Rotunda in July 1826.[242] Payments were made for lumber in the spring and summer of 1826. [243] Other payments that may have been for work at the Rotunda included $2,000 in April and another $1,000 in July to Dinsmore and Neilson.[244]

Jefferson had been in ill health for much of the time that the Rotunda was being built, often unable to travel from Monticello to the University to follow the construction progress or to meet with the proctor and the contractors. Writing from Monticello in late October 1825 Jefferson described his current condition to an acquaintance: "Eighty two years old, my memory gone, my mind close following it 5. months confined to the house by a painful complaint, which, permitting me neither to walk nor to sit, obliges me to be constantly reclined, and to write in that posture, when I write at all." "The little of the powers of life which remains to me," he continued, "I consecrate to our University. If divided between two objects it would be worth nothing to either."[245]

Five months later, in early March 1826, Jefferson told architect Robert Mills, who would later design the annex to the north of the Rotunda, that his "health is quite broken down." For the past ten months he had "been mostly confined to the house, and now nearly ending my 83d. year, my faculties, sight excepted are very much impaired." Problems with his wrists meant he could "write but slowly & laboriously." Nevertheless, he invited Mills to visit Charlottesville: "I wish your travels should some day lead you this way, where from Monto. as your headquarters, you could visit and revisit our Univy 4 miles distant only. The plan has the two advantages of exhibiting specimens of every fine model of every order of architecture purely correct, and yet presenting a whole new and unique."[246]

Jefferson died four months later, on July 4, 1826. His death, James Madison, the new Rector, wrote, "clothed the whole land in mourning" and had fallen "with peculiar force" on the University. Even in retirement, Jefferson had not ceased "to cherish that love of country and of liberty, which had been the ruling principle of his life." "Reflecting more particularly on the great truth, that as no people can be happy but with a free government, so no government can long be free, without knowledge for its conservative element," Madison wrote, Jefferson had "determined to close his illustrious career, by devoting the resources of his genius and his vast acquirements, to the erection of this monument to science and liberty: indulging to the last hour of his protracted existence, the gratifying confidence that under the auspices of the State to which it was dedicated, it would more than re-pay whatever might be done for it, by the lights it would diffuse, and the characters it would rear, for the service and the ornament of the republic."[247]

True to his 1805 promise, Jefferson had bequeathed his library to the University and had also stated less formally that a "marble bust of him by Caracchi, with the pedestal and truncated column on which it stands, should be presented to the institution." However, according to his grandson Thomas J. Randolph the "deeply embarrassed state in which his affairs were left" meant that Jefferson's assets would not be adequate to cover his debts. Because he was fearful that settling the estate would "leave the library exposed to injury," Randolph hoped to be able to "deposit" the library at the University but with the understanding that it might be necessary to sell the books in the future. The bust, not having been a specific bequest, would probably have to be sold.[248] Madison, in a report to the Literary Fund, expressed the hope that the library could become a permanent gift, citing the "pain which would be felt from a loss, and that from such a cause, of a gift so acceptable to the University." The bust, Madison argued, would be a "fine image of its illustrious Father, which would be at once an appropriate ornament, and a spectacle ever reminding the ingenuous youth, of the love of science which they ought to cherish, and the dedication of its fruits to the cause of their country, of liberty and of humanity, which they ought to emulate."[249]

Jefferson had not lived to see the Rotunda completed. The clock and bell had not yet been delivered, and the plasterwork was not finished. In August 1826 Joseph Antrim sent a proposal to Brockenbrough stating that he would "put stucco cornices and do the plastering that remains undone inside of the rotunda" and extend credit for the work for up to two years.[250] In September Cocke asked Brockenbrough to get estimates, along with "details of their models," from Dinsmore and Neilson for constructing the "internal Cornice" in wood and from Antrim for creating it in plaster.[251]

## FINISHING THE ROTUNDA, 1826-1828

At the time of Jefferson's death work was also still needed in the library. Brockenbrough, turning now to John Cocke for advice and confirmation of his decisions as he had to Jefferson, wrote in late August 1826 that the "Faculty wish to be arranging the books in the Library." However, Dinsmore and Neilson had told him that they would "not be able to get up the hand rail & Balasters to the Stairs so as to secure the room" within a fortnight, as was desired. Brockenbrough complained that "if we are to be governed by their former promises and engagements, it will probably be double that time." To secure the library Brockenbrough suggested instead that "a temporary partition be put up at the head of the Stairs." There was already a "sufficiency of Book cases" available, so the actual work of arranging the books could get underway. "Unless some plan of this sort is adopted," Brockenbrough feared, "the Library will not be in place before the meeting of the Visitors" scheduled for early October 1826.[252] Evidently arrangements of some sort were worked out, for by the time the Visitors gathered at the University that fall, the new Rector, James Madison, was able to report that the "library room in the Rotunda has been nearly compleated, and the books put into it."[253] It was not until 1827, however, that payment was made for "two dozen chairs," and the "circular tables in the Library" were put in place. [254]

In the first annual report filed after Jefferson's death, Madison stated in a commentary dated October 7, 1826, that the "Two rooms for the Professors of Natural Philosophy and of Chemistry, and one large Lecture room, have also been fitted for use." Outside, the "Portico of the Rotunda has been finished, with the exception of the flight of steps, and the laying of the marble flags, which have been received and paid for." What remained to be done was the "finishing one other large oval room, one small one, and the entrance hall of the Rotunda."[255]

At their October 1826 meeting the Visitors passed a resolution asking the faculty "to cause the small room on the first floor of the rotunda to be finished & fitted for the reception of the natural and artificial curiosities given to the University" by Jefferson and "to have them suitably arranged for preservation & exhibition."[256] Two years later these materials were to be moved to the small oval room in the basement.[257]

Several small invoices were paid between the fall of 1826 and the summer of 1827. George Wolfe was paid "for turning for the rotunda," and J. Fitz was paid for "wire work" for the library. Joseph Forsett was paid "for bolts, &c. for rotunda" in March 1827.[258] Joseph Antrim was paid in September 1827 for plastering in the Rotunda,[259] and John Vowles had supplied "draw locks" for the library. Large sums were paid to Dinsmore and Neilson in 1827, but it is not clear whether the payments were for work on the Rotunda.[260]

In August 1826 the University had made a partial payment to Joseph Coolidge of $250 toward the clock and bell, but it was not until late March 1827 that Coolidge was able to tell the proctor that the clock and its dial had been shipped from Boston and was en route to Richmond.[261] Willard left early in April to "superintend the removal of the clock &c from the vessel to the Canal boat."[262] The order for the bell was not placed until August 1827. Coolidge confirmed the instructions that it was to be "cast, of purest metal, to weigh about 450 lbs." Although Coolidge had said that the bell would be ready in early September, it was not delivered until several months later. Coolidge was finally paid $159.25 in February 1828 for a "large bell." [263] The bell was hung above the ridge of the portico roof, adjacent to the attic.

In July 1827 the Visitors had authorized the proctor to install "a neat iron railing. . .on the right and left of the portico of the Rotunda & adjacent to the same"; its purpose was "to exclude access for the purpose of walking over the gymnasia" housed in the terrace wings.[264] The Visitors, however, failed to communicate this order to Brockenbrough until mid-September; when the order was finally conveyed to Brockenbrough, he was told to confer with the executive committee before determining placement of the railing.[265] Brockenbrough duly asked John Cocke about the best location and whether it should be made of cast or wrought iron; Brockenbrough evidently thought the railing was to be "on the right & left of the Rotunda & adjacent to the same," presumably at the east and west ends of the terrace nearest the Rotunda.[266] Cocke, however, suggested placing the railing "as near to the Pavilions as will be consistent with the object for which they are to be erected," that is, "to secure the privacy of these Buildings."[267]

If Lafayette's 1824 walk on the terraces included walking atop the arcaded wings of the Rotunda, wood railings may have been in place along the north and south sides of the terrace wings for reasons of both aesthetics and public safety. While the drawing of the arcade attributed to John Neilson did not indicate a railing, other early views of the university, such as the 1826 engraving by Benjamin Tanner [*Figure 27*], do show railings with fretwork.

In August 1827 Brockenbrough had given Cocke an update on the construction work, stating that "We are going on tolerably well with our jobs" and noting that "the plastering of the Rotunda will be finished during the vacation." Meanwhile, the iron work was "nearly completed." [268] Brockenbrough had also "written to Philadelphia for a stone cutter to come on & undertake the Steps." However, he had found that since that man "asks rather more than I am willing to give," he wanted to find an artisan in Richmond. [269] Brockenbrough had calculated that "it will take about 700 feet running measure" of stone for the steps, which in its rough state would be approximately 18 inches wide and 8-1/2 inches thick." No contract for the stone steps was written at this time, however.[270]

There were problems with the performance of the chimneys, making rooms on the west side of the Rotunda "useless." In a November 1827 memorandum Brockenbrough noted that "Some of the visitors looked at tops of the Rotunda chimneys at their last meeting, but I beleive came to no decisive determination what should be done to prevent their smoking." Cocke reminded Brockenbrough in November 1827 that he should experiment with a "Sheet iron Funnel" atop the chimneys and suggested that Brockenbrough consult with Dr. Emmett, who knew of "a late improvement in the Construction of these Funnels."[271] Cocke also sent along a scheme developed by Professor Bonnycastle "for Curing Smoking Chimneys."[272]

Apparently either the skylight at the Rotunda or the one at the anatomical hall had been leaking in 1827, and Cocke received the following advice from Coleman Sellers of Richmond about a corrective measure that had worked elsewhere: "take off all the glass, and have them well cleaned, and Rubed with whiting so as to Remove any grease that might get on by handling &c then take white lead putty, (made with drying Oil and Tapan) and bed each glass well into it—so as to Cement their edges together."[273] The terrace roof over the gymnasium was also leaking.[274]

Environmental conditions in the Rotunda, according to the faculty, were proving to be less than ideal for both the students and the books. In January 1828 the faculty passed a resolution directed to the Board of Visitors that "the Books in the Library especially those in the Gallery are now materially suffering from damp, and that it is impossible for any person to remain in the Library with comfort during the Winter season." The faculty also recommended that heating stoves be installed in the lecture rooms, "the fire places having been found insufficient for warming and drying the apartments," making them "exceedingly disagreeable and unwholesome especially in the morning."[275]

In July 1829 the Visitors authorized the executive committee to carry out some minor repairs in the Rotunda: the "pillars in the chemical lecture room" were "to be cased," and the benches were "to be fixed to a rising platform, as in the lecture room of the Professor of Natural Philosophy." In addition, the fireplace in the chemical laboratory was "to be altered, so as to improve the draught, in the mode thought most expedient by the Professor of Chemistry."[276]

Despite these problems out-of-town visitors to the University often found the overall ensemble, with the Rotunda as its centerpiece, enchanting. In 1828 novelist and diarist Margaret Bayard Smith wrote to her sisters from Charlottesville that "Never have I beheld a more imposing work of Art"; she called the domed library "a magnificent apartment—larger & more beautiful than the library in the Capitol." She and Professor John T. Lomax "sat in the Library looking over books & conversi[n]g on literary subjects for more than two hours, while the young people were roaming about & climbing to the dome or roof of the Rotunda."[277]

## REPAIRS AND IMPROVEMENTS, 1830S

The stairs leading up to the south portico may not have been constructed until 1832. The stone was quarried by William Leitch, and he was paid in small amounts by the University at various times beginning in September 1830, with the final payment made in January 1833.[278] An undated contract between the University and Leitch stipulates that Leitch would "undertake to quarry all the stone for the steps of the Rotunda on Gen'l Cocke's land." All stone was to be "of good quality and sufficiently hard so as not to be damaged by weather" and was to be "18½ inches wide on top and 8 ½ inches thick for the front and no less than three feet long."[279] In the spring of 1833 more stone was quarried and hauled to the site by wagon. By April 1833 "81½ feet of coping stone for the basement of the Rotunda" was quarried at a cost of $.40 per cubic foot, for a total of $32.60. In 1834 “stone work about the basement of the rotunda, under contract made in 1831” was carried out for a total of $129.60.[280]

Leaking in the Rotunda’s skylight and dome would prove to be a persistent problem. In July 1833 the Board of Visitors passed a resolution stating that the proctor should take “immediate measures to stop leaks in the roof of the Rotunda.”[281] A list of repairs and improvements published in the annual report of the Rector and the Board of Visitors in 1836 indicates that a modest $.50 was spent “repairing the sky-light in rotunda” in July 1835 and that $131.82 was spent for “tinning” on the Rotunda and the pavilions in August.[282]

At its August 17, 1837, meeting the Board of Visitors agreed that the “blocking course of Wood on the dome” needed to be repaired and painted. In November 1837 the University paid George W. Spooner of Charlottesville $181.81 for repairs made to the dome of the Rotunda. The Board had also directed in August 1837 that a “marble pavement” be “laid in the Portico of the Rotunda” and that the “Cistern at the Rotunda, now a cause of material injury to the walls of the building” be removed, but there is no record that year of the paving work or removal of the cistern or a clear indication of where the cistern was located.[283] Additional repairs to the roof, specifically to the “copper covering” of the dome, were made by James B. Rogers in October 1839, for $37.00.[284] It is not clear whether the $145.62 spent in May 1837 on “sheet lead, tin and glass for skylight” or the $11.50 spent in February 1840 for the “glazing sky light and painting” was for the skylight in the Rotunda or the one in the Anatomical Hall.[285]

The Board of Visitors had called for alterations to the skylight of the Rotunda in 1840 to stop the leaking, and a glass and tin lantern was installed over the skylight that year. The lantern and accompanying weathervane are clearly depicted in a lithograph of the Rotunda viewed from the south executed sometime between 1846 and 1851. The same components appear in several other lithographs that show the grounds from the east and west, made during the 1850s, 1860s, and early 1870s, though the weathervane, which was in the form of a quill some 8 to 10 feet long, was removed by William A. Pratt, the University’s first Superintendent of Grounds and Buildings, in 1860.[286]

George Spooner installed new bookcases in the library in October and November 1838 and January and February 1839, at a cost of $500.00. John Day and Company painted the cases and installed their glass doors in March 1839, at a cost of $59.57.[287]

University records reveal little else about specific repairs and improvements made to the Rotunda during the 1830s, suggesting perhaps that no major repairs were made during that time.

In December 1840 the Rector, Chapman Johnson, submitted a summary on the state of the University’s physical plant to the Virginia House of Delegates, reporting that during 1839 and 1840 the “buildings in the university have been put in a good state of repair; and they, with the public grounds, the library, the apparatus belonging to the several schools, and the other property of the university, are in good condition." Johnson further noted that the University was flourishing "to a gratifying extent," and though the country was mired in an economic depression, "the number of students has been nearly as great as at any prior time."[288]

## A GROWING UNIVERSITY, 1840S AND 1850S

By the middle of the nineteenth century the University was operating beyond full capacity and was essentially bursting at its seams: in the fifteen-year period between 1842 and 1857 enrollment swelled from 128 to 645 students. As of 1850 the University buildings — both dormitories and classrooms — were able to accommodate only 200 students. The University's growth can be attributed in part to increasing prosperity in the Southern states, which put more Southern parents in the position to send their sons to school. Escalating ante bellum tensions with the North further expanded the student body, as young Southern men seeking an education declined to enroll in Northern colleges and universities and opted to attend the University of Virginia instead. Furthermore, the extension of railway facilities connecting Charlottesville and Richmond in 1850 improved access to the University. The growth of the student body forced the University to rescind its policy that all students live in University housing, and the overflow of students sought lodging in Charlottesville's inns and boarding houses. Twelve new dormitories built at the University in 1848 brought only a little relief.[289]

The increase in enrollment soon outstripped available classroom space as well. While a few departments, such as chemistry and natural philosophy, had their own classrooms, the five schools of ancient languages, modern languages, mathematics, moral philosophy, and law had to share only two lecture halls in the Rotunda. By the early 1850s the English department shared this space as well. As the student body grew, faculty members complained that their ability to teach effectively was seriously hampered by the crowded conditions. The mid-century growth of the university also meant that Jefferson's plan—a more intimate arrangement wherein professors conducted classes primarily within their residences—was changing.[290]

In response to the ever-increasing need for more classroom space, the University decided to convert the two open gymnasia wings projecting from the southeast and southwest sides of the Rotunda into lecture rooms. As early as July 1833 George Spooner had submitted specifications for this work, but evidently the plan was not seriously considered until July 1840, when the Board of Visitors decided to advertise for proposals and contractors based on plans submitted that year by Visitor John Hartwell Cocke. The Board stipulated that the plan should include the following:

> The excavation of a space at least four feet wide parallel with the South walls, of the said Gymnasia, & extending from the steps of the Rotunda to the porticos of the Pavilions 1 & 2 respectively. This excavated passage to be sunk six inches below the level of the floors of the new rooms, to be faced with a brick wall laid in hydraulic cement up to the level of the Lawn & capt [*sic*] with cut stone & the bottom paved with hard brick, inclining from the walls of the rooms half an inch to the foot, with a graduated blind drain at the base of the outer wall to deliver the water by a continuation of the drain beyond the arched entries at the east & west ends of the said lecture rooms.[291]

Meanwhile, George Spooner was selected to make the alterations in the Rotunda's wings. The work of enclosing the gymnasia and installing lecture rooms began in the spring or summer of 1841, but some aspects of the new construction were quickly deemed unacceptable. On July 1, 1841, the Board of Visitors reported that the "roofs which have recently been erected over the halls at the former gymnasia obstruct the view and are injurious to the aspect of the buildings of the University." The Visitors ruled that the roofs should be altered and noted that it had been "ascertained that they may be reduced without injury to the apartments beneath." The Board recommended "that the proctor be instructed to cause the upper portions of the aforesaid roofs to a perpendicular depth of thirty inches to be removed and substituted by flat roofs covered with copper or zinc, and that he proceed, as soon as practicable, to procure the proper materials for the change hereby required."[292]

Spooner made the alterations between late July and November 1841, during which time the University paid him a total of $2,116.76.[293] The entire project of "converting the gymnasia into lecture rooms" was finished in the summer of 1842, and in July Spooner submitted an additional itemized bill for $6,115.36.[294]

At its July 1, 1841, meeting the Board of Visitors had discussed the uses of the new lecture rooms, as well as the uses of some of the rooms in the Rotunda. The Board resolved that the newly enclosed "apartment" that replaced the "Eastern gymnasium" should be "fitted up and appropriated to the general meetings of the University & as a place of religious worship for the professors, officers & their families and of the Students of the University, & that it be placed under the direction of the Faculty." The "western hall" would serve as a "Lecture room for the professor of Natural Philosophy & for the reception of the philosophical apparatus and of the objects of natural History &c bequeathed to the University by Mr. Jefferson." Furthermore, the "two apartments in the first story of the Rotunda, now occupied by the philosophical Apparatus, & by objects constituting the aforesaid donation of Mr. Jefferson" were to be used as additional lecture rooms once the apparatus was removed to the new lecture room in the western hall. The Board also discussed the arrangement of the rooms for instruction in chemistry:

> It being represented to the Visitors that the present lecture room of the professor of Chemistry in the basement story of the Rotunda is not as well adapted for the purposes of a lecture room as the opposite apartment in the same story, now used as a chemical laboratory.
>
> Resolved that the Proctor, under the directions of the professor of Chemistry, be instructed to cause those apartments to be altered in their interior arrangements so as that Eastern apartment be used as a chemical lecture room & the western apartment as a chemical Laboratory.[295]

In July 1840 the Visitors specified that the "Hall and galleries of the Library be newly painted" and that the floors of the Rotunda's "hall and galleries" be "swept once every day" and "scoured immediately preceeding [*sic*] the opening of each session of the University and at the commencement of each succeeding quarter thereafter, and as much oftener as may be necessary to keep them in a clean & neat condition."[296]

The Rotunda roof was painted with "soapstone paint" during 1842 at a cost of $17.60, and John Day submitted a bill for $27.75 for painting the "stonework" in the "Rotunda chapel" and the lecture rooms in March 1842.[297] The University paid Joseph Points a total of $750.00 for unspecified "repairs to the dome of rotunda" in July and October 1844.[298]

In July 1845 the Board of Visitors resolved that the proctor "be directed to have wooden flooring placed over the metal covering at the base of the dome of the Rotunda, and cause the ornamental blocking around the dome to be protected by a covering of sheet iron."[299]

The addition of the lecture rooms in the former gymnasia deferred the problem of overcrowding for only a few years. "The duty of arranging the lectures in the different schools of the University so as to prevent any interference or serious inconvenience to the Students has become from year to year a more difficult task," the faculty reported to the Board of Visitors in October 1849. In fact, by that time it had become "utterly impossible to make such an arrangement, owing partly to the considerable increase of the number of Students, and partly to the number of schools attended by each one of them." In response to the problem the faculty proposed that classes be shortened to one hour, "by which room for at least one additional lecture, daily, would be gained" and "once more lay before the Board of Visitors the urgent want of additional lecture rooms." The Board adopted the proposal for shortened classes only temporarily, "until further order [could] be taken upon the subject" of new construction.[300] Though plans for additional space had not been formalized, the Board of Visitors ordered the manufacture of 300,000 bricks at the end of June 1850, in anticipation of the "erection of such additional buildings as may become necessary for the successful operation of the University."[301]

The inadequacy of the existing conditions became even more apparent when the Rotunda was inspected by an unnamed "competent architect" in 1850, and it was found that the "*large room in the rotunda was insecure*, and could no longer with safety be used for *public exhibitions, as it had been for past years*."[302] In October 1850 Rector Joseph C. Cabell presented the following report on the state of the dome room:

> [T]he necessity of speedily providing another apartment for the general meetings and public exhibitions, cannot be too often repeated or too strongly enforced. These meetings and exhibitions have heretofore been held in the large upper apartment in the rotunda containing the library, which is the largest in the University, and in some respects admirably adapted to the purpose. The practice has been attended with some injury to the library by reason of the dust arising on such occasions; but if this were the only objection, it might be continued still longer without very material injury or inconvenience. This apartment, however, having been planned and constructed merely for the purposes of the library and its appropriate uses, the floor is not calculated to sustain the pressure of the great additional weight thrown upon it at the period of the annual exhibition, which is estimated to be generally not less than 100 tons, and at the time of great excitement in the audience, to be augmented by oscillation to quadruple this amount.
>
> From indications in the ceiling of the story below, there is evident danger of the floor yielding to the superincumbent pressure arising from this cause, especially as the circle of pillars by which the library is supported, is not sustained by corresponding pillars in the story underneath. A proper regard for the safety of the auditory, as well as of the building, suggests the necessity of as little delay as practicable in transferring the general meetings and exhibitions to another and more suitable position in the University.[303]

## MAKING PLANS FOR ADDITIONAL SPACE, 1850–1851

By the early fall of 1850 the Board of Visitors was sufficiently convinced that the existing buildings were "totally insufficient for the accommodation of the increasing number of students," and it was of the opinion that "no time should be lost in taking immediate measures for the erection of such needful buildings." At its September 25, 1850, meeting the Board of Visitors appointed a two-man committee, composed of Andrew Stevenson and Thomas J. Randolph, to investigate the cost and logistics of constructing a new building that would hold a public hall and space for additional lecture rooms and laboratories. The construction project had a modest budget of around $25,000, and the committee was authorized to engage an architect to superintend the work. On December 28, 1850, Stevenson informed Rector Joseph C. Cabell that he had written to "two eminent architects…to ascertain what they would charge to come up & visit me & draw plans &c. for the Building." The architects that Stevenson had contacted were Robert Mills of Washington, D.C., and prominent New York City architect James Renwick, who had recently won the competition for the design of the Smithsonian Institution Building in Washington, D.C.[304]

By mid-October 1850 Stevenson had written twice to both Mills and Renwick. Both architects were "willing to come at a moment's warning." Renwick stated that he would work only on the following basis: that he "do the drawings & attend the work for two percent of the whole amount expended." "This is too much," Stevenson reported to Cabell and suggested that it would be "best to get Mills" to "slip up to the University" from Washington and "help us fix a plan."[305]

Mills visited the University in early December 1850, and he and Stevenson inspected the grounds together to determine the most suitable location for the new construction. It is not known what further communications were had with James Renwick, but Stevenson and Randolph quickly selected Mills to undertake the work: "Mills was the "most reasonable," of the two candidates, Stevenson wrote to Cabell on December 28, reporting that Mills stayed "not two days, & we agreed on the plan." "I think," Stevenson assured Cabell, "you will approve of the plans of the Building & its location…It will add to the appearance of the Rotunda, & the whole of the Buildings."[306] On the other hand, Randolph, who was seen as "loyal to the artistic spirit of his grandfather," had reservations about the design for the annex and feared the fire damage that such a large building could pose. Nevertheless, the need for space and economy overruled the aesthetic concerns, and Mills's design went forward.[307]

Robert Mills had studied under Thomas Jefferson, James Hoban, and Benjamin H. Latrobe and is often credited with being the first American-born architect to be professionally trained entirely in the U.S. Born in Charleston, South Carolina, in 1781, Mills worked as an architect in Charleston, Philadelphia, Baltimore, and Columbia, South Carolina, until 1836, when President Andrew Jackson appointed him architect of public buildings in Washington, a position he held until 1841. In Washington Mills designed and supervised the construction of the U.S. Treasury Building in 1836 and the U.S. Patent Office and General Post Office, both begun in 1839.[308] He also won the competition for the design of the Washington Monument in 1836. By the time he was selected to undertake the work at the University of Virginia in 1850, Mills had been living and working in Washington, D.C., for twenty years and was 69 years old.[309]

Within weeks of visiting the University, Mills submitted full specifications and six sketch plans. He had wanted to publish the full specifications in newspapers, but Andrew Stevenson thought that venture too costly, so copies of the specifications were instead made available to potential bidders through the proctor's office.[310]

The specifications, dated January 3, 1851, indicate that Mills had designed a four-story addition extending north from the Rotunda. The building would include a sub-basement, a basement, a "principal" story, and an "upper" story. The main portion of the addition, which would soon become known as the Annex, would be 105 feet long and 55 feet wide. A covered colonnade would extend 25 feet from the north side of the Rotunda, connecting it to the south side of the Annex; a 25-foot-deep portico would span the Annex's 55-foot-wide north facade. Overall, the structure, including its two porticos, would extend 155 feet from the Rotunda.[311] The sub-basement and basement would have 14-foot-high ceilings. The principal story would have 21-foot-high ceilings, and the upper story "to eaves and cove of roof" would be 18 to 20 feet high. A later account indicates that Mills's original plans called for the basement, first, and third floors to be occupied by several "average size" lecture rooms and by "one large apartment, in addition, for the storage of the costly apparatus belonging to the School of Natural Philosophy." The second floor would be reserved for a 1,200-seat public hall.[312]

Mills's specifications stipulated that the joists of the interior structural system be "framed into girders supported by cast iron pillars or columns." The roof was to be framed with "principal rafters, with Queen posts, to admit of a cove ceiling to be executed" and covered with either tin or sheet iron. The outside walls were to be faced with "pressed brick, laid in Flemish bond" with "flat joints well settled down and bound with the interior part of the wall and prepared for painting." The "other parts of the walls" were to be "laid in American bond (3 stretchers to one header.)" The columns in the new portico were to match the columns on the Rotunda's south portico, extending "up to the eaves of the roof" of the "present Portico." The bricks in the columns were to be "solidly laid in hydraulic mortar, the facing prepared for stucco work, and the bases and caps of these columns (to be formed of cast iron) to be built in with the brick work." All wood floors throughout the building were to be constructed of the "best quality heart stuff."[313]

Controlling the costs of the new construction was a constant concern. In late January 1851 Stevenson reported to Rector Joseph Cabell that he had "urged Mr. Mills to reduce the general estimate to under $25,000 — whether he shall be able to accomplish it is to be seen, but I shall struggle hard." Stevenson expected that the University would have to look to foundries in Baltimore or Philadelphia "to see about casting the capitals and the pillars." "I hope to succeed in getting rich & handsome capitals," Stevenson wrote, "equal in appearance and as durable as those of the Rotunda for about $100 each, including the Bases," whereas the marble ones at the Rotunda had cost "$1100 & upwards, each." Stevenson anticipated a savings of "$5 to 6 thousand dollars" if they could get the capitals and bases made of cast iron for the desired price.[314]

Robert Mills was in Charlottesville in February 1851 to review his drawings with Stevenson and Randolph. At this time the committee "commissioned him to prepare forms of contract and issue the requisite advertisements." Mills met with the committee and potential contractors on April 3, at which time "the work, in all its departments, was let to undertakers of respectable standing, upon terms satisfactory to the committee and to the board of visitors."[315] The firm of Hudson and Lushbaugh of Staunton, Virginia, was selected as the contractor, and George Spooner was appointed to superintend the work.[316]

The first expenses for the project dated to May 1851. Fifty dollars went toward reimbursing Mills for his travel expenses to Charlottesville, and $100 was paid to him for his professional services thus far. He did not charge a fee for preparing the plans and specifications but was paid a monthly salary of $83.33 from December 1851 to October 1852 and was reimbursed for travel expenses.[317] The sum of $40.62 was paid for advertising in May 1851, and in June and early July 1851 an additional $101.87 was spent placing notices to contractors in the *Richmond Times-Dispatch*, *Richmond Examiner*, and the *Jeffersonian*.[318]

## CONSTRUCTION OF THE ANNEX, JULY 1851–1854

Ground was broken sometime in late June or early July 1851. The firm of Sowell and Seay carried out the excavation work, while Hassan and Boyle began stone work, and Word and Brown did brick work.[319] By mid-August 1851 work was reportedly moving along well, and there was "every reason to believe the building will be covered in by the ensuing winter." Andrew Stevenson and Thomas Randolph reported to Rector Joseph Cabell that work appeared to be "well executed and the materials of excellent quality." Stevenson and Randolph credited George Spooner with the smooth progress, reporting to Cabell that in Spooner they had "an entire confidence." "He examines daily, and indeed hourly the whole work as it progresses," Stevenson and Randolph reported, "and it is executed under his immediate approbation. So far everything has gone on as well as we could have expected; and if no unforeseen occurrence turns up to prevent it, we anticipate that the exhibition room will be ready for public exercises in June next, and the lecture rooms in the course of 12 or 14 months."[320] In late September 1851 construction was reportedly "advancing regularly. The first story is built up & the arches for the portico to the same height, excepting a part of one side."[321] The sum of $11,701.78 was expended on the project in 1851.[322]

The Annex was not completed according to schedule, nor was it finished within budget; Robert Mills's estimated cost for the building proved to be too low. The University petitioned the General Assembly to borrow $25,000 to put toward the construction costs, and the loan was granted in February 1852.[323] On May 8, 1852, Stevenson told Cabell that he was "not entirely satisfied" with Mills's estimates, and he was "disappointed to find so much to do & so much money expended." "The Proctor tells me that $20,000 has been paid," Stevenson reported, "and I fear that it will take 15 to 20,000 more. But it is too late to look back & the work must be completed."[324]

In their annual report the Rector and Visitors indicated that the new building "was not finished at the annual meeting in June [1852], as was anticipated in the last annual report." It was, however, "far advanced towards completion at that time, and sufficiently so for the public exercises at the close of the session to be held in the largest apartment," which was, presumably, the public hall. The lecture rooms in the basement were already occupied by the schools of chemistry and natural philosophy. The "upper story and the surrounding embankments" remained to be done as of September 1, 1852, but George Spooner assured the University administration that the "whole structure and its appurtenances" would be completed by October 1, 1852.[325]

The same annual report included a detailed list of expenditures related to the construction of the Annex made between May 31, 1852, and May 31, 1853, for a total of $20,332.54. Sowell and Seay continued with excavation work, as did Hassan and Boyle with the stone work, and Word and Brown with the brick work. Joseph Points did the tin work; Watson and Diviney did some of the iron work, while Samson and Pae of Richmond cast the iron capitals; Frank and Clover did the glazing; Terrell and Carter did the plaster work; and T. C. and S. M. Keller undertook the painting. Regular salaries were paid to Mills and to Spooner, and various other men were paid for hauling materials and for "labor." Some of the men or firms on the payroll were also paid for hiring out slave labor.[326] In a report made the following year, the Rector and the Board of Visitors indicated that $13,730 was spent on the project between July 2, 1853, and April 4, 1854, including payments made to the same firms employed the previous year. Furthermore, Edmond, Davenport and Company supplied cement; Hezekiah Taylor made the cast-iron railings for the porticos; George McIntyre supplied "glass, paints, oils, &c."; J. L. Maury did blacksmith's work; William S. Johnson supplied stoves and pipes; and Flannagan, Abell and Company supplied the carpeting for the platform in the "public room."[327] Curtains for the "exhibition room windows" and "chairs and cushions for the exhibition room" had been purchased in August and September 1852.[328]

Joseph Cabell reported on the usage of the various rooms of the completed building in October 1853:

> It has in the subbasement a chemical lecture room and laboratory, not surpassed, if equaled, in point of extent and convenience, at any other institution in our country: in the basement, a spacious philosophical lecture room, besides two other commodious apartments for instruction, and

> convenient passages for interior and exterior communication; in the first and second stories, a hall and gallery of capacity sufficient for the largest assemblages that will probably ever attend the public exhibitions; and in the third story, an apartment for a museum, running, like the hall immediately below it, through the whole length of the building, and furnishing extensive accommodation for collections in natural history.[329]

The chemistry laboratory was a point of particular pride, with its "perfect ventilation system" and "proper arrangement of furnaces, sand baths, water baths, &c." The laboratory's water supply was also "well accomplished at less expense and with vastly more convenience than by the former plan of digging a well near the Laboratory." The water supply was "brought from the cistern back of the Chapel," located on the north side of the Rotunda's southeast wing, "by a leaden pipe & distributed in a fitting manner over the Lecture room and Laboratory." The Board of Visitors also touted the adaptability and the vastness of the new space:

> Connected with the latter is a portion of the north arcade, that has been enclosed and is now used as a cellar for coals &c., but your Committee understand that this arcade, with the portion now used by the Janitor, can be fitted up at any time (by enlarging the windows) so as to furnish an extension to the Laboratory, whenever required and could be made in any respect not much behind the present Laboratory, & when thus extended it might be made to accommodate forty or fifty working students.
>
> It appears to your Committee that the whole building capacity of the lecture room, laboratory &c is not surpassed by any institution of the kind, and equaled probably by very few. Indeed there is nothing in the opinion of the Committee to prevent its development for the most perfect instruction in agricultural, manufactural & pharmacopeial Chemistry.[330]

Upon the completion of the Annex, the Rector and Visitors described its relationship to the Rotunda:

> It is connected with the rotunda, so as to bring all the lecture rooms, scientific collections and apparatus in the academical department under a common roof, in graceful and commodious distribution; and this completes the architectural accommodation for instruction by lectures and examination in this principal and important portion of the institution. The cost of the building, although considerable, is lost sight of in the contemplation of the great benefits and advantages resulting from its construction.[331]

The final cost for the entire project, as reported in 1853 and including $3,000 for "grading and finishing the surrounding embankments, &c.," would eventually total $53,228.74, or more than twice the initial cost estimate and budget.[332]

Cabell and the Board of Visitors defended the final cost, arguing that "a building of the same character and extent could scarcely be erected, in the same locality and under the same circumstances, with greater economy and of more faithful execution." Still, seeds of doubt about the integrity of the design evidently had already been sewn; the Rector and Board of Visitors stated in 1853 that "a more eligible position for such an addition could not have been selected" but that "if the new building detracts at all, it detracts as little as possible from the general aspect of architecture of the university."[333]

In spite of the initial support for the design, the Annex, even before it was constructed, was acknowledged by some as being out of harmony with the style of the other buildings on the campus. Once built, the Annex would prove to be a hulking appendage, and upon completion it was described as "ugly and incongruous" in comparison to the perfect proportions of the Rotunda. Furthermore, concerns were raised about connecting such a large building to the Rotunda as a fire hazard. Ultimately, however, the need to economize won over all aesthetic suggestions.[334]

## ATTEMPTS TO INCREASE THE UNIVERSITY'S WATER SUPPLY, 1854–1855

As the student body increased, so did the need for a more voluminous water supply. The water was needed not only for domestic purposes but also to extinguish fires, which were a constant threat to the buildings. In an attempt to solve the water problem at least three new cisterns were constructed at the University in 1851 or 1852, but these small reservoirs did little to alleviate the situation.[335]

In 1854 the University engaged engineer Frederick Erdman of Philadelphia to devise a scheme to pipe water to the University from creeks located to the southwest of the grounds. Erdman's proposal proved too costly, however, and the following year the University hired civil engineer Charles Ellet, also of Philadelphia, who had won national acclaim in the previous decade as a designer of suspension bridges. Ellet's solution to the water problem included installing tanks within the Rotunda walls:

> The right to take possession of the springs necessary to complete the supply had already been granted by the General Assembly. In accord with Ellet's recommendation, iron pipes were laid down, which connected a reservoir at the back of the Rotunda with numerous fountain-heads situated in the high valleys of the foothills towards the west. The water,—which was first received in the reservoir,—was, by a steam pump, forced up into two tanks located within a cavity of the bricks that supported the bottom of the dome in the rear. Each of these tanks had a capacity of seven thousand gallons; and they were elevated at least seventy feet above the surface of the Lawn. The pressure was sufficient

> to drive water from them to any roof within the central grounds of the University, except the top of the dome itself.[336]

However, the plan was not successful:

> The tanks proved to be defective. The leaking water at first seriously injured the exterior walls of the Rotunda, and then slowly dampened the partitions of the rooms and basement. There was, at one time, a heavy overflow, owing to a shortened provision for waste pipes. Many of the books in the library were, on this occasion, thoroughly soaked, the ceiling was defaced, and the plastering of the lecture halls below was loosened.[337]

The problem of getting sufficient water to the University buildings continued to plague the school. In an 1858 report to the executive committee, Superintendent of Buildings and Grounds William A. Pratt reported that "two cisterns with drains leading to them had been constructed on either side of the Rotunda."[338]

## REPAIRS TO THE ROTUNDA, 1850S

In June 1853 the library's collection was reportedly arranged and catalogued in an orderly manner, but other sections of the dome room were crowded with "forty or fifty engravings and prints…hung upon nails driven into the columns, and badly arranged and detracting from the appearance and beauty of the room." The executive committee of the Board of Visitors argued for the removal of the artwork and its installation in the museum space in the Annex.[339] Some pieces may have been removed around this time, but most stayed in the dome room until 1895.

By June 1853 the steps of the Rotunda were again in need of repair. "In their present state the bases of the columns are in danger," Visitor Andrew Stevenson reported, and he and the executive committee recommended that the steps undergo "immediate reparation." In August the University paid Lou Flannery $90 for "resetting of rotunda steps (in part)," and on October 3 Robert R. Prentis was paid $133.06 "for repairs to rotunda steps and other masons' work and for repairing pumps, &c." It is unclear whether the "other masons' work" and pump repair were related to the Rotunda.[340] Apparently the repairs made in 1853 were not sufficient: in June 1854 the Board of Visitors reported that it was "aware of the immediate necessity of repairs, and it is earnestly recommended that the steps before the Rotunda be reset at once as a few months may result in the entire destruction of the Portico unless these repairs be made." The Board resolved that the steps of the Rotunda should be "reset immediately, in such a manner as to prevent the destruction of the vault by the rain and frosts of winter."[341] In

February 1857 C. M. Warren and Company worked on the “composition roofing to the terrace floor at rotunda portico” for a fee of $75.40.[342]

At the end of the 1850s the Rotunda’s roof was also in need of repairs. Thomas J. Vaughan was paid $64.42 in April for “tin work on lantern and dome of rotunda.” The University paid George Spooner $55 for “repairs to rotunda lantern” on June 17.[343] Nevertheless, the librarian reported “leaks in the Library” in late June 1859, and the lantern was removed in 1860.[344]

The construction of the Annex alleviated the problem of crowding brought on by increased enrollment for only a few years. By 1857, with enrollment nearing 650, still more space was needed for academic purposes. The Board of Visitors did not have “even a room in which to transact their business, without interference with the operations of the University” and were forced to meet in a hotel “two miles distant.” The Board declared that the “physical wants of the university” had become “so pressing as to present serious obstacles to the proper conduct of the schools, and they must of course increase with the increasing number of students.”[345] In response to this Buildings and Grounds Superintendent William A. Pratt suggested that two wings be added to the Annex, “each of which should be a precise pattern in style, though apparently not in size, of the Annex itself.” Though the wings were never built, the plan was seriously considered by the faculty. In his history of the University Philip Alexander Bruce commented that had this plan been carried out, it would have created a “bulky cluster of buildings, together with the Rotunda and the Annex,” and “if it had been practicable to enhance the incongruous ugliness of the Annex in any architectural way, this scheme would undoubtedly have accomplished it.”[346] Perhaps the expansion was not carried out because of a sudden drop in enrollment triggered by outbreaks of typhoid fever and measles during the 1857–1858 academic year. Several students died, and many more left the University to avoid the pestilence. Many of the students returned by the end of the term, but by then the Civil War was looming on the horizon, and there would be no time or resources for a building campaign.[347]

## THE ROTUNDA DURING THE CIVIL WAR AND RECONSTRUCTION, 1861–1877

On record the University remained loyal to the Union until May 7, 1861, when Virginia followed South Carolina, Mississippi, Florida, Alabama, Georgia, Louisiana, and Texas in seceding from the Union and joining the Confederacy. Before that, however, rumblings of succession had already been felt on campus. On March 16, 1861, faculty chairman Socrates Maupin recorded in his diary that on the previous night the Rotunda had been broken into and the Confederate flag draped across the dome. The flag was quickly removed, though students were permitted to form military companies and perform drills on the Lawn. It was not long, however, before the faculty itself ordered the Confederate flag raised over the Rotunda, after the fall of Fort Sumter on April 13, 1861. Shortly thereafter the University buildings, including the Rotunda, were conscripted for use as hospital space, and tents were set up on the grounds to accommodate the overflow of sick and wounded. Following the July 21, 1861, Battle of Bull Run 1,200 casualties overwhelmed the University; another 1,400 troops wounded in the Battle of Port Republic arrived the following June.[348]

In spite of its occupation by thousands of casualties and battles raging across the state throughout the war years (with a total of 123 battles, Virginia saw at least three times as much action as any other state), classes at the University continued virtually uninterrupted.[349] Maintenance and repairs, however, necessarily fell by the wayside as the University struggled to maintain its academic schedule while reluctantly playing host to the Confederate Army.[350] During the war years the faculty received a mere "shadow of compensation" or sometimes no salary at all, and the positions of proctor and superintendent of buildings and grounds were eliminated.[351] Still, in July 1863 the library was reportedly in a state of "neatness" and "good condition," though there was a "bad leak in the room from the sky-light which ought to be promptly attended to." There is no record of repairs having been immediately made; in July 1865 the skylight again, or still, required "immediate attention."[352] Perhaps minor repairs were made in an attempt to solve the problem, but leaks in the roof and skylight and pleas for their repair were reported repeatedly in the years following the war. In June 1867 the Board of Visitors resolved that the reinstated proctor be "instructed to make a prompt and efficient alteration in the sky-light of the Rotunda so as to secure it against leaks." Still, a year later, the Committee on Grounds and Buildings reported that "all the roofs of the Rotunda buildings are said to be in leaky condition."[353]

The war had taken both a physical and financial toll on the University. In 1866 the Rector and the Board of Visitors reported that although the University had "escaped total destruction and ruin" during the war, "its buildings needed many and costly repairs," and the library was "sadly deficient in all the more recent works of general literature," having received no new books in six years. By the war's end the University's financial situation was in a "truly discouraging condition," and it had not "a dollar to meet the necessities." There simply were no funds to make the repairs to the Rotunda, which was "seriously endangered by the presence of the steam engine used to fill the tank — the tank itself is defacing the walls of the building." In 1868 the water tanks in the Rotunda continued to be a problem; the balustrades on either side of the portico on the south side of the Rotunda were in need of repair; and the "walls of the new building attached to the Rotunda seem to be giving away."[354] Modest repairs were made to the Rotunda's roof sometime between the end of June 1868 and June 1869.[355]

At the end of June 1870 the Committee on Grounds and Buildings reported that the "Rotunda has been much improved by the removal of decayed cornice and the substitution of new work, and by the addition of paint on those parts which were in immediate want of it." Still "much remained to be done to put that building and Hall connected with it in good order," and the committee recommended an appropriation for that purpose as soon as the University's finances would allow.[356] An inspection of the library in June 1872 showed it to be in "good condition," but it was agreed that the "procurement of glass doors for many of the cases" was essential for the protection of the library's collection. However, the University's post-war financial situation rendered the request "inexpedient" at that time.[357]

In June 1873 the Committee on Grounds and Buildings requested that the "water tanks over the library" that had been installed under Charles Ellet in 1855 be inspected. Either overflow or leaking of the tanks had caused damage to the roof, and the leaks had "seriously injured" some of the books in the library so that they were rendered "unintelligible and worthless." Upon inspection the committee determined that the leaks in the Rotunda's roof were caused by overflow of the tanks and resulting standing water on the roof, and within a few days pipes were "laid on the roof of the Rotunda as to prevent a recurrence of this overflow."[358] A report on the condition of the library dating from July 1874 observed that "everything connected therewith" was then in "excellent condition."[359]

In July 1874 the Board of Visitors discussed the continued use of the Rotunda as the site for University social events. Concerned about the risk of fire and the increased cost of insurance, the University librarian requested that public balls no longer be held in the dome room of the Rotunda, as they had been since the early years of the University. However, a report made by Micajah Woods of the Library Committee on June 30, 1874, had indicated that the "danger arising from the use of candles has been obviated by the laying of gas pipes around the galleries, and the jets are so arranged that the lights will project from the galleries and be entirely out of reach of parties on the main floor." Woods successfully argued for continuing some social events in the Rotunda, writing that the annual ball was "one of the chief items of attraction of the session, and it is particularly proper that the handsomest Hall at our command should be used for the occasion."[360][360] BV, Minutes, 1 July 1874.

In late June 1877, the Library Committee reported that the dome room, bookcases, and books, were all in "good order."[361]

## THE ROTUNDA AT THE END OF THE NINETEENTH CENTURY

As the Rotunda aged, its reputation as a hallowed space deepened. Along with this phenomenon, the University librarian seems to have grown weary of sharing the dome room with *fin de saison* revelers. In June 1880 the question of the use of the dome room for non-academic events was again raised, this time by J. L. Maryee, chairman of the Library Committee. "For two or three years past," Maryee complained, "the young ladies & gentlemen attending the commencement exercises have occupied the Library during some hours of each day as a dancing hall. This use of the Room, during the daytime of Commencement week, is disapproved by many of the earnest and influential friends of the University, as incongruous & unseemly, and in the opinion of your Committee tends to create injurious misconceptions as to the judgment and aims of the Authorities controlling the Institution." The Library Committee requested that "dancing and other social diversions" in the dome room be restricted to the annual ball on the evening of commencement, and the Board of Visitors agreed.[362]

Throughout the 1860s and 1870s the University continued to struggle with maintaining an adequate supply of water on campus. In November 1882 Proctor and Superintendent of Grounds and Buildings Green Payton reported that though he had recently "constructed a reservoir in the mountain at an elevation sufficient to distribute water over our buildings by gravity alone" by way of a "4-inch pipe," the system could not provide enough water for the University during the dry season. Payton had recommended "making new connections with the disused rotunda tanks," which had evidently been abandoned sometime before, and "refitting the steam-pump, thus keeping the old system as a supplement to the new." Though refilling and using the tanks would pose a threat to the Rotunda's walls, the need for more water was evidently dire enough that the Board of Visitors approved the plan. The work was carried out in 1882 at a cost of $397.94.[363] Despite these efforts the water supply was again reported to be inadequate the following year. The University employed the services of well-known sanitary engineer and landscape architect Ernest W. Bowditch, of Boston, to devise a water-supply, drainage, and sewer system. Bowditch estimated that a "thorough system" could be installed on the grounds for a cost of $31,300.[364] The University, however, was operating under "straightened means" due to the "heavy debt entailed upon the institution by our predecessors, in their efforts to sustain its reputation." The University's financial situation had become "so embarrassing" that the Rector and Visitors appealed to the General Assembly for relief.[365]

In June 1883 the Committee on Grounds and Buildings reported upon inspection that it would take "many thousand dollars" to put the University's grounds in "thorough repair." Because funds were scarce, the committee recommended doing only "such things as seem absolutely indispensable and requiring immediate attention." The first item on the list of critical repairs was the Rotunda's roof, which was in "bad condition." The committee recommended that the roof "be repaired and painted with Iron paint" and that such repairs would cost $100. The "Arch north of the Annex" was reportedly also in "very bad condition" and needed to be repaired "immediately." This cost was also estimated to be $100.[366]

In March 1884 the General Assembly granted the University a $40,000 annuity for maintenance of the grounds; the first installment was to be used "for constructing a system of sewers and improving water supply."[367] By the end of November 1885 "a reservoir of ample dimensions for the storage of a year's supply [of water] and the delivery pipes" were finished and were in "successful operation," at a cost of $20,177.57.[368]

On May 31, 1886, the skylight in the dome of the Rotunda was reportedly once again leaking and "in need of attention." Also at this time "nearly 100 of the marble slabs of the floor of the south portico have been cracked or broken and should be replaced." The skylights in the Annex were also reported to be in "bad condition" and leaking, causing damage to the walls in the public hall, "to the ceiling over the north portico, and in the walls in the Drawing Room." Repairs to the Annex were approved, but repairs to the leaking skylight in the Rotunda were deemed "not urgent" and, therefore, likely not immediately carried out. [369]

That same spring the original bell cracked, reportedly after students removed it from the mounting, turned it upside down, and filled it with water, which froze, splitting the casting and leaving its original tones "harsh and discordant." A new bell was ordered from McShane and Company, of Baltimore. Later, as plans were being made to reuse the original bell in the university chapel, three faculty members reportedly bought it for $100 and "presented it to the Board of Visitors on condition that it should be kept forever as a relic in one of the public buildings of the University." The cracked bell was placed in the Brooks Museum at some point before 1896, then moved to the Bayly Memorial Museum in the late 1940s, and in 1956 to Clark Hall. After it was rediscovered in 1964, it was placed on display in the Rotunda.[370]

Electric lights were installed on the University grounds and in its public buildings and dormitories in the spring of 1888.[371] Between 1888 and 1890 "extensive" improvements were made to the University's buildings and grounds but not to the Rotunda.[372]

A report on the Rotunda, published in the University yearbook, *Corks and Curls*, in 1891, describes the building as the "most prominent figure among the buildings" on the grounds and the "real hub of the University, where flows all day the stream of professors and students, as it were, the life blood circulating through the heart of the University world." The description continued, claiming that the "veriest rustic cannot fail to be struck with its beauty and impressed with its completeness; he does not comprehend it, still he perceives its effect. High above all towers is the red Roman dome, announcing to the scholastic pilgrim afar off that the Mecca, toward which he journeys, has been reached."[373] The reference to the Rotunda's dome in this passage suggests that the roof had been painted with red iron oxide, as the Committee on Grounds and Buildings had recommended in 1883.

Along with the increasing flow of students and professors that followed the war and Reconstruction came many shipments of new books. In December 1892 the Library Committee reported that additional shelf space was needed to house the ever-expanding collection. "The gradual absorption of the entire Rotunda" for use as library space, the committee suggested, was thought to be the "best ultimate disposition of this building."[374] Nevertheless, in June 1894 the faculty recommended that a new building be erected to house the University's library and that the Rotunda be transformed into a memorial hall for alumni.[375]

## THE ROTUNDA IS DESTROYED BY FIRE, 1895

On October 27, 1895, a clear, bright Sunday morning, second-year student Mason Foshee of Brewton, Alabama, decided to forgo church services in favor of a visit to the Fayerweather Gymnasium. As Foshee leisurely made his way along the nearly deserted University Avenue toward Rugby Road, he noticed a "thin wreath of smoke curling from the northwest corner of the Annex." A fire had broken out at the rear of the top story of the building, in an area used as a drawing studio. It was later determined that the fire had probably originated in a "large closet filled with old papers and in the wall and floor of this closet," where "electric wires had been run."[376]

Within three hours the forty-three-year-old Annex, which also housed the University's law school, as well as the schools of physics and modern languages, was reduced to a smoldering ruin. A bucket brigade of men and women, university students, faculty, and neighbors formed in an attempt to douse the flames, and the "University hose" was brought out, but due to insufficient water pressure and a "lack of skill and excitement of those who were handling it," the apparatus proved useless. Meanwhile, crews from the Southern and the Chesapeake & Ohio railroads, along with the fire departments from Charlottesville, Staunton, Lynchburg, and Richmond, were deployed to the scene. As onlookers watched the flames devour the Annex, fear that the fire would spread to the Rotunda and other buildings on the Lawn escalated.[377]

In an attempt to prevent the fire from reaching the Rotunda, dynamite was detonated in the wood-frame roof of the portico connecting the Rotunda and the Annex. Despite repeated attempts with dynamite and the columns being "battered down," the portico continued to stand, providing a direct avenue for the encroaching flames. The east and west wings of the Rotunda, which housed the old chapel and the YMCA reading room and directly connected the Rotunda with the pavilions and dormitories, were dynamited in the race to stop the fire.[378]

In spite of these drastic efforts, the fire was not contained; it advanced to the Rotunda, filling the building with "thick clouds of acrid, suffocating smoke, which poured in from the openings in the rear of the dome." Still, a "stubborn Southern spirit" prevailed on campus as masses of volunteers scrambled to empty the Rotunda of its contents:

> The door, like all the other doors in the University, was locked, but it soon gave way before the vigorous shoulders which were applied to it. The pictures of the Professors and distinguished Alumni of the University which ornamented the walls were the first things saved…The men going up and down the stairs were at first very much in each others way, until, by the effort of Prof. Mallet, Mr. Forsyth, and some others, a semblance of order was introduced into the crowd, and from then until the flames came into the dome the students went up one stair and down the other in a ceaseless stream.
>
> The men dipped their handkerchiefs in water and tied them over mouth and nose and groped through smoke to the books and pictures. The glass cases holding the books were all locked; the students broke them open with fist and foot and threw the books out of the windows into blankets, which others held below, or carried them down stairs in their arms.[379]

Some of the students then turned their attention to the mid-1850s marble statue of Jefferson carved by Alexander Galt that stood on the main floor of the Library:

> A squad of men, under Dr. Kent's direction, saved the cases containing the catalogue of the library, while others tried to lift the statue of Jefferson from its pedestal with their hands, an attempt which was naturally unsuccessful….finally ropes were secured and attached to the neck of the Statue. These ropes were then carried up into one of the galleries and from thence willing hands lifted the statue from its pedestal and lowered it onto mattresses which had been placed under it. The mattresses with the statue on them were dragged to the door and the statue slid down the steps on an inclined plane of planks; the whole work being done in stifling smoke and under inconceivable difficulties.[380]

According to the student newspaper, *College Topics*, as the men rushed in and out of the burning building, women at the scene "met the blinded and choking men as they emerged with the books from the Rotunda and took their burdens from them that they might return more quickly to their work. Many ladies carried across the lawn loads of books which had taxed the utmost strength of athletic men."[381] Morgan Poitiaux Robinson, one of the many students struggling to save the Rotunda that day, reported that women, too, worked feverishly inside the Rotunda, rescuing books and art alongside the men:

> They kicked the glass out of the bookcases — in many instances breaking it out with their own bare hands — and worked side by side with the men long after the fire was in the Library. The boys would get down on their knees and hold out their arms, while the women piled the books as high as they could reach on the outstretched arms; or again, the men would fill the women's silken (for it was Sunday) skirts with books and in each case the one carrying the books would take them to the window…and dump them down to the portico of the Rotunda, while others on the portico would carry them down to the Lawn and away from further danger. At first the men had tried to drive the women away, telling them that they would save all the books, etc., but they would not go, but worked everywhere that the men worked.[382]

Years after the fire Robinson vividly recalled the chaotic scene inside the Rotunda as the fire raged. "It was an awful scene," he wrote in 1908; the glow of the fire through the thick smoke "cast a dull, red, fiendish glow over everything." This phenomenon, combined with the crackling of burning timbers and the sounds of breaking glass, crashing beams, and dynamite explosions, created a "veritable hell" inside the Rotunda before the "whole plaster ceiling of the dome…came down to the floor."[383]

Over the next few hours the fire burned uncontrollably, and at about one o'clock that afternoon the "great dome of the Rotunda slowly and majestically sank into the raging flames." Bell Dunnington, the twelve-year-old daughter of Professor Francis P. Dunnington, witnessed the fire, and in a letter to her sister the following day wrote that she had never seen a "more magnificent or more awful sight than when the dome caught fire. All of the top part of it was one terrible, glowing mass of flame, and the tin [roofing] had a curious reddish look, though it did not blaze but wrinkled up." Photographs taken in the days after the fire show that much of the Rotunda's interior was destroyed, leaving little more than a charred, brick shell. All that was left standing were the "walls, the front and back porches, and some blackened pillars." Fortunately, there were no fatalities, and no serious injuries were suffered.[384]

Morgan Robinson painted a doleful picture of the scene at the University the night of the fire:

> The Lawn was littered with books, instruments from the different laboratories, book-cases, desks, benches, and whatnot, while near the steps of the Rotunda, its recent home, lay the statue of Jefferson, enshrouded in a large canvas and guarded by special watchmen. When the moon came out, as though to take a last look at the pride of Jefferson's latter days, it was a ghastly and heart-rending sight to see the blackened walls and hollow windows, and the tall white pillars, with their marble capitals all smoked up, standing as silent sentinels, on

> the old portico, where had stood so many men of note in this country, beneath the shadow of the dome of the Old Rotunda, it was certainly a sad, sad sight.[385]

Even though the fire wreaked havoc and the "embers glowed for several days," classes, remarkably, continued uninterrupted. The fire was under control by half-past two on that Sunday afternoon, and by three o'clock the faculty, wasting no time, assembled in the chemistry lecture room "to devise ways and means for carrying on the work of the University without interruption." That night University mechanics, who had spent the entire day tirelessly battling the fire, "kept hammer and saw and plane going in order that lecture rooms might be ready for morning lectures." The day after the fire "all work of the University went right on without a break. All classes met at their usual hours, and all lectures were delivered, though in improvised lecture rooms, society halls, etc., just as if nothing had happened." Morgan Robinson later observed that the "University probably never saw the time when lectures were better attended than they were that day after the fire," even though "everyone wore a fatigued, worn-out, weary and sorrowful expression as though he had just lost his most valued friend."[386]

### TAKING MEASURE: LOSSES AND OPPORTUNITIES

At the time of the fire the Rotunda housed, in addition to the library, the lecture rooms of the schools of ancient languages, mathematics, moral philosophy, and English.[387] Initial reports indicated that while some of the materials stored in the Rotunda and the Annex were severely damaged in the fire, "the larger part of the library's contents," including books, paintings, and statuary, including a bust of the late Professor John B. Minor, were removed from the library in the Rotunda in time to be saved, as were the contents of the law library in the Annex. In fact, however, by early January 1896 the University calculated that while 11,694 books had been rescued, approximately 30,000 others, valued at $50,000, including some given as gifts to the University by Jefferson himself, were lost. It was later reported that as many as 50,000 volumes were lost. Most of the books that burned were housed in the middle and upper galleries of the Library.[388] During the months following the fire, the surviving books were recatalogued, arranged on the shelves in Brooks Hall, then the University's natural history museum, and made accessible to the student body by early May 1896.[389] While much of the art displayed in the Rotunda was also saved, the University's beloved copy of Raphael's painting *The School of Athens* by Paul Balze, purchased by the University in 1853 and which hung in the public hall of the Annex, was destroyed.[390]

A report of the faculty dated October 31, 1895, and the Rector's annual report of 1895–96 offer conflicting information about the surviving apparatus used to teach physics and engineering. The faculty report indicated that some of the instruments suffered damage, but that much of the equipment had been removed from the physics lab in the Annex and stockpiled in the Brooks Museum. The Rector's report, however, stated that the "apparatus of the Physical Laboratory and Engineering Department was almost entirely destroyed."[391]

Though undeniably a tragedy, the fire nonetheless opened a window of opportunity to improve the University: the outmoded and cramped spaces could now be replaced with "facilities more ample and splendid" than those that the student body and faculty had previously known. From the disaster the University community took a positive tack, likening their beloved, burned institution to a phoenix, rising from its ashes. The faculty called upon the Board of Visitors to unite with them "in the most active and earnest efforts," not only to restore the "beauty and conveniences" of the fire-ravaged buildings but also to make significant improvements to the University as a whole.[392] Faculty members were extremely concerned that the fire would lead to a fall off in enrollment and agreed that it was necessary to act quickly to restore the campus to full — and improved — working order and to assure the student body that the University was as strong as ever.

In its report the faculty declared that the Annex's "contiguity to the rotunda" was the "cause of more than half of [the] disaster" and that the building had been an "architectural blunder" in the first place; the Annex, the report stated, was "devoid of true architectural merit and very costly for the accommodation secured." The Rector, Dr. W. C. N. Randolph, reminded people how his father, Thomas J. Randolph, who was on the building committee for the Annex, had "bitterly opposed" its construction, predicting that "it would lead to the burning of the Rotunda." [393] Further concerns over the possibility of a fire in the Rotunda itself and a call for a safer place to house the library had been voiced in the *Alumni Bulletin* just eight months before the Rotunda was destroyed: "The greatest need is a fire-proof library building. Our present valuable collection is constantly exposed to fire."[394]

With Thomas Randolph's prediction sadly realized and the Annex and Rotunda burned, the faculty immediately suggested erecting a free-standing "Academical building" constructed of fireproof materials on another site, removed from the Rotunda and the other buildings in Jefferson's Academical Village. They recommended that the ruins of the Annex be demolished immediately, that any "useful material" be moved to the yet-to-be-determined new site, and that the "depression occupied by the old building" be "backfilled with earth." The cost for the completion of a new academic building was estimated at $90,000.[395]

Meanwhile, though, in preparation for a meeting of the Board of Visitors on November 4, 1895, the faculty consulted with Harry McDonald, of the McDonald Brothers architectural firm based in Louisville, Kentucky, to determine the condition of the ruins and to develop cost estimates for rebuilding. McDonald was in Charlottesville at the time, overseeing the construction of Christ Episcopal Church. After his investigation McDonald stated that the exterior walls of the Rotunda were "sound" and could be reused in reconstruction. He reported that the walls were in need of "little repair," though they should be "at once protected against damage from weather" with a new roof, which, he recommended, be installed immediately.[396] Soon after the fire Margaret Lewis Randolph, a great-granddaughter of Thomas Jefferson, had viewed the ruined buildings, noting that the Rotunda then looked like "any other burned out building. The North wall of the Annex has fallen for about halfway down." The walls of the Rotunda, she reported, "they think are all right…the Capitals of the front columns are probably destroyed by the fire, the ornamental parts are dropping off in great many places…Carts are already busy cleaning up the debris and the ashes are smoking inside."[397]

While the faculty, students, and Board of Visitors agreed that it was crucial that the Rotunda's original proportions be faithfully observed in the reconstruction, there was debate over the intended use and interior arrangement of the building.[398] Over the years the library had become "so crowded with books that the orderly arrangement of them was impossible, and the consequent utility of the collection was seriously impaired." In order to accommodate a pleasing, spacious, and modernized library facility within the Rotunda, some members of the faculty suggested that the entire interior — "the whole capacity from the dome down to the portico floor" — should (unlike Jefferson's multi-story Rotunda with the Library in the domed space on the top floor) be used entirely for the purposes of the library.[399] However, some members of the faculty disagreed with this plan, arguing that such an arrangement deviated from the original as-built scheme and was therefore unacceptable. The question of how the interior of the new building would be arranged was not settled until after another architect was selected and final plans were drawn, several months later.[400]

The faculty had recommended in its October 31 report that the Rotunda's east and west wings, or terraces, on the south end of the building should be "at once reconstructed in their former proportions…and assigned to the use of the library and the School of Natural Philosophy, respectively."[401] In addition to commenting on the arrangement of the interior of the Rotunda, the faculty suggested that a portico, similar to the one of the south facade, be constructed on the north side, "with proper flights of steps descending to the esplanade to be formed over the site of the old Annex, and thence at the Ramparts to the level of the ground." The faculty recommended this though the north portico was not part of Jefferson's as-built design.[402]

RAISING THE FUNDS NEEDED TO REPAIR AND IMPROVE THE CAMPUS

Even while smoke was still rising from the "crumbling walls and smoking ruins," students and faculty had gathered to discuss ways to raise the money to rebuild the destroyed buildings. Initial speculation about the cost of repairs, improvements, and replacement of lost equipment ranged from $100,000 to $300,000.[403] The faculty claimed that the funding could "easily be raised if every friend of the University" did his "duty in [the] matter" and that the "funds requisite for this reconstruction" were "already on hand or immediately in sight." However, fundraising proved more difficult than initially expected.[404] Moreover, the University buildings were woefully underinsured: the firm of Peyton and Sinton of Richmond, which carried the insurance, estimated coverage at about $150,000 for all of the University's buildings, and the damaged buildings were covered by only $25,000 in these policies. The *Charlottesville Daily Progress* provided the following breakdown of the insurance coverage of the damaged buildings and materials:

| | |
|---|---|
| Rotunda | $8,000 |
| Library and pictures | 8,000 |
| Public hall or annex | 3,500 |
| Scientific apparatus, etc | 3,500 |
| School of Athens | 1,000 |
| Old chapel | 500 |
| Y.M.C.A | 500 |
| | $25,000[405] |

In its October 31, 1895, report the faculty urged that the "work of design be pushed rapidly to its completion and the work of construction begun at the earliest practicable moment."[406] In this same report the faculty also proposed that sites be selected and plans designed for a new physics laboratory and separate engineering building. The faculty wanted both of these new buildings to be "isolated from all others."[407] In short, the task that lay ahead of the University was monumental: "buildings, projected on a larger scale than had been before attempted" at the University had to be "located, designed, and erected within twelve months," and the funding had to be secured "with even greater promptness." Moreover, "the equipment of the Library and of the other departments devastated by the fire" had to be "renewed, and, as far as possible, modernized and enlarged."[408]

At its November 4 meeting the Board of Visitors assembled a building committee to oversee the restoration of the Rotunda and the construction of new buildings that would satisfy the need for classroom space formerly housed in the Annex. The committee was composed of the Rector, William Cary Nichols Randolph, who was Thomas Jefferson's great-grandson; two Visitors, W. Gordon McCabe and Armistead C. Gordon; and faculty members William M. Thornton, professor of applied mathematics and chairman of the faculty, and William H. Echols, a civil engineer who served as an adjunct professor of mechanical engineering and was also the University's superintendent of buildings and grounds in 1895.[409]

Within days of the fire contributions from individuals and offers of financial aid from sympathetic alumni and friends and from other universities around the country began to arrive via telegraph at the University. By November 8, 1895, the fund for the new construction exceeded $12,000, each dollar from private subscription.[410] Two days after the fire a mass meeting, spearheaded by Virginia Governor Charles T. O'Ferrall, was held in Richmond with the aim of organizing a fundraising program.[411]

William M. Thornton, an alumnus of the University who had been a member of the faculty since 1875, traveled to New York and Boston in late December 1895 and early January 1896 to appeal to University of Virginia alumni in those cities for contributions. It was a difficult task: he bemoaned his "almost unbroken record of defeats" and "numerous absolute failures" in his campaign; people with the means of making large donations, he found, were "harried by constant appeals from every quarter and for every cause." Nevertheless, he managed to secure several large gifts, ranging from $2,000 to $25,000, as well as many smaller donations. By January 6 Thornton estimated that he had raised more than $42,000 during his trip.[412] In the February 1896 issue of the *Alumni Bulletin* Thornton recounted some of the donations: "The largest gift," of $25,000, he wrote, "has been that from the generous and public-spirited Charles P. Rouss, of New York City." This gift would be appropriated for the construction of the physical laboratory at the south end of the Lawn, and the building would be named in Rouss's honor. Other contributions included $2,500 from a Mrs. Sinclair, also of New York City, and $5,000 from a "liberal friend of the University in Boston." In addition, Thornton reported, "there have been obtained from general contributions in the Northern and Western States, $1,718; from the District of Columbia, $2,881; from the Southern States, $4,048."[413] An additional $33,053 had been received from sources throughout Virginia: the cities of Richmond, Norfolk, Lynchburg, Staunton, Lexington, Winchester, and Roanoke contributed a combined $18,575, and the town of Charlottesville and Abermarle County together contributed $7,886. The Southern Railroad and the Chesapeake and Ohio Railroad gave $2,000 and, $1,000, respectively. Other donations from the "State at large" amounted to $619, in addition to more than $1,500 collected by public-school children from throughout Virginia. Thornton further reported an additional $2,930 from the University of Virginia itself.[414]

While on his trip Thornton received word of "several gifts of books," including "fifteen hundred volumes from Columbia College" in New York City; a "fine collection of the older editions of the Greek and Latin classics, and of works in general History and

Literature from the library of the late Dr. Torrey, of Cambridge, Mass.; and the entire medical library of the Boston Athenæum, containing many of the older classics in the medical sciences." "Many publishers," Thornton reported, "were also induced by our New York alumni to make smaller contributions of books."[415] While in New York and Boston, Thornton solicited for contributions in local newspapers, including the *New York Post*, *New York Times*, *New York Sun*, *New York World*, *Home Journal*, *Boston Herald*, and the *Boston Transcription*.[416] By the end of 1897 the University would have in hand approximately 40,000 volumes, thus restoring about one half of the original library.[417]

In securing the necessary funds, the University turned not only to loyal alumni but to the Virginia State legislature as well. The Visitors urged alumni associations to lobby the legislature for "as liberal an appropriation as possible towards rebuilding and re-equipping the University." Though the University had hoped for a $200,000 lump-sum grant from the State, the State instead permitted the University to borrow the desired $200,000 and awarded an additional $10,000 annuity to enable it to pay the interest on the debt.[418] The legislature claimed it could not justify giving $200,000 outright to the University when Virginia was mired in debt and severely impoverished in some regions. One senator argued in support of reducing the annuity to $5,000 (an amendment that was defeated 30 to 5):

> I come from a section of the State where, while we are honestly in favor of an appropriation to the University, we are not able in consequence of any sentimentalism to subscribe more than we are able to do. We are confronted with the fact, however, that the interest upon the State debt is to be paid; our lunatic asylums are needing appropriations, and I cannot conceive how, in the estimation of any senator upon this floor, we can in our present condition subscribe the sum of $200,000 to the University of Virginia.[419]

The following retrospective review of the fundraising was published in the *Alumni Bulletin* in 1898:

> By January 18, 1896, there had been raised in cash and pledges from the alumni and other friends of the university about $75,000, which amount was increased by later gifts to $86,000. There was in hand from the original Fayerweather bequest and from the Shields bequest enough to raise this sum to $140,000. The conditions of the litigation with reference to the residue of the Fayerweather estate justified the expectation of about $120,000 from this source. And the bill of relief before the Virginia Legislature had been so far assured as to give

> reasonable assurance of $200,000 from the bond issue, which they finally voted. Altogether there was about $440,000 in sight for the work of reconstruction.[420]

## SELECTING THE ARCHITECT

Harry McDonald had acted as the initial architectural consultant in the Rotunda's reconstruction and carried out preliminary work, including taking measurements of the surviving walls of the Rotunda and then using these measurements, along with Jefferson's original drawings, to prepare a set of designs for the restoration of the building. Five of these drawings survive, including ground-floor and first-floor plans, front and side elevations, and one section [*Figures 64-67*].

McDonald Brothers' plans depicted a very different interior from that of the original Rotunda. In order to create more space for the University's growing library collection McDonald Brothers designed the new Rotunda without the floor dividing the dome room from the main level below, creating a single, large room that stretched skyward from the main floor to the dome and oculus. A new skylight would be framed in cast iron and have a higher, more conical shape than its predecessor. The plans included three annular levels of galleries for books: the first gallery level would be supported by twenty pairs of Ionic columns, the second gallery by twenty pairs of Corinthian columns, and the top gallery would be defined by an arcade with Doric pilasters. The drawings indicate that ornament, not included in the drawings, would continue around the circumference of the room between each of the levels. The smooth surface of the interior dome destroyed in the fire would be replaced with coffers set in plaster.[421]

Though McDonald Brothers' plans eliminated the oval rooms on the main floor, these rooms, as well as the "dumbbell" hallway, were retained on the ground-floor level. Staircases with a semi-circular end return connecting the ground and main floors were placed at the north and south ends of the building.[422]

In their designs the McDonalds included, as was requested by the faculty, a portico on the north side of the building. This north portico would resemble the south portico, with six Corinthian columns across the front and three columns along each side. The new columns on both porticos were to be fluted. The bases of the columns, the shafts, and the capitals were designed with the same dimensions as the old ones on the south portico. There would be a lecture room under the north portico to help make up for the classroom space lost by removing the three oval rooms on the main floor. The presence of the south terrace wings is vaguely indicated on McDonald Brothers' plans; the north terraces are not included.

The McDonald Brothers' plans indicate a wide use of cast iron throughout the building. The exterior window casings and lintels would be recreated in the "same design" as the old wooden ones but would now be of more fireproof cast iron. Window sills would be made of stone.[423]

The new roof of the Rotunda was to be constructed of tin and galvanized iron. The cornice and the steps of the dome would be galvanized iron and the curved part of the dome between the top step and the cast-iron–and–glass skylight would be covered in tin plate. Overall, the McDonald Brothers' drawings were heavily annotated with dimensions. The firm began work reconstructing the Rotunda's terrace wings soon after the fire, working in partnership with local builders, the Spooner Construction Company of Charlottesville.[424]

McDonald Brothers had been, at least initially, seriously considered for the entire reconstruction project: the Board of Visitors had resolved at its November 4, 1895, meeting to secure McDonald Brothers "at once" and "with their advice and assistance proceed to rebuild the Rotunda and the Wings thereof."[425] Although they created the detailed drawings and engaged in work on the Rotunda in late 1895 and early 1896, McDonald Brothers was, nevertheless, passed over for the commission.[426]

The faculty had stipulated in its October 31, 1895, report that in order to ensure that the architectural character and classical proportions of the Rotunda be retained, the architect selected to undertake the project should be "not of local repute only but of broad and national consideration." Furthermore, the faculty requested that the architect take into account "not merely the convenience and elegance of the single structure, but its effect as a member of our general architectural system."[427] The faculty was convinced that it was important to follow the "classical types of design" in the new construction and to locate the new buildings "so as to create a harmonious combination with the original Jeffersonian group"; previous additions, the faculty felt, had "not added in the least degree to the harmony and beauty and magnificence of the original composition." When creating new plans for the Rotunda, the architect should also "give special attention to the problems of <u>heating</u>, <u>lighting</u>, and <u>ventilation</u>, which in the old building were inadequately solved."[428]

Professor William Thornton had written to William Rutherford Mead, partner in the New York-based architectural firm of McKim, Mead and White, on October 29, a few days after the fire, just as Mead was returning from Europe. Back in New York, Mead replied to the news of the fire on November 5, writing "I can only say how much we all regret the calamity which has befallen the University in the loss of a building that was one of the architectural monuments of the country — and our hope that its reconstruction has fallen into reverent hands." "It would indeed be a misfortune," Mead continued, "if some one tried to be original and improve on what has gone before — except perhaps as to interior arrangement" of the Rotunda. Mead clearly indicated the firm's interest in working on the project, telling Thornton that "if no final arrangements have been made, we can only say we should consider it an honor to be associated with the work and apart from our actual expense should not consider the money side of the matter." The expenses, he added, would be about three percent of the construction costs.[429] Coincidentally, when Mead responded to Thornton, Mead's partner, Stanford White, was in Richmond to attend the fashionable wedding of a close friend, artist Charles Dana Gibson, and Virginia socialite Irene Langhorne. White returned to New York on November 8 and was likely already aware of his firm's expression of interest in the project by that time.[430]

Though McDonald Brothers had already begun work on the reconstruction of the Rotunda's terrace wings and the building committee had been in communication with McKim, Mead and White, there also was talk of holding an architectural competition.[431] Several prominent firms, including Barney and Chapman, and Carrère and Hastings, both of New York; E. G. Lind of Baltimore; Edgerton S. Rogers of Richmond; and Shepley, Rutan and Coolidge of Boston all contacted the University expressing their interest in the massive, high-profile project. However, the University quickly scuttled the idea for a competition in the interest of expediency. The faculty feared that students would not return to the University for another session unless they could see "some sign of active preparation for the new buildings & some proof that they will have new lecture-rooms for their next sessions' work," and a competition would undoubtedly delay the start of construction.[432] This concern was further illustrated when, on January 18, 1896, William Randolph wrote to architect John Carrère of Carrère and Hastings, thanking him for his interest in the work at the University but also explaining that because time was so short, "it would not be wise for us to risk the delays almost necessarily consequent upon an architectural competition"; the members of the building committee had felt "compelled to entrust the work to the hand of one chosen man of undoubted professional eminence."[433]

By the end of the nineteenth century McKim, Mead and White had become the preeminent architectural firm in the U.S., renowned in both the professional and popular press. In his 1931 biography of Stanford White, Charles C. Baldwin described the firm as "vigorous, versatile and interested" and noted that the partners "were part and parcel of the times, entering into the activities of their clients, designing homes, clubs, churches, museums, memorials and office buildings, for a whole generation." At the time of the fire at the Rotunda McKim, Mead and White had a "near monopoly on prestigious projects" in the U.S., and they had, among other things, recently designed the new campus at Columbia University and New York University's Bronx campus, both of which included rotunda-form libraries.[434]

On January 18, 1896, eschewing the competition and offers from other firms, the University of Virginia formally offered McKim, Mead and White the commission for the reconstruction of the Rotunda, as well as for the construction of a complex of three new buildings across the south end of the Lawn, including the general "Academical Building," physical laboratory, and mechanical-engineering building. With this decision and invitation, McDonald Brothers was officially supplanted. Randolph, as chairman of the building committee, and Thornton, as chairman of the faculty, conveyed the news to Stanford White that the building committee was inviting him "to become the architect for the reconstruction of the Rotunda and the erection of the new buildings." Partner Charles F. McKim was indefinitely laid up, recovering from a bicycle accident, and William Mead was more involved in managing the firm than in creating architectural plans.[435] The building-committee members later admitted that they had "exceeded their authority" in directly offering the appointment to McKim, Mead and White, but their action was speedily confirmed by the Board of Visitors.[436] Stanford White immediately accepted the commission.

In his letter of invitation Randolph urged White to make arrangements to visit the University at "the earliest possible date" with the goal of "inspecting its possibilities or architectural development."[437] Thornton reminded White that when they had met the previous fall, probably soon after the fire, he had explained the "limitations of our resources and the simplicity of the materials in which your work must be done." Thornton wrote White that he would have to rely "mainly on bricks and mortar" but also pointed out that "Jefferson shewed [*sic*] in our old buildings how much could be done by proportion and composition, and we shall trust you to broaden his demonstration." Thornton also told White that McDonald Brothers had "retired from the work which they had undertaken" and that White would "not be intruding upon an occupied field, and we desire to give you a free hand in all your work."[438]

Before the contract was awarded to McKim, Mead and White, McDonald Brothers had worked on the Rotunda for a total of 79 days, from around November 1, 1895, until January 18, 1896. During that time they informally employed the H. L. Cranford Paving Co. to cover the Rotunda with a temporary roof, which was "speedily done and in a satisfactory manner."[439] They also oversaw Cranford's rebuilding of the walls of the "adjacent terrace rooms" and then covering them with "flat, fire-proof roofs." William H. Echols of the building committee later wrote that the McDonald firm "had made the complete design for the restoration of that building and of the present wings east and west, and had completed the east wing in its present condition before they resigned."[440]

Though much of the work overseen by McDonald Brothers was deemed sufficient, there were some problems that ultimately may have led to the dissolution of the firm's relationship with the University and the hiring of McKim, Mead and White. The new roofs that were built over the terrace rooms were made of concrete in order to fulfill the University's desire for fireproof construction. These new roofs, which were much heavier than their sheet-metal-over-wood-frame predecessors, were built upon the remains of the terrace walls, and there were concerns about their structural safety. An independent engineer called in to examine the work determined that the "steel beam framing supporting the upper concrete terraces was overloaded and that the new structure had begun to crack and sag." The engineer found that the carrying capacity of the steel beams was inadequate. Ostensibly, on the grounds of this engineering miscalculation, McDonald Brothers was relieved from their work at the University.[441]

It seems, however, that McDonald Brothers' miscalculations may not have been the only reason they were let go from the job: the State legislature dictated that the University would need to engage a large, nationally renowned architectural firm for the work in order to secure the necessary funds for the reconstruction project. Harry McDonald later disclosed that at the January 18, 1896, meeting of the building committee he distinctly stated with regard to the terrace roofs that he intended to "thoroughly strengthen this work, no matter what the cost," at his own expense. In response, however, William Randolph reportedly told McDonald that the University was "in a hole"; they were being criticized for having made a hasty selection of an architect, and the University would jeopardize its chances of securing State funding if it engaged a local architecture firm, as opposed to a nationally recognized one.

McDonald acquiesced on the condition that his resignation be presented in such a way that it would not damage his or his firm's reputation. Randolph and the building committee responded with a letter officially informing McDonald Brothers that Stanford White, an "architect of the highest eminence," would be offered the commission but that the termination of the University's relationship with McDonald Brothers was a friendly one.[442]

On January 22, 1896, Stanford White wired both Professor William Thornton and Rector William Randolph to announce his acceptance of the invitation.[443] A little more than two weeks later, on February 8, the University sent McDonald Brothers' drawings and specifications for the Rotunda to White in New York. Thornton stated at this time that McDonald Brothers would be paid for the plans and told White that he "may as well use them for what they are worth."[444] In their drawings for the Rotunda, McDonald Brothers had removed the intermediate floor to make the dome room into a two-story space. Their scheme included three tiers of columns with intermediate cornices, which approximated the size and proportions of Jefferson's individual columns.[445]

Thornton asked White to "preserve and return" the McDonald drawings, as they had constituted the firm's formal report to the building committee. Thornton also reiterated to White that it was important that work on the Rotunda begin quickly. "Much of the ironwork" needed for the structural work, Thornton suggested, "could be pushed under cover of the temporary roof regardless of the frost or other bad weather." "Send any instructions you think necessary about the portico floor," he added.[446]

In preparing to hand over their drawings to Stanford White, McDonald Brothers composed a lengthy and detailed explanation of the drawings and the calculations and decision making that had gone into creating them. “We were directed to follow the old design closely, in the exterior at least,” the firm wrote While the columns retained their overall height of 28 feet 6 inches in the new plans, McDonald Brothers had adjusted the sizes of the bases and capitals to more closely reflect the proportions of the columns at the Pantheon:

> Measurements taken from the old walls show the height of the columns of the portico, including base shaft and capital to be 28'6". The survey also shows the diameter of the columns at the base to be about 2'11". Mr. Jefferson’s estimations to the marble cutter called for a base for a 3' column with a diminished diameter of 2'8" and a height of 3'5" for the capital. The height of the base of the old columns measured from the floor to the top of the torus is 17 7/8", within 1/8" of the proportions of the same members on the Pantheon. The total height of the entablature and attic base, measured from the [imprint ?] on the building is 8' 9½”. Taking the proportions of the Pantheon, the diam. of old columns measured at the base being 3' would require a total height of 29'4".
>
> A column 28'6" high should have a diam. of 2'11" at the base and 2'6½" at the neck. The height of the capital should be 3'3½" and the height of the base from the floor to the top of the torus 17½".
>
> By referring to our drawings it will be found that we have adhered to the proportions for diams. at the base and neck, the total height, the height of capital and that of base, given by Mr. Jefferson.
>
> We think the design would be improved if the diams. of cols. were placed at 2'11" and 2'6½", the height of the capital at 3'3½" and height of base at 17½", leaving the total height of column unchanged as measured from the old building.
>
> We have taken the liberty of fixing the height of the entablature at 6'7½", which bears the same relation to the height of the columns in the Rotunda portico as the entablature of the Pantheon portico bears to its columns. To do this we had to encroach on the height of the attic base, which was, judging from the photographs, a little higher than we have it. We moved the top of the attic base up two inches, thereby increasing the height (combined) for the entablature and attic base to 8'11½". This is so slight that I don’t see how it can be objected to.
>
> The cornice in the Pantheon portico had no dentils, but as the Rotunda had these we have put them back. The columns of the old Rotunda and of the

> Pantheon had no flutes, but with your approval, we have designed the columns with flutes.
>
> We have removed the antifixae from the attic cornice and replaced them with a parapet. We concluded that it would be a mistake to have the sides of the north portico without railing and have therefore left the protection which we had originally, hoping you will finally approve our action.[447]

MCKIM, MEAD AND WHITE'S PLANS FOR THE ROTUNDA

The reconstruction of the Rotunda was only one part of the multi-faceted work that Stanford White was to undertake at the University, and officials were eager for him to arrive in Charlottesville to begin the design process. By their calculation the University had "less than eight months in which to plan and erect the needed buildings."[448] Thornton wrote to White on January 24, 1896, stressing how important it was to move ahead quickly and assuring him of the willingness of the University personnel to assist:

> We shall try to have ready for you all the preliminary information necessary to accelerate the work. The various members of the Faculty are engaged now in drawing up memoranda and sketches showing the needs in each of the department buildings. As soon as you are able to trace out your plans for these and determine the best location for them, we should like to begin work on the excavation and to collect materials for the foundations and have everything in readiness for beginning actual building operations as soon as spring opens.[449]

White, however, had fallen ill in late January 1896 and could not travel to Charlottesville.[450] He promised, though, that he would be there on February 4. He could stay for only one day, but he assured Thornton that the purpose of his trip was to "expedite matters and arrange for a later appointment."[451]

In anticipation of White's visit Thornton sent to him the "data for the several buildings," including McDonald Brothers' measurements of the Rotunda and drawings showing "sections of the old cornice."[452] Furthermore, W. C. N. Randolph informed White that he would convey to him Thomas Jefferson's "original drawings of the buildings of the University." The drawings were "quite in detail and perfect as to all the buildings," Randolph wrote, except for the drawing of the Rotunda, which was "not so perfect and not so in detail." Still, he wrote, the drawing of the Rotunda would serve as "a very good guide as to the original designs of the modifications of the Pantheon."[453]

Back in New York, White was visibly concerned about the larger design issues of adding to Jefferson's complex. Edward Simmons, a painter and fellow member of The Players, a men's club in Manhattan, recounted how he had met with his good friend White soon after the latter had returned from Charlottesville. "As we sat together over something to drink," Simmons recalled, "he seemed to be puzzled, confused, and silent. I asked him what was the matter. He started and came out of his mood, saying it was the job down South. 'I've seen *his* plans,' he said, speaking with great deference. 'They're wonderful and I am scared to death. I only hope I can do it right.'"[454] In preparation for the work, White studied Jefferson's original drawings, sketches of the Lawn, elevations and plans of the Rotunda, and a bird's-eye view of the grounds.[455]

On February 21, 1896, White wrote to Thornton from New York, reporting that he was "now ready, as far as my drawings are concerned, to present the scheme for the Rotunda, and also the scheme for the lay out of the new Campus" but that he still wanted "to investigate the cost more thoroughly" before presenting his plans to the building committee.[456] White elaborated on the difficulties he faced in reconstructing the Rotunda within the constraints of the University's budget:

> The approximate estimates which we have made upon the work are far in advance of those which have already been stated for the buildings. I cannot understand how such an estimate of $90,000 could have been made upon the Rotunda, for a fire-proof building; using limestone instead of cement for the columns, and metal for the window trim, cornice, and roof. We have found it impossible here to construct such buildings as you require for less than 25 cents per cubic ft. fire-proof.[457]

On February 26 White sent his drawings of the Rotunda to Thornton in Charlottesville. "We have endeavored to restore the building exactly to its former state," White wrote in an accompanying letter, "or rather exactly to the state which we believe Jefferson contemplated finishing it at the time the building was built." At this time, the scheme for the restored Rotunda, presented in "eight scale studies," was reportedly more fully developed than the studies for the new buildings to be built at the south end of the Lawn.[458]

Two of the eight studies that White sent to Charlottesville were of the Rotunda's interior. One study endeavored "to preserve the room in the Rotunda practically as designed by Jefferson — using the lower story as a storage room for books, with a small circular hall for reading-room." The alternate scheme that White proposed, which depicted the large, open plan similar to the McDonald scheme, was, White wrote, "a nearer approach to the classic and ideal treatment of the interior of such a rotunda. It is the one also which is much the most sensible where a library and reading room to meet the enlarged needs of the University is required." White strongly advocated the adoption of this alternate scheme, writing that it was "the one which we believe Jefferson himself would have adopted had the Rotunda been intended solely for use as a Library." White further elaborated on the plans:

> The scheme of re-building would contemplate the preserving as far as possible all exterior work in fit condition to use; the substitution of cut limestone and copper where wood and plaster has been heretofore used, and the use of as little wood as possible.
>
> The approximate estimates we have received upon this work run from $130,000 to $150,000. We think when working drawings are made and careful estimates are given by Southern firms that these figures will be reduced. At the same time, the amount of cut stone upon the building is so great that we should recommend the adoption of cement for the columns and balustrades, window trim, etc., should we be unable to obtain a sufficiently low figure upon the Rotunda.[459]

White's plans for the rebuilt Rotunda also included east and west terrace wings on the north side of the building, mirroring those on the south. The terraces would be connected by colonnades, running north-south, creating courtyards on each side of the building. Assisting White in preparing the drawings were William Mitchell Kendall and Bert Fenner, both from McKim, Mead and White's New York office, who later became partners in the firm.[460]

White presented his plans for the redesigned Rotunda and the new buildings to the University's building committee on March 2, 1896. The committee adopted the plans but on the condition that White pare down the cost of the entire project, including the new buildings — estimated to be more than half a million dollars, or double the budget — to $250,000. White's plans had called for constructing all of the new buildings of fireproof materials and installing central heating and a mechanized ventilation system in the Rotunda. In White's revised plans, only the Rotunda would be constructed of fireproof materials; central heating was retained, but the ventilation system was eliminated. After a few other adjustments not related to the Rotunda, the cost estimate was brought down to the necessary amount, and White's plans were approved at the March 13, 1896, meeting of the Board of Visitors.[461]

At this same meeting the building committee reported that, to date, $1,370.47 had been spent on repairs to the Rotunda proper; $3,465.93 on the terraces and wings; $629.49 on cleaning, hauling, and stacking bricks from the Annex; $895.95 on constructing temporary lecture rooms; and $2,690.57 on "incidental expenses," for a total of $9,052.41. The repairs included the carpenter ($778.19), day laborers ($138.59), watchmen ($13), removing debris ($71.95), and materials — lumber ($284), hardware ($66.94), cotton cloth for windows ($10), and rope ($7.80).[462]

The Board of Visitors authorized the building committee to enter into construction contracts but with an important caveat: "in no event shall the cost of the completion of the said buildings, ready for use," exceed $250,000, exclusive of architectural fees. The architects were responsible for supervising, directing, and inspecting construction and for providing “complete specifications and details.”[463]

White, for his part, had agreed to deduct from his commission the fee that the Board had already paid McDonald Brothers, and the Visitors thanked him for the interest and enthusiasm in the project. White presumably accepted the University’s thanks graciously, but a few days later he wrote in a private letter that he was being “driven crazy by the University of Virginia work…they are driving everything to get four buildings finished before the 15th of September, and with McKim away, and in addition to the other loads, it does not leave me with much mind left.”[464]

In his March 20, 1896, “Report of the Architects to the Building Committee,” White explained that the remodeling of the interior of the Rotunda was given “most careful study.” “Reasons of sentiment,” he wrote, addressing the question of the arrangement of the interior posed by some members of the faculty in the days after the fire, “would point to the restoration of the interior exactly as it stood.” White, however, successfully lobbied for making the interior of the central part of the building one open space for use as the library. It was an “unquestionable fact,” White wrote, “that it was only practical necessity which forced Jefferson at the time it was built to cut the Rotunda in[to] two stories.” White convinced those initially opposed to a single large space beneath the dome that Jefferson would have “planned the interior as a simple, single, and noble room” without the division into two stories, if it had been possible.[465]

White’s design also made provision for the growth of the library, including four terrace rooms that would project out at ground level and could be occupied by offices or reading rooms until such time as they were needed to house the library collection. The terraces at the southeast and southwest edges of the Rotunda would stand on the sites of the YMCA reading room and old chapel that had been deliberately destroyed by dynamite during the fire. The “two oval rooms in the basement,” which were to be in “direct connection with the main floor of the Library,” could be used as “ordinary reference and reading rooms.”[466] Rector W. C. N. Randolph, the building committee, and the Board of Visitors “most heartily” adopted White’s plans and specifications for the Rotunda, which were finalized on April 25, 1896.[467]

After their plans were approved McKim, Mead and White prepared another set of eleven drawings that are dated April 7, 1896. These drawings, eight of which survive, show that Stanford White had adopted several of the elements outlined by McDonald Brothers in their plans, including the large open space from the main floor to the top of the dome, the levels of annular galleries for books, the coffered ceiling, and the addition of the north portico. In White’s plans, however, the north portico was shortened from three-columns deep to one-column deep. Though this one-column-deep scheme was ultimately adopted, the portico area was enlarged from that shown on the drawings, as evidenced in photographs taken after construction was complete.[468]

The north terraces appear on the April 7 plans and elevations, but, curiously, they differ in design and dimension between the firm's site plan and the ground-floor plan of the same date. The site plan shows terraces that extend further out from the building than those in the ground-floor plan, thus creating larger courtyards between the Rotunda and the colonnades that connect the north and south terraces. Ultimately it appears that the scheme on the site plan was followed.[469]

White's plan eliminated McDonald Brothers' inclusion of pairs of Ionic and Corinthian columns on the first and second levels of the interior. Instead, White implemented a twenty-column peristyle of single, larger Corinthian columns that rose from the main level up three stories to support the architrave between the second- and third-level galleries. White's plan for the ground-floor level resembled McDonald Brothers' in that White, too, retained the east and west oval rooms and "dumbbell" hallway. However, the site plan again reveals a different design and includes a smaller north oval room that was actually built in the reconstruction. White eliminated McDonalds' semi-circular staircases at the north and south ends of the hallway and included two sets of curved staircases on opposite sides of the south end of the hallway, similar to Jefferson's original plan. Lavatories were planned for either side of the north entrance on the ground level, abutting the north facade.[470]

White's plan also included four spiral staircases that connected the main floor to the upper galleries at the corners of the Rotunda. According to the plan, bookcases on the first and second gallery levels would be installed perpendicular to the columns, projecting into the gallery walkway from the columns, as well as against the walls, between the windows. Ultimately, the bookcases on the main floor were arranged like this, but the cases on the first and second galleries were installed against the Rotunda's walls, between the windows. The third gallery level, which ultimately would contain a series of closets around the perimeter, had a simple balustrade, the design of which was later changed to be more ornate. White's April 7 scheme also included a fourth level of the gallery, but this plan was ultimately abandoned.[471]

The April 7, 1896, side elevation depicts the "16 oz. copper tiles made in special design" later indicated in the specifications, dating April 20, 1896.[472]

During the winter of 1895–1896 Stanford White solicited an estimate for work for the Rotunda's dome, floor vaulting, and other interior work from the R. Guastavino Company of New York City.[473] Rafael Guastavino, who had immigrated to the U.S. from Spain in 1881, created a structural system for building floors and ceilings that used flat clay tiles set in cement mortar. His structures were stronger than concrete structures of comparable weight and were more fire resistant than concrete or steel. Guastavino's system was also impervious to rot, insects, and damage by the elements. Guastavino had worked extensively with McKim, Mead and White, and his vaulting system had won attention when he worked with them on the vaulted roofs and floors of the Boston Public Library in 1892.[474]

On March 11, 1896, Rafael Guastavino had sent McKim, Mead and White an estimate for work on the Rotunda. For labor and material for the erection of "ceiling floor of vestibule for Library Building," for the "ceiling support of the main front stairs," and the "ceiling and rough roof of the pediment," the estimate was $4,666. This price included "rough tile work and iron necessary." Guastavino specified that no concrete was included for the vestibule and stair arches, but it was included for over the pediment. For an additional $2,710 Guastavino proposed "to furnish labor and material for Dome step rings built of porous terra cotta to allow nailing of metal roof architrave and frieze for the pediment of front elevation." "No moulding or cornice are figured for this pediment," Guastavino specified, "but iron is included." The price for concreting the vestibule and over the stair arches was $600.[475]

Also on March 11, 1896, the W. H. Mullins Architectural Sheet Metal Company of Manhattan submitted to McKim, Mead and White an estimate of $9,504 for the copper roofing for the Rotunda. The estimate included the "cornice and gutter round dome skylight, copper fill roofing, steps and cornices on dome, main cornices and gutters on Rotunda and tympanums, interior porch cornices, and window casings and heads all as shown on drawings."[476]

Stanford White received an estimate for carving the column capitals and bases for the Rotunda from the Piccirilli Brothers' studio in Manhattan on April 15, 1896. The firm gave three estimates for the work: "each cap with base in first quality Italian monumental marble would cost $850; each cap with base in #2 Vermont $1,100." If the Vermont marble was too expensive, then they proposed a "less expensive marble, saving about $250 each set, which probably would answer to the purpose."[477]

Meanwhile, in preparing to begin construction in the early spring, Thornton had asked White to assess the quantity of bricks that the University should have readily available "on the ground when the building operations begin." Thornton estimated that between 300,000 and 400,000 "old bricks" from the burned Rotunda were available for reuse in the reconstruction, but Thornton pressed White on the number of new bricks that would be needed for "face work." "Mr. Echols," Thornton reported, "is looking into all the details and getting ready to make bricks on our own grounds, and I hope that work will soon be begun."[478] By the time of the March 13, 1896, meeting of the Board of Visitors "clay almost identical with the clay of the original bricks" had been found, and enough for a half million bricks had been "gotten out and exposed to the weather."[479]

On April 27, 1896, William Echols informed White that the University had hired the firm of Adams Brothers and Payne of Lynchburg to produce 1.5 million bricks. Theodore Skinner, the on-site superintendent from McKim, Mead and White, wrote to Echols that same day, indicating that the estimate for the brick fabrication did not include "face brick to be used in Rotunda." "These bricks," Skinner reminded Echols, needed to be "exactly the same size as those used in the old walls of Rotunda and must have the same smooth texture and color." The new bricks for the Rotunda would be "wanted as soon as any," Thornton added, "so it is important that you begin their manufacture at once."[480] Echols responded to Skinner's letter two days later: "The bricks we are now making at the University yard are the size of the Rotunda brick and will cost $7.00 per m. delivered at Rotunda. How many of these brick do you need? Let me know this, so I can change moulds to 8 x 4 x 2½ as soon as we have made enough of the smaller size."[481] On May 4 Echols wrote to White, informing him that so far they had made 100,000 new bricks the size of the Rotunda brick and that he needed to know how many more bricks they would need. The building committee was evidently anxious for White to come to Charlottesville. Echols wrote to White: "Expected you here Saturday. When will you come down and take charge of the work?"[482]

To help manage construction costs, several railroad companies — the Southern, the Chesapeake and Ohio, and the Norfolk and Western — promised the University a 50-percent reduction on shipping the construction materials. Temporary tracks were laid to the University for ease of delivery of construction materials.[483]

William Thornton's description of the planned restoration work on the Rotunda was published in the February 1896 issue of the *Alumni Bulletin*. The south facade of the building would be a reproduction of Jefferson's original design, "as exact as the skill of the builder can achieve." The Rotunda's "stately columns, with their graceful Corinthian capitals of white marble, the cornice, the pediment, the swell of the noble dome," would all be "consciously restored." Thornton elaborated on the plans for the exterior, including the new portico on the north side of the building:

> The same materials will be used, save that the combustible timber will be replaced by incombustible cement and copper. In like manner woodwork will be eschewed in the interior construction, and even steel will be used to a very limited extent, the columns, floor arches, and the dome itself being reconstructed of tiles under the Guastavino patents. The northern face will show an elevation similar to the southern, but the portico will be much less in depth, in order to not detract from the dignity of the southern front, the steps descending between the two new wings, added to correspond with the terrace rooms on the south. The side elevations will present a novel and dignified aspect. The two terrace rooms are to be connected by a colonnade in continuation of that on the Lawn. The flat roofs of the wings and the connecting colonnades, guarded by a handsome

> balustrade, will furnish a pleasant promenade about the main building, while the vistas between the columns prevent apparent reduction of its height to spectators approaching from east or west.[484]

The report in the *Alumni Bulletin* also included a description of the new interior of the Rotunda:

> The interior partition walls will be removed to the level of the portico floor…and at that elevation will be bridged with heavy steel beams, between which the Guastavino floor arches will be thrown. Upon this floor will be supported a handsome Corinthian peristyle, whose entablature carries the main gallery at a height of 28 feet above the floor. From the entablature springs the inner shell of the dome; from the main wall springs the outer. The two meet at the eye in the crown and are tied together by intermediate braces. The space between the wall and the peristyle is subdivided by perforated iron floors into five book tiers, three below and two above the gallery, the latter being lighted from above through sheets of heavy glass set in alternate panels with the tile into the roof. The capacity of this main library room will be between 90,000 and 100,000 volumes.[485]

## CONSTRUCTION OF THE TERRACES

Even before construction contracts were awarded for the Rotunda itself, work on the terraces at the Rotunda was underway. McDonald Brothers had begun construction in late 1895, and specifications for the repair of the terrace roofs, probably drawn up by McKim, Mead and White, were dated February 1, 1896:

> <u>Iron.</u>
> Present 15'' beam girders to be tapped for the connections of strengthening framing. Framing shown in black on drawing to be steel I beams of size marked on drawing, framed, and with connections as shown. If wall ends of beams come into arches of openings they are to be hung from the wall above the arch in wrought iron stirrups.
>
> <u>Plastering.</u>
> Cut out plaster at each point where strengthening beams and present four inch beams cross to permit of blocking up of the 4'' beams, and repair all plaster after iron is erected.
>
> <u>Damp-proofing.</u>
> Flash all side walls with 16 oz. copper. On top of present mastic coat lay a damp-proofing course composed of four layers of heavy asphaltic roofing felt laid in and well cemented together with hot asphaltic cement, and coated with same on top surface. Before concrete for pavement is laid, put on a one-half inch thick

> coat cement mortar composed of parts of Dyckerhoff Portland Cement to three parts of clean sharp sand.
>
> Post & McCord's estimate for ironwork erected is … $750.00
> T. New's estimate for flashing and damp-proofing is 725.00[486]

On February 3, after having reviewed the specifications with Echols, Thornton informed White that the tight schedule would not allow for plastering and that it "should be deferred until the total dead load has been placed on the roof." Thornton also reported that the roof of the eastern terrace was leaking, in spite of patching.[487] By February 8 Thornton and White were in agreement that it was "best to postpone the completion of the terrace rooms and let the contracts for that work along with those for the Rotunda." Though the building committee wanted to have some of the rooms ready for use that spring, Thornton conceded that it was "hardly possible" for them to "finish the rooms in time to make them of any real use this session."[488]

At the March 13, 1896, meeting of the Board of Visitors, the building committee reported that $3,465.93 had been spent, to date, on the terraces and wings, including $1,000 paid to the Cranford Paving Company; $551.83 to Nettycomb and Kell for "cement, etc."; and $281.80 to Wenger and Brand for "plastering & material."[489]

## SELECTING THE CONTRACTOR

Soon after learning that his firm had been selected for work at the University, Stanford White began to investigate prospective contractors. He consulted, for example, Thomas Hastings, John Carrère's partner. Hastings replied on February 6, 1896, that he could only give White "facts concerning our Richmond work, without any advice as to your work — because it is differently located." Hastings supplied the names of contractors in Richmond whom his firm had used for "masonry, carpentry, plumbing, roofing, painting, millwork, and ironwork."[490]

White was concerned about who would be invited to bid on construction work. He had checked on three companies that William Thornton had proposed earlier in March, and White was "not at all satisfied with the reports" he had received. It appeared that these companies had built only "buildings of a very cheap and unimportant character," rather than any that were intended "to last for generations." White suggested that William H. Echols confer with W. C. N. Randolph and Thornton to determine how to proceed with selecting the contractor.[491]

Randolph told White, in confidence, that for political reasons he would oppose awarding the work of reconstructing the Rotunda and erecting the three new classroom buildings to just one contractor. "We are a State institution, dependent for our success upon the backing that the State gives us," he wrote, "and while I am not for one minute going to yield to any demagogical ideas about it, I am not going to be foolish enough not to throw the rotten tub to the whale" (he warned White not to "ever let this sentence come back to me"). Randolph proposed instead giving the Rotunda contract to a Northern firm, since no Southern firm could "do it and make it fireproof." He proposed awarding the contracts for the construction of the new buildings to three separate Virginia firms. Still, Randolph wrote, if White felt that this approach would jeopardize the character of the work or involve unqualified contractors, he would agree to hire a single firm. It might "give you and I less trouble to let the whole thing to one man," Randolph wrote, but "it would not be good for the University."[492]

White replied that he would send the specifications to a list of contractors that had been submitted to Randolph. "On the whole," White added, "I think it would be best to obtain bids from the various firms recommended, reserving to yourselves and ourselves the right of rejecting any and all bids."[493]

While the questions of the contractors and bidding rules were being discussed in early April 1896, McKim, Mead and White had selected Theodore Skinner to be the firm's on-site representative at the University. Skinner, a member of the staff at the firm's New York City office, had written to White to apply for the post in late February and visited Charlottesville in anticipation of his role as supervisor of the work. Skinner, who was described as a "pleasant gentleman to do business with," was a graduate of Massachusetts Institute of Technology and already had "practical experience" as a construction superintendent. He sought the position in Charlottesville in the hope that the work there might "lead to a position as instructor in architecture at the University."[494]

Skinner found the work at the University difficult, describing his assignment as "work, hard work, from 8:30 a.m. until 6 p.m. and sometimes later — Saturdays as well as other days." His tasks included inspecting materials and workmanship, making drawings, correcting mistakes, and being "ready to talk shop to any of a hundred and one interested parties here, etc. etc."[495] Skinner held this post from April 27, 1896, through December 18, 1897.[496]

Skinner was also involved in the dialogue about the selection of the contractor for the restoration work on the Rotunda and the new construction. He reported to White on a conversation he had with Randolph about the selection process, after which White told Randolph that he agreed that "if possible all work should be given to Virginia Contractors." White further proposed that the terms of the contract be "very severe," with 10 percent of the contract held for three months after acceptance of the work and a 10 percent bond required. Randolph agreed, saying that he favored making the conditions "very stringent."[497]

Still, there was confusion over who was to be invited to submit bids. Randolph wired McKim, Mead and White on May 4, 1896, that he was disturbed that he had not yet received from the architects the list of contractors who would be invited to bid on the construction of the buildings; moreover, Skinner maintained that he had not received from Echols the University's list of contractors. On May 5 Thornton sent to White a list of candidates, with a note that the architects were to add to it "such other firms as you approve."[498] Randolph wired White on that same day that he hoped White would "Submit Specifications at once." The University's list included the Charles E. Langley Company of Richmond, who had contacted McKim, Mead and White about bidding on the work in early February.[499] A surviving list of proposed bidders for the work includes in addition to Langley three companies from Richmond; one from Lynchburg; one from Charlottesville; one from Charleston, West Virginia; and one from Louisville, Kentucky. Also on the list, and designated as having been suggested by McKim, Mead, and White, were H. L. Cranford, of Washington, D.C.; Norcross Brothers, of Worcester, Massachusetts; and Probst Construction Co. and George A. Fuller and Co., both of New York City."[500]

The bids were opened with White, Thornton, and Echols in attendance, on May 22, 1896, and the building committee planned to meet the next day.[501] A single construction contract for the restoration work and the new construction was awarded to the lowest bidder, the Charles E. Langley Company, and the documents were signed on May 26. The Board of Visitors, at its meeting on June 17, ratified the building committee's decision to award the construction contract to Langley for $269,440. This amount exceeded the sum that had been authorized by the Visitors in March" but was approved by the Board of Visitors on June 17, 1896.[502]

The Charles E. Langley Company had been highly recommended to Stanford White by architect Thomas Hastings, who told White that Langley was a "very intelligent mechanic," with "unusual judgment in matters of building." Carrère and Hastings had worked with Langley on the Richmond Hotel. Hastings strongly recommended using Langley as the general contractor for the University of Virginia work, believing him to be "perfectly responsible" and "very conscientious."[503]

In the spring and summer of 1896 the University entered into contracts with several companies for subcontracting work: C. C. Cocke of Charlottesville was engaged to supply 1 million common bricks at a cost of $6.50 per thousand bricks; Adams Bros. and Payne of Lynchburg was engaged to supply 1.5 million good quality, hard brick at a price of $5.50 per thousand; Edgar N. Cox of Charlottesville was contracted to provide all of the sand that would be required "in and about the construction and repairs of any and all buildings and improvements constructed or repaired" at the University for the price of $.55 per ton; and E. Dillon and Co. was contracted to provide the lime required in the construction and repairs at a price of $.33¼ per 200-pound barrel.[504]

THE RECONSTRUCTION OF THE ROTUNDA BEGINS

Once the contracts were signed at the end of May 1896, work began at once, around the first of June. The work at the Rotunda took precedence over the construction of the new buildings, though all work was to proceed simultaneously: the basement lecture rooms in the Rotunda and the four terrace rooms were to be finished as soon as possible and be ready for use by the beginning of the next session, in the fall. It was hoped that all of the work would be completed "by, or very near, the close of the year 1896."[505] The contract specifically called for the lecture rooms and terraces to be completed by September 15, 1896, and the entire construction project — both the Rotunda and the new buildings — was to be completed on December 15 of that same year.[506]

At first, work on the Rotunda progressed vigorously. By June 24, 1896, work on reconstructing the dome had begun and was reportedly "going on rapidly."[507] On July 7 Skinner reported to White that work was "progressing well," but questions had arisen about the Rotunda's original foundation and the foundation to be constructed for the new north portico. Skinner wrote to White:

> Today we have found that the old foundations of the "Rotunda" building had no spreading foot or concrete foot: that the new piers and walls of the North Portico foundation sit below the bottom of the old brick work and that although the earth is very compact clay, to prevent a settlement all along the walls, some form of underpinning and bracing must be devised and put in place at once.[508]

Skinner observed that "considering the depth and width of the piers under the columns," it seemed to him that it was "really necessary to prevent the earth under the old walls from moving to make any settlement impossible." Skinner sought White's advice on the matter, but in the meantime, "in absence of better authority," Skinner suggested that the "inner piers" be "doubly shored" and the "middle piers" have "one shore each." He continued:

> Then, if the piers were drifted under about a foot and walls carried up under old work and wedged up, that with proper bonding of pins no settlement would be possible between pins. A wall, one foot thick and backed up with the concrete floor filling should I think hold the earth in place there. I will have the walls shored up while waiting for your instructions.[509]

On July 8 Skinner sent to White a sketch "showing the arrangement of the Guastavino dome ceiling lights and ceiling of the fourth gallery Restoration of the Rotunda," which had been approved by the building committee and the contractors "without 'extras.'" Skinner explained that the omission of the lower skylight ring previously shown on their drawings permitted a promenade around the base of the dome "as there was previous."[510]

As work progressed in July, Skinner discovered that the design for the main staircase in the Rotunda needed to be adjusted. “I have made a sketch of the new arrangement of the stairs for the Rotunda,” he wrote to White on July 29, “which I think will be necessary owing to Guastavino’s ribs (not his own) but the floor ribs coming deeper than you know in making your details of stairs and landing.”[511] The following week Skinner appealed to White again on the matter of the stairs, writing that the stairs “do not work out well in connection with the stair well as drawn. Of course the stairs can be built as they are shown, but there is not good head room. I am having a model or rather a platform and some steps built to show how bad it is, and shall expect you to change something.” Other than this problem, Skinner reported that the work was “going along fairly.”[512]

The August 7, 1896, issue of the *Charlottesville Chronicle* reported on the progress of the construction in detail, noting that work was “progressing rapidly”: the new floor in the Rotunda was almost complete and the outer shell of the dome was three-quarters done. The terraces and the connecting colonnades were also “well under way” and would “soon be ready for the fire-proof roofs and the modeling of the balustrade around the terraces.” To support the planned fourth gallery, which ultimately was not built, the lower portion of the dome was strenghtened by twenty piers, each five feet wide. The lower part of the dome was stepped following the arrangement used by Jefferson, now modified to contain windows and a promenade at the base of the dome.[513]

By mid-August Skinner was ready to address the question of the lighting and the tile for the Rotunda’s dome. He wrote to White on August 11, requesting that White send to him a “set of plans of Rotunda showing Lighting outlets for gas and electric fixtures.” Skinner also asked that White “consider design of copper tile” for the dome and that he “consider regrading and arranging garden and old retaining wall of terraces, Rotunda.”[514] The following week Skinner sent White a telegram, urging him to send the lighting information immediately.[515]

Photographs dated August 27, 1896, show the Rotunda covered with scaffolding, with part of the dome reconstructed. Another photograph of the same date shows the condition of the north facade with the ghost marks of the Annex’s connecting roof still visible [*Figure 75*]. Work on the Rotunda reconstruction progressed slowly in the late summer and early fall of 1896. Guastavino worked on the outer dome that summer, but on September 28 Skinner reported that work on the Rotunda was “delayed for lack of iron for galleries.” As a result the inner dome could not be started, although the outer dome was reportedly “all completed” at this time.[516] The plan for the fourth gallery was eventually abandoned but was still included as of early autumn 1896. In 1973, when the Rotunda was being reconstructed, stairs that had been erected to reach the annular room on the fourth gallery above the main floor were discovered. The unfinished stairs had evidently been walled up after the plan for the fourth-floor gallery was eliminated.[517]

## ANOTHER TRAGEDY

On the morning of October 19, 1896, part of the concrete roof of the one-story terrace wing projecting from the Rotunda's northeast edge collapsed, killing two workmen and seriously injuring three others. The two men who were killed were George Tucker, a carpenter foreman, and Eugene Bunch, a carpenter. The other workers sustained head injuries, as well as cuts and broken bones; two were in the building when the roof came down and were buried in the debris, while the third man was on the roof at the time of the collapse and rode it down.[518] Tucker, a native of Greensboro, North Carolina, had moved to Charlottesville with his wife and four children specifically for the work at the University. Bunch, age 24, was unmarried and reportedly lived near the pharmaceutical laboratory on the University grounds at the time of the accident.[519]

The cause of the collapse was attributed to the premature removal of the interior scaffolding, before the concrete had hardened sufficiently. The *Richmond Times-Dispatch* explained that the roof "was constructed with steel girders, strengthened by steel cables passing through them. The span of the roof was about thirty feet, and was supported by brick walls." Though the cables did not break after the supports were removed, "the top of the walls was dragged down by the great weight of the cement, girders, and roof." Shortly before the collapse, Skinner had given an order to the foreman not to remove the scaffolding, "as he did not consider the walls dry enough," but the supports were, nonetheless, taken down.[520]

A coroner's jury assembled on the day of the accident to determine responsibility for the accident.[521] The investigation, which included extensive interviews of the injured men, continued over the following five days. It was determined that the supports were removed under the direction of one of the supervisors from the Manhattan Concrete Company, and, therefore, the company was responsible for the accident.[522]

On October 29 Skinner and Robert Robertson, who had replaced William H. Echols as the University's head of buildings and grounds, inspected the condition of the walls of the two new lecture rooms and reported their findings to White. They checked "all of the pins of the north walls, and would have done so upon the South walls," but the gangway and scaffolds prevented accurate measurement there. They presented the results of their findings to White:

> First: There are no signs of any settlements in any of the walls either in those parts when the roof fell in or at any other part of the same wing or in the other wing.
>
> Second: From observations made by transit upon all piers in the north walls, at these points in the height of each pier, one at 1st offset, 2nd at impost [?] of arch, 3rd just below frieze, it appears that the three piers from which the girders fell <u>lean</u> <u>out</u> one 0.065' and two 0.045'. The remaining piers in this wing (the East one) are as nearly vertical as we could measure. The piers in the West wing (now shored up), including even the one carrying the cracked girder, all lean out from 0.03' to 0.06' between the points measured, the pier carrying the cracked girder leaning 0.035. The extreme N.W. corner pier, i.e., the corner of the arcade having 0.04' and having no heavy load makes me think that all the other irregularities may be due original lack of plumbing of the walls by the masons.
>
> Third: The cracked girder in the West room shows a measured deflection of 0.07' at the center but as all the girders in this room have heavy coat of plaster upon them, in some cases covering 7/8" iron electric pipes and gas pipes, it is hard to determine to what extent they have deflected.[523]

In spite of all this, Skinner and Robertson concluded that there were no "sways or swags in any of the rest of the roof and no cracks in the walls."[524]

On October 31 W. C. N. Randolph wrote to building-committee member Armistead C. Gordon, indicating that he expected both White and McKim to be in Charlottesville on the following Thursday to present in person White's "report upon the accident to the roof of the Jefferson Building and their proposition for the rebuilding of the new roof."[525]

Part of White's response to the accident was to send his brother, Richard Mansfield White, who was apparently in need of a job, to Charlottesville to serve as an assistant to Skinner. White told his brother that Charlottesville was a pleasant city, that "there are pleasant people there," and that the experience would be "good training" for him. He advised his brother to be "as useful as [Skinner] would like you to be, but no more so." "In other words," he said, "you are to consider yourself not our representative, or the University's, but simply Mr. Skinner's aid[e]." White further warned his brother that he was "not to talk about things to the Contractors, the University authorities, or, in fact anybody. If there is any talking to do, leave that for Mr. Skinner. This is very important."[526]

## MAKING CHANGES TO THE PLANS AND FITTING UP THE INTERIOR OF THE ROTUNDA

On October 24, 1896, while the investigation of the failed terrace roof continued, Theodore Skinner wrote to Stanford White inquiring whether the "concrete columns for the porticos of the Rotunda" could be made hollow, and, if so, "how large a core could be left out." Regarding the interior of the building, Skinner wondered what type of book stacks would be used and from whom should such estimates be obtained. Skinner mentioned the "Library Bureau" as one possibility and asked White if there were others from whom he should seek estimates.[527]

Meanwhile, concern developed about the structural integrity of the Rotunda itself. On October 28 a representative from the Charles E. Langley Company informed Skinner that because of "irregularity of the Rotunda walls which gives the deck beams unequal, and in some cases too small bearing," they suggested building an 8-inch-thick wall from the first floor to the third gallery. The estimate for this work was $498.[528] Skinner wrote to White the following day suggesting that they follow Langley's recommendations. "Langley's suggestion," Skinner wrote, "seems to me the best solution of many difficulties and the cheapest way to give beams their proper bearing, prevent staining of plastering, and make the Rotunda cylindrical." The walls of the Rotunda were found to be "very irregular" and varied "about 4" in and out from the true circle." Skinner requested that the change order for the new work be made immediately, as the gallery beams of the first and second stories were in place and Guastavino was "getting ready for the 3rd gallery."[529] Ultimately, "two new courses of brick were needed on the inner surface of the walls to make them circular and to reduce the diameter enough to support the galleries."[530]

As November opened, University officials worried about the pace of construction. According to the contract, the Rotunda was to be completed by December 15, but the collapse of the terrace roof, the resulting investigation, and the construction of the new brick interior wall had slowed work so that construction was behind schedule. At its November 9, 1896, meeting the building committee resolved that it was necessary for McKim, Mead and White to "press" Langley toward the completion of all the work called for in their contract "without additional cost to the University."[531] Skinner informed White the following day that the committee was increasingly anxious for work to move ahead rapidly. In the same letter Skinner wrote that he was "awaiting instructions and orders" from White "for the treatment of the north portico steps into the garden" and "for the covering of the dome," since White had "omitted tile and changed to copper ribs." Skinner reported that he was delaying Guastavino's work on the inner dome until White decided whether he wanted to "change the designs or not." Skinner requested that White send along "drawings of the steps and outer dome casing" to Charlottesville soon.[532]

On November 12 White sent Skinner a telegram promising a new plan for the dome. Skinner responded that he was "greatly interested to see the new scheme" and wondered whether White could arrange to "have the twenty skylights in the dome steps let light into the dome thro [sic] the panels." Skinner also told White that Langley and Co. demanded more money for the "inner skylight of the dome for the Rotunda." "Will your new scheme alter this?" he queried White. If so, Skinner argued, the "work on present lines" would have to be stopped. Skinner questioned whether Langley would need to submit an estimate for this new work before making the skylights, or could this be adjusted later.[533]

Work proceeded slowly through the end of November and progress often hinged on White's readiness or ability to make decisions about both small and large questions from afar. On November 28 Skinner sent White the following update, pressing White to send his new plans for the dome and to make the decisions that would allow the project to move forward:

> Before the work of the wing rooms and basement rooms of the Rotunda can be finished, Langley & Co. desire that the gas and electric fixtures should be set, as otherwise the dirty work of making connections will spoil the finish.
>
> The building committee wish you to make a selection of fixtures for these rooms and also for the Rotunda proper, and procure estimates for the same in place, keeping in mind the limited means of the fund in hand. They want good fixtures in keeping with the building, but as simple and low priced as you consider fit. It is necessary that this matter be taken up immediately in order to forward the work.
>
> The building committee meets here on Friday next the 4th of December so if you are going to submit drawings for the new scheme of the Dome, they should be here by noon of that date or wait one month for the next meeting for approval.
>
> Will you kindly let me know when to expect drawings for this proposed change, or how soon I can start work on the old lines if you have not decided to make the change in design.[534]

White promptly responded to Skinner's request, promising him new drawings for the garden and for the dome. "I am going to have another inner core built, with an air space between," White informed Skinner, "but I do not wish to order the work ahead until the Building Committee approve, and am, therefore, making a careful drawing." His revised plan called for the inner dome to spring from the main shell of the building, enlarging the interior and decreasing the curvature, thus eliminating the "silo-like" effect that would have been created by the earlier plan. Tension bands were installed at the inner dome's base to assure that no spreading load was added to the outer walls.[535] White elaborated on the finish of the inner dome: "My intention is to have a plain white plaster dome, but at the top I would like, if there is no objection, to use the eagle and stars in the hall ceiling at Monticello as a band or ornament around the skylight."[536] The coffering and rosettes that White had earlier designed for the inner surface of the dome were done away with in favor of a smooth plaster surface. White's new treatment for the dome, "with a slight change in the porticos," was approved by the building committee at its December 4 meeting.[537] White's design has survived only in sketch form, with details of the decorations but almost no detail of the structure.[538] Work on the new inner dome was carried out during the winter of 1896–1897.

By the end of November 1896, Skinner was evidently frustrated by his lack of contact with White, having himself been so long in Virginia and so far from New York. On November 29 Skinner implored William Haase in the New York office to “call Mr. White’s attention to the necessity of deciding about the gas and electric fixtures for the Rotunda immediately and get him to make selections and estimates.” Skinner asked Haase to also get White “to locate the four fine light fixtures specified to be on each side” of the entrances to the Rotunda. Skinner thought that the fixtures should be hung “quite high above the portico floors, and possibly they would make the best effect if suspended near the ceilings.” Still, he needed White’s approval and pressed Haase to “please find out about these locations at once and let me know locations exactly, as the rising is being done rapidly now and delay will make it extra expensive to locate them.”[539539] Skinner to Haase, 29 Nov. 1896, Box 172, File 2, MMW, N-YHS.

In relaying news to White that the building committee had accepted White’s changes, Skinner queried him on the treatment of the dome. “Will you not,” he wrote, “consider penetrating the new dome for the twenty skylights already in place in the outer dome? If not I shall have them removed and covered over flat with copper.” Skinner promised that he would send White what plans he had of the Rotunda lighting outlets, noting that these plans had “changed somewhat by the changes in rooms” and adding that “the committee again recommended simplicity and cheapness to my attention.” Skinner reported on December 5 that work was “going on well.”[540] A fire-insurance map dated December 1896 indicates that the structure was then “being finished” and that the terrace wings, connecting arcades, and south portico and steps were in place at that time.[541]

On the following day, December 6, Skinner wrote Haase that he was returning by mail to the New York office the “drawings for the new dome of the Rotunda, approved by the committee” in Charlottesville. However, the building committee also insisted that further alterations be made: they requested that the “ceiling of the south porch be lowered from the position shown” on the “original drawings and as in Jefferson’s time to a point at least as low as the top of the architrave shown and that a door be cut through from the 3rd gallery into the room thus formed.” “You are to light same through flat lights in roof,” Skinner instructed Haase, and the same was to be done in the north portico. Skinner continued:

> My idea would be to drop the ceiling as low as possible, even to top of columns, by making a beam ceiling of it — quite deeply coffered. You see we will lose the copper cornice any way [sic], why not use some in ornamenting coffers with rosettes…Please ask Mr. White about this at once, and have it decided as it will modify Guastavino’s iron work somewhat, and let me have also prints of the

> new drawings, and any new details for balustrade, cornices, and [paneling?] work around gallery just as soon as you can.[542]

Langley and Co. signed a contract with the National Mosaic Company on December 8, 1896, to lay the mosaic floors in the Rotunda. Antonio Patrizios, president of National Mosaic, met with White two days later, at which time White "verbally approved the sketch designs" and recommended that "square White Carrara Stones" be used "in the body of the floor, but that some changes would be made in the borders." By January 12, 1897, Patrizios was awaiting from White the drawings indicating the changes.[543] By now, the December 15 deadline for completion of all projects was missed by nearly a month.

On January 15, 1897, Langley and Co. submitted a change-order proposal to McKim, Mead and White for $676.35 for the Rotunda's new windows and doors:

| | |
|---|---|
| 5 extra inside doors 3'2 x 7'6 x 1¾, jambs trim hardware and painting complete | 114.25 |
| 8 extra inside doors 3'2 x 7'6 x 1¾, jambs trim transoms hardware complete | 25.60 |
| 6 prs. Sash 3'5½ x 6'10 5/8 cir. 3 sections with frames trim, shutters, aprons, stools weights, etc. complete | 215.70 |
| 26 sq. yards extra 6" part. Wire lath plaster 2 sides | 72.80 |
| 1 Fire proof door | 22.00 |
| | $676.35[544] |

On January 19 Langley submitted another proposal to McKim, Mead and White for the installation of "granolithic steps" at the south portico based on an estimate made by the Manhattan Concrete Company for a sum of $5,500.[545]

By mid-January 1897 construction had advanced to the point where a question about the lighting had to be settled immediately. Skinner wrote to White indicating that the specifications called for "165 decorative lamps in the dome." "I have always understood you to want," Skinner wrote, "in one group or circle, a crown of lights in fact. Am I right?" He pressed White to decide on the location of the lamps "whether on the bottom of decorated member, or on the facia, or both" or to determine "some other place for those lights." "The wiring must be done now, at once," Skinner informed White, "since the two domes are too close together to admit of working between them." Skinner asked White to specify whether he wanted to use gas fixtures in addition to electric.[546]

At the end of January Skinner was eager to address the design of the entrance to the Rotunda, as well as other design features. He informed Haase that the "entrance vestibule" needed to be "considered at once" and requested that drawings be sent to him. The matter of "how it shall be <u>cut off</u> — and what shall be done to the <u>floor, walls</u>, and <u>ceiling</u>" had to be decided immediately. "There are several chases which must be <u>get at</u>

able — and are specified covered with paneled boards — they will look queer unless the whole wall space is paneled too — please send me drawing of this treatment as specification as to what wood to use."[547] Skinner also instructed Haase to call to White's attention several "important matters" regarding the Rotunda and asked Haase to do the following:

> Make drawing for wood panel to go between the jambs, head, and floor of 1st gallery—This panel will only show from below and outside, the book cases will run all around wall on this gallery.
>
> Make drawings for grilles, for all alcoves on ground floor.
>
> Make F.S.D. [full size details] of names for frieze in main cornice, list of which I enclose.
>
> Select hardware for front and rear doors, and for 3rd gallery cases.
>
> Select designs for electric fixtures, and gas fixtures, and get estimates, which then send to me to submit to the committee.[548]

On February 15, 1897, Skinner asked Haase to finalize "the 3rd gallery details in short order." With his letter he enclosed a "sketch plan and section of the third gallery floor and of inside the dome, showing the radius, height of [center], and position and size of doorway into stairs and stacks."[549]

Work on the interior progressed, and by the second week of March 1897 the plasterers were awaiting details from New York on how to finish the interior of the dome. "Please send me full sized details of the stars, clouds and rays of light around the Eagles," Skinner wrote White. Skinner also requested details of the "new treatment of the pedestals and balustrade around the top gallery" and of the "capital letters for the names" that were to encircle the entablature.[550]

An exterior photograph of the south portico shows the Rotunda very much a construction site in late March 1897. Some of the column capitals on the south portico columns are in place, though uncarved, and the balusters lay in the foreground awaiting installation on the terraces. An undated photograph shows a similar scene on the north side of the Rotunda, where the capitals are in place uncarved and the foreground is piled with construction debris [*Figure 78*].

## CHARLES E. LANGLEY AND CO. DECLARES BANKRUPTCY

During the winter of 1897 it was becoming clear that Langley and Company was struggling to carry out its work under the bid of $269,440 that the University had accepted.[551] Theodore Skinner had approved Langley's application for payment of its eighth installment on the Rotunda contract, but Skinner was concerned about Langley's financial position and thought that Langley's request for funds was high and "simply an attempt to get a hold of as much money as possible as soon as they can." "The building will be completed in about two or three months except some carving which will take longer, so that the next monthly payments will have to be very small," he wrote. The contractors evidently needed cash, Skinner continued, "as they have limited capital." However, with the funds set aside in the reserve, Skinner still thought the "University is safe."[552]

At the end of March 1897 Skinner told White that he had "finally obtained from Langley & Co. the data" that White had wanted about credits and estimated costs of change orders. The difficulty in obtaining information may have been a harbinger of the construction company's financial difficulties.[553] Rector W. C. N. Randolph called a special meeting of the Board of Visitors' executive committee in early April to discuss the problem.[554] A few days later Skinner told White that no action had been taken by the committee "with reference to the possible stopping or omitting of any of the work." However, the executive committee had passed a resolution requesting that Skinner present to them "as soon as possible, a complete report, stating the condition of the contract, with the amounts necessary to complete each building to date."[555] Randolph had hoped that it would still be possible to complete the "whole work as designed" but feared that switching contractors at this late date would make the project prohibitively expensive.[556]

Amid the discord of trying to solve problems with Langley and Co., *Corks and Curls*, the student yearbook, printed an account of the status of construction as of early April 1897, praising the Rotunda's completed dome as "more graceful to our eyes in recent years" and noting that the columns of the two porticos were then "crowned with capitals of Italian marble, ready for the hand of the carver." The oval lecture rooms in the basement and the "old terrace rooms" were already being used for classes at that time, but the library itself was incomplete, still wanting decorative finishes and furniture. The new terrace rooms were "already under roof," and the connecting colonnades were "practically finished."[557]

The *Corks and Curls* report also described the "several important modifications" that had been introduced into the Rotunda's reconstructed interior: "The inner shell of the dome…has been thrown back to abut against the building wall, restoring to the domed interior its full amplitude. The light iron rail of the gallery has been replaced by an artificial stone parapet, and the piers of this will serve as pedestals for a circle of life-size statues (casts from the antique) overlooking the space below." The inner surface of the dome was not yet plastered or painted the planned sky blue with the "twelve soaring eagles, their beaks and talons picked out in gold." "The space between the circle of eagles and the central light will be frescoed to represent floating clouds," the yearbook reported, "fading into the clear vision of the sky."[558]

Reports furnished by McKim, Mead and White for the April 23, 1897, meeting of the Board of Visitors indicate that there was "some nine thousand dollars in dispute" over extras for all projects between Langley and Company and the architects. In a letter written a week before this meeting, White told Randolph that he felt that the contractors were being dealt with too leniently, but, he noted, "they unquestionably took the work at very low figures, and if it had not been for them the University would not have been able to have built its buildings under the appropriation." White believed that it was in the best interests of the building project and the University as a whole to help Langley and Co. "along as far as possible" but without allowing "them too much latitude."[559]

White had also pointed out to Randolph the "very difficult position" that Skinner had been in. He still enjoyed the firm's full confidence, but in executing the firm's orders, Skinner had "often incurred the disfavor of the Contractors." White asked Randolph to help Skinner "by impressing upon Langley & Co. that they must carry out his orders, and do no work without his assent as our representative." In spite of the tension, a few days before the April 23 meeting of the Visitors, Skinner reported that work was "now progressing favorably."[560]

White traveled to Charlottesville to meet with Randolph before the Board meeting. At the meeting the Board of Visitors noted that Langley claimed that the amount needed to complete the Rotunda and the new buildings was $92,518.55 but that the amount included "certain items of Extra work" which were "in dispute and not conceded" and that the "amount actually necessary to complete the work" would not exceed $89,438.59. The Board of Visitors resolved that until the buildings were completed and accepted by the University, "warrants shall be made only for current pay rolls and to other parties doing work and furnishing materials for work hereafter done and materials hereafter furnished."[561] The discussions leading up to these decisions were not recorded in the minutes, but it seems evident that the Board was losing confidence in the general contractor.

Before long the situation had deteriorated further. Randolph wrote White a strongly worded letter on May 3, notifying him that Langley's subcontractors had served the University with notices to stop making payments to Langley and Company and stating that the University was unable to pay Langley and Company "any more money and this will stop their work." The next step, Randolph wrote, was for the Board of Visitors to act through McKim, Mead and White, as was stipulated in the contract, "in taking possession of the work and material and completing the buildings." He told White it was "absolutely necessary" for White to attend the meeting of the Board the next week and also to "consider further the question of reducing the cost and leaving out part of the work provided for in the contract."[562][562] Randolph to White, 3 May 1897, Box 172, File 2, MMW, N-YHS.

Meanwhile, Charles Langley told White on May 4 that he would be meeting with representatives of the University to "go over the whole ground" and would be "willing to consent to anything in reason."[563] Piccirilli Brothers submitted a bill to the University on May 3, indicating that Langley and Company had paid them $4,000 to date. Piccirilli had delivered to the University twenty curved sills at $15 each and ten straight sills at $10 each, as well as ten Corinthian bases and twenty Corinthian capitals (sixteen for columns and four for pilasters, with the abacus and necking complete) at a cost of $400 for each capital. The capitals, however, were not yet carved, and the total price for the completed capitals would be $840 each.[564]

On May 12 Piccirilli Brothers submitted a second bill for the following:

| | |
|---|---|
| 30 sills on the Rotunda | $400 |
| 10 Bases on North Portico of Rotunda | |
| $150 each | $1500 |
| 20 Caps on Portico of Rotunda | |
| Material & Labor $400 each | $8000 |
| To finishing same caps $440 each | $8800[565] |

On May 20, 1897, Piccirilli wrote to McKim, Mead and White that estimated cost for "finishing all work contracted" was $8,800; the capitals were left uncarved for the time being.[566]

The Board of Visitors' executive committee met on May 14, 1897, to review the situation, and the subcontractors continued the work until May 15. However, the subcontractors and vendors had served notices to the University against Langley and Company for $43,000, and state law forbade any further payments to them. Langley and Company was unable to meet its payroll on May 15, leaving 150 laborers, who had not been paid since April 1, "upon the grounds without means of subsistence or of getting away." Langley and Company offered "to surrender their contract and tools and materials" if the University would advance $4,500 for the overdue payrolls. The committee accepted this offer, believing that in consideration of the "hopeless insolvency" of the contractors, the agreement was in the "best interests of the University." In accordance with the contract, the committee then executed agreements with two of the subcontractors, including the Guastavino firm for the "completion of certain tile roofing and flooring which will amount to probably $1,100." It is unclear from the records whether this work was on the Rotunda or on a portion of the new buildings at the foot of the Lawn.[567]

The executive committee recommended that because the Rotunda was the "most nearly finished of any of the buildings," it should be "pressed to completion first." With the old crew of roughly 150 workers cut by half, work continued.[568] As of May 15, 1897, a total of $85,576.98 had been spent on the restoration of the Rotunda.[569]

### A NEW CONTRACTOR IS CHOSEN

At the end of May 1897, as the University's relationship with Langley and Company deteriorated, Ross F. Tucker of the Manhattan Concrete Company wrote to McKim, Mead and White, addressing his firm's role in the University's construction project. "Our one object in this matter is to proceed and execute our work with all speed and to deliver the same in a completed and satisfactory condition as soon as possible," Tucker explained. "We hope to meet you and the University on fair and liberal grounds," he continued, "in order that they may be put into the possession and enjoyment of their new buildings as soon as circumstances permit."[570]

With the wish that his firm be able to continue the work, Tucker highlighted some problems that he and his workers encountered in the reconstruction of the Rotunda. "You will understand that with the assignment of the principal contractors went all responsibility in the condition of the lecture room roofs of the Rotunda," he pointed out; the "water proofing of the old roofs was so poorly done that the rooms are useless."[571] Tucker maintained that the leaking terrace roofs were not the fault of the Manhattan Concrete Company:

> Everything has been done in order to discover the cause for these leaks without success. At my own expense in addition to all the damp-proofing and other work specified by the architect, I covered all of the vestibule roofs with tin and flashed the balustrade to the same so that there is no possibility for any leak to occur through the terrace roof. The only way in which water can possibly get in is from the outside of the balustrade. The balustrade is placed directly over the wall and it is possible that water is forced in during storms from the outside, under the base of the balustrade. This has been frequently caulked and will probably be stopped altogether when the cement work is painted. This portion of the work was not done under my contract and I am sure that no part of the work done by me.[572]

Tucker also reported leaks in the ceiling of the faculty room, chairman's office, proctor's office, and the Board of Visitors' room, as well as a leak in the steam pipe in the chairman's office. The pipe had been installed by Langley and Company.

The variation in the color of the brick used in the facades was also unacceptable Tucker indicated that all of the brickwork had been "gone over with acid and made as uniform as possible" but thought the bricks would still need to be painted to create a uniform appearance. Furthermore, there were problems with the columns. Tucker reported that Theodore Skinner, along with Tucker's own superintendents and the subcontractors who did the work, all "emphatically state that no lime mortar was used in this work." Tucker continued:

> I have already explained that I did all of this work as did the subcontractor, under protest. The University peremptorily ordered the columns to be completed before they had an opportunity to dry. The resolutions of the Committee are on record, as are my protests. Mr. Skinner notified the architects of the circumstances at the time. Under the circumstances it seems impossible for me to hold the subcontractors for pushing the work to completion and putting steam into the building before the work had an opportunity to dry. The fault would have been the same even though any other material had been used, which I am assured is not the case.[573]

Even considering all of these problems, Ross Tucker aimed to have at least the exterior of the Rotunda finished by June 15. He indicated that the "new west roof" would be "reinforced by additional iron work of an expensive kind" and that all work would be done in the "best manner and as speedily as possible."[574]

Tucker, a college friend of Skinner, was also known to White, since he had worked at Box Hill, White's Long Island estate.[575] On June 4, 1897, Tucker wrote to William Rutherford Mead, White's partner, expressing interest in taking over the work at the Rotunda. He planned to "leave for Virginia early next week to take up the matter of the proposition embodying the settlement of the claims of the sub-contractors and the completion of the work on the buildings." He hoped "to be able to make a proposition" to McKim, Mead and White and to the University, which would "do away with litigation and its endless delays and enable" the University to "complete the buildings in the shortest time possible."[576]

Meanwhile, W. H. Hoffman, an employee from McKim, Mead and White's New York office, had arrived in Charlottesville and on June 6 filed a report with Mead. Hoffman had already toured the buildings with Skinner and decided that in order to re-bid the remaining work, new specifications would be needed; they would be referenced to the original specifications and would identify the "various materials on the site that could be used." Not being able to find a suitable typist in Charlottesville, Hoffman requested that a typist from the firm's New York office be sent down, along with "his typewriter, plenty of specification paper, transfer paper, binding sheets & tape to bind work," along with his shorthand book. Hoffman understood that there would be four bidders in addition to Tucker, and he told Mead that he was "becoming acquainted with the work and specifying its completion at the same time which is difficult and keeps me over anxious."[577] Mead apparently went to Charlottesville for the meeting of the Board of Visitors held on June 15; White was spending at least part of the summer in the West.[578]

At that meeting the Board of Visitors authorized the executive committee to proceed with the construction and restoration work by entering into "all such arrangements and contracts as they may deem proper for the completion of the work and may make such modifications in the plans and specifications of the architects as they may deem judicious." The committee was authorized to award new contracts for all of the uncompleted work or to contract for part of it and hire day laborers to finish the rest of it.[579]

The stress of the situation was affecting Skinner's health. He wrote Mead two days after the June meeting of the Board of Visitors that when he had accepted the post in Charlottesville "for the sake of getting away from the office, more or less on account of my health," he had expected to stay only a year. The work proved "much more complicated" and caused him "much more worry" than he had had in his former job in New York, and he had "not gotten neither the rest nor the change" that he had expected. Nevertheless, he was determined to "weather the storm" and did not want to be replaced. Mead replied with a statement of confidence in Skinner's work.[580]

Meanwhile, Hoffman remained in Charlottesville to help with the situation. On June 19 he met with a committee of the Board. Hoffman filed a report about the meeting with Mead, noting that Randolph had been "very pleasant" to him and seemed to accept Hoffman's position that the "work was of excellent character and of ample quantity for the small amount of money they had expended on it." Hoffman had told Armistead Gordon, another committee member, that there was "no doubt" that all of the buildings would be ready for the students when they returned on September 15, although "there might be some work still to do, but it could be arranged that it need not interfere with the use of the buildings by the University." Ross Tucker had also been at the meeting, and the committee had questioned him about subcontractors. [581]

Shortly after the June 15 Board of Visitors' meeting, Skinner had been told by a member of the executive committee that if the architects could have their materials ready by June 28, the University would move ahead quickly to issue new contracts.[582] On June 22 Hoffman reported to William Mead in New York that he had completed the new specifications for the Rotunda that afternoon.[583]

By the summer of 1897, the stress of managing the work at the University was affecting Skinner's health. He wrote Mead two days after the June 15 meeting of the Board of Visitors that he had accepted the post in Charlottesville "for the sake of getting away from the office, more or less on account of my health," and had expected to stay only a year. The work proved "much more complicated" and caused him "much more worry" than he had had in his former job in New York, and he had "not gotten either the rest nor the change" that he had expected. Nevertheless, he was determined to "weather the storm" and did not want to be replaced. Mead replied with a statement of confidence in Skinner's work.[584]

On July 20, 1897, Ross F. Tucker signed a contract with the University of Virginia to serve as the general contractor for the completion of the work, stipulating that he would carry out all "Carpenter, Mason, Plastering, Painting, Plumbing, Heating & Ventilating, Gas fitting, Cement, Electrical, Hardwood, Iron and other work necessary to the completion of the Rotunda" and the new buildings. Under the new contract all work on the Rotunda and its terraces was to be completed by November 15, 1897, while all work on the new buildings was to be finished by January 1, 1898. Tucker's price, accepted by the University, for completing all of the work, was $99,956.[585]

A few days before signing the contract with Tucker, the University had contracted with W. J. Whitehurst for "certain sash, doors, frames, mouldings, glazing, wood work and other like materials"; he would be paid directly for these elements.[586] Some other contractors also submitted proposals to McKim, Mead and White in mid-July, but it is not clear whether they were accepted or combined with the Tucker contract. Nevertheless, their proposals may have indicated work that still needed to be done. For instance, the Southern Electric Company, of Baltimore, proposed to run "tubing to 5 outlets for back porch lights, to 1 outlet for front porch light; to 4 ceiling outlets in basement for First Floor; to 8 floor boxes on First Floor; to 20 outlets for desks on Third Gallery; to 2 outlets for clock face rooms" in the Rotunda. Southern further proposed to place receptacles for 170 lights around the dome.[587] W. H. Spelman and Co., of New York City, submitted a price of $1,315 for the completion of plumbing and gas fittings in the Rotunda.[588] Sculptors J. Franklin Whitman and Company of Philadelphia submitted a price of $3,900 on July 15 for carving the Rotunda's Corinthian capitals but then realized that they had made an error in measuring the capitals on a trip to Charlottesville and revised the price on July 22 to $6,500.[589] Ultimately, the work for carving the Rotunda's capitals went to the firm of Pempeo Coppini and John Grignola, of New York City; the capitals were completed in situ in 1902.[590]

Ross Tucker submitted bills for work completed on the first day of each month from August through November of 1897. The bills show that "granolithic moulds, models, and column work" were completed for $5,100 in July. Excavation, installation of heating, carpentry, plastering, and marble, iron, and electrical work were done in August for a total of $20,100.08. Similar work plus the installation of the elevator was carried out in September for $18,422.64. More of the same type of work was done in October for $21,447. It is not clear, however, what of this work was done at the Rotunda and what was done at the three new buildings at the south end of the Lawn.[591]

On September 30, 1897, Skinner reported to the office in New York that the contractors were "about to finish the shafts of the columns inside the Rotunda." He suggested that they finish the columns with a "light grey rough cast cement," rather than what had been specified, because, he argued, the columns would be "less easily soiled and would be equally durable." Moreover, Skinner offered the argument that the "contrast in color between the white bases, caps and cornices and the gray shafts would be very pleasing." "The rough surfaces," he added "would not tempt the students to write all over them as do the smooth white finishes."[592]

On December 10, 1897, Stanford White wrote to Randolph, impressing upon him that among the "most important matters to be carried out as soon as possible" were "the painting white the outside of the roof of the Rotunda, the painting of the interior of the dome and ceilings of the porches of the Rotunda," and "equalizing the color of the brickwork of the Rotunda," as well as "cutting of the caps and placing of the statues in the Rotunda."[593] On that same day the Board of Visitors authorized painting the outside of the Rotunda dome white and having the inside of the dome "painted or colored and the Library galleries painted white."[594] Also at this meeting the Visitors paid tribute to Randolph, who was resigning as Rector of the University and as chairman of the building committee, for reasons of poor health. Armistead Gordon was elected Rector in his place.[595]

Correspondence dating to the end of December 1897 indicates that the work at the University was winding down.[596] Skinner left Charlottesville in the beginning of December on account of his stress-induced health problems. On December 29 Richard White, still on location and now overseeing the last of the work for McKim, Mead and White, wrote to his brother that people were approaching him about certain small matters that needed correction both at the new buildings and at the Rotunda and about the final acceptance of the work. He asked whether Stanford wanted him "to attend and to decide as to the lesser matters."[597] Tucker wrote to Richard White on the same day, asking him to sign a requisition for the balance due on his contract, less the 15 percent reserve. He hoped that "ere the week is over you can certify that the several buildings are complete and broom clean." Tucker complained that "University people and others over whom I have no control are tracking dirt into the buildings after I have cleaned them up, and are taking possession of rooms."[598]

Richard White communicated regularly with the New York Office. On January 5, 1898, he notified his brother that the executive committee of the Board of Visitors was planning to inspect the buildings prior to their formal acceptance. The contractors had "turned over the keys" to Richard White, and he, in turn, had turned them over to the Proctor.[599] The next day Tucker wrote McKim, Mead and White that the work was "ready for inspection and delivery to the owners."[600] Stanford White apparently decided to tour the buildings himself and not rely on his brother's offer to show the Visitors through the final inspection.[601]

On February 26 Richard White reported to his brother that scaffolding was up in the Rotunda, evidently for the painting of the dome, and the workmen were awaiting the "barrel of color which you were to have sent here from New York."[602]

## FINISHING THE WORK

On February 28, 1898, new members were elected to the Board of Visitors, and at their March 17 and 18 meeting the Visitors spent time closing out the accounts for the work on the Rotunda and the new buildings. The Board extended its gratitude to McKim, Mead and White, thanking the firm for its "personal interest and zeal in carrying out the work" and the "masterly way" in which it "offered a striking solution of practical difficulties in a manner at once harmonious with but expansive of the original design and preserved the distinctly classic features of the University buildings." To Stanford White the Board specifically extended its gratitude for his "unceasing labors and the unreserved devotion of his single abilities to the accomplishment of the best and noblest results." The Board boasted that, as completed, the new construction "greatly increased the efficiency and attractions of the University" and "made it a more splendid monument to its great founder, Thomas Jefferson."[603]

Theodore Skinner was back in Charlottesville for the meeting of the Board of Visitors on March 17 and 18, 1898. He had gone to Paris after leaving Charlottesville, but when he found himself "unable to work" there, physicians told him to return home and rest for six months. Rather than resting, though, he again traveled to Charlottesville at Stanford White's direction to represent McKim, Mead and White in settling the final arrangements for the University buildings. Richard White was still there, too, but was suffering from a sprained ankle.[604]

On March 21, 1898, Thomas H. Carter, now Proctor and Superintendent of Buildings and Grounds, submitted a report to McKim, Mead and White, outlining the various minor problems with the new buildings that needed to be rectified before the University would accept them. Regarding the Rotunda, Carter noted that there were "cracks and defects in the granolithic cement of the balustrade and steps of terraces," as well as leaks in the "large cellar under the platform connecting the north steps of the Rotunda" and in the "pump room under the north front of the Rotunda."[605] Carter also inquired about the installation of a pipe under the urinals in the Rotunda lavatories.[606]

While in Charlottesville Skinner reviewed Carter's observations and wrote to White on March 25 that the University was arranging for the work to be repaired and a "settlement of the Tucker contracts" was then "in sight." Skinner, however, did not elaborate on these matters, as he was bound for New York and told White that they could discuss it in detail in person.[607]

THE DEDICATORY CELEBRATIONS

The new buildings and the Rotunda were dedicated at the commencement ceremonies held in the new auditorium of Cabell Hall on June 14, 1898. The ceremony was attended by several hundred people, including Virginia Governor James Hodge Tyler. The following account of the event was published in the August 1898 issue of the *Alumni Bulletin*:

> Pit, dress circle, balcony and gallery were filled, probably four-fifths of the seats being occupied by ladies, whose pretty costumes gave a color to the scene and whose lively chatter swelled into a steady buzz before the Rev. Dr. Randolph McKim invoked divine blessing and thus began the transactions of the day. On the rostrum sat some two hundred men, a distinguished gathering, with Governor Tyler and his staff at the centre or grouped about it. Here were a bishop, a Senator of the United States and many distinguished alumni and guests. When Mr. Wu, the Chinese minister, and Mr. Chow-Iss-Chi, the second secretary of the Chinese legation, and Mr. M. Y. Chung came in and took their seats a Chinese flag (black dragon on a yellow field) faced them, draped on the wall behind those on the rostrum.
>
> Dr. McKim's prayer was followed by the hymn "Rise, Crowned with Light," sung finely by the students.
>
> The Hon. Armistead C. Gordon, of Staunton, read the dedication poem. The audience during the reading was very responsive, and at its close some one on the dress circle proposed "three cheers for our poet," which were given enthusiastically.
>
> Rev. Dr. T. M. Carson, rector of St. Paul's Episcopal Church, Lynchburg, then delivered an address, presenting the physical laboratory building, the gift of Mr. Charles B. Rouss, of New York.
>
> Then came the rollicking college song, "Orange and Blue," which set everybody to applauding, which was kept up until other songs were given.
>
> This was followed by an address by Hon. James C. Carter, of New York.[608]

That evening a large reception was held in the Rotunda.[609] The northwest terrace of the Rotunda, the YMCA hall, had been dedicated separately, two days earlier, on June 12, 1898.[610]

Though the buildings had been handed over to the University, some problems with the construction lingered after the dedication. In late July Thomas Carter wrote to McKim, Mead and White, requesting that the firm take the "necessary action in regard to the Rotunda columns." "I wish very much that Mr. Stanford White could see them in person," Carter wrote. "The upper part of the columns for six or eight feet are more solid than the lower, and might possibly be retained, but," he wrote, "I am unable to see that a complete and uniform job could be made of the columns without taking off the cement from the cores and putting it in anew."[611]

White evidently passed this information along to Theodore Skinner, who was, at the time, convalescing in Liberty, Maine, "lying off," as he himself put it on July 31, 1898, and "trying to get on my feet again" after his stressful year-and-a-half-long stint in Charlottesville. Though he had not yet fully regained his health, Skinner offered his services to White once more, writing that he was ready to help White in any way that he could in order to get the situation at the University settled once and for all.[612]

Regarding the Rotunda's columns, Skinner wrote that they "were finished in a hurry and at the urgent order of Mr. Robertson," superintendent of buildings and grounds, but that as far as he knew, the columns were done "exactly in accordance with the revised specifications written by Mr. Hoffman," of McKim, Mead and White. Skinner told White that Gilman Brothers, a subcontractor for Ross F. Tucker, "prophesied that these columns would do just as they have done, i.e., crack and stain if the specifications were followed." Skinner said that he made a special trip to New York to consult with Charles McKim on the matter, as White was away in Europe when the question of the columns came up, but that McKim would not "take the responsibility of changing" White's specifications and instructed Skinner to see that they were carried out as written.[613][613] Skinner to White, 31 July 1898, Box 172, File 2, MMW, N-YHS.

The following description appeared in the August 1898 issue of the *Alumni Bulletin*: "At the northern end [of the Lawn] is the rotunda, a building in the Corinthian style, modeled from the Pantheon in Rome. Its base consists of four terraced wings united at the eastern and western ends by colonnades, and covered by a flat roof, forming, with the north and south porticos, a continuous promenade around the building. This promenade, guarded by its handsome parapet, is a beautiful feature of the remodeled structure."[614]

The anonymous author of the article then turned to the interior of the restored building:

> From the centre of the base rises the rotunda itself, circular in plan with its shapely spherical dome and its superb Corinthian porticos. The interior is a single room from the portico level up, devoted entirely to the uses of the library. In addition to the space on the main floor, there are three galleries, the topmost at the springing of the dome being carried by a peristyle of twenty Corinthian columns.
>
> The room is finished in white, except the ceiling, which is sky blue, picked out with stars. The decoration about the central light is a circle of eagles seeming to soar downward through the blue ether. The base of the building contains in

> convenient proximity the offices of administration, the law lecture rooms, the law library and the assembly hall of the Young Men's Christian Association.[615]

In the 1898 edition of *Corks and Curls*, Stanford White wrote that "If the new buildings are successful, it is mainly due to the fact that the architects have rigidly endeavored to carry out and complete the original scheme as laid down by Jefferson, and that in doing so, the work has been to them a work of love." White concluded: "The State of Virginia may well feel that in the graceful proportions of the Rotunda and of the old buildings, in the gleaming white colonnades with their classic temples embowered in the avenues of trees, and in its beautiful College lawn under its soft skies, that it possesses, if not the finest, or richest, or most imposing, at least the most exquisite and perfect group of collegiate buildings in the world."[616]

An 1899 description of the Rotunda states that the interior of the restored building "is of nobler proportions than before, as there are but two stories, the second occupying more than two-thirds of the entire height, rising from the level of the floor of the portico to the dome, making it the most notable and imposing university library hall in the world." The author of this account, University librarian John S. Patton, went on to describe the new north facade of the building and portico, comparing it to the Annex:

> The illustration of the north front of the rotunda shows that a handsome esplanade has taken the place of the much criticized annex of former days, a modern architectural excrescence impossible of classification here, which those who care to see the orders of architecture unmixed will be glad has not been restored, especially as its absence gives room for a portico after the model of that which looks upon the lawn, though subordinate to it. It cannot be denied that the rotunda appears of less majestic height because of the flanking arcades, corridors, and wings which make it the centre of a quadrangle, but it is equally undeniable that this loss is in the interest of a happy effect, due to a closer correspondence with its surroundings. Everybody who is at all familiar with the arcades remembers how perfectly they accord with the general architectural plan outlined and in part inaugurated by Mr. Jefferson. These arcades have been extended by covered colonnades to the northern line of the rotunda, and united with it by two low wings on each side. In these wings are the office of administration, the law lecture rooms, and the hall of the Young Men's Christian Association. As the roofs of these colonnades and wings are covered with cement pavements, they, together with the floors of the porticos, form a quadrangular promenade around the entire building.[617]

A final calculation revealed that the restoration of the Rotunda ultimately cost $109,058.[618]

## A NEW CENTURY

A September 1902 Sanborn fire-insurance map depicts the reconstructed Rotunda with its north and south porticos and four single-story terrace wings projecting from each side of the porticos. The wings are connected by single-story colonnades. The map indicates that the north wings were then used as classrooms, and the south wings were used as offices. A similar map made five years later, in October 1907, shows that the north wings continued to be used as classrooms but that the southeast wing had been converted from office space to classrooms. The southwest terrace wing continued to be used for office space. The skylight in the Rotunda roof is indicated on the map. Written over the dome is the word "Library," and "Fire Proof Construction" is inscribed over the entire structure. A Sanborn map made in November 1913 shows no changes since 1907.[619]

The first few decades of the twentieth century were quiet ones for the Rotunda. What work was done pertained to the landscaping, and there is no record of any major changes or repairs made to the building's interior. A 1920 Sanborn map indicates that all four of the terraces were by this time being used as classrooms, and this map also indicates that there is a basement level beneath the north terraces. Written next to the Rotunda on the map is the following descriptive note: "(Built 1895) Brick Walls, Floors & Roof. Tile on Reinforced Concrete Covered with Copper. Fireproof Construction." In November 1921 the University planned to "complete heating equipment" in the Rotunda, as well as in the East Range and the East Lawn. The contract was awarded to Almirall and Company of New York, without competitive bids, for $60,000. The work was set to begin at the end of November 1921 and was expected to be completed, weather permitting, by the first of January 1922.[620]

A Sanborn map made in 1929 shows that classes were no longer being held in the Rotunda's wings at that time; all of the rooms in the wings were now given over to offices and conference rooms.[621]

## RESTORATION OF THE EXTERIOR, 1938 AND 1939

The Rotunda served as the University library until 1938, when the entire collection was moved to the new Alderman Library, located across McCormick Road to the west of the Rotunda, leaving the Rotunda without any real function.[622] In June 1938 the Board of Visitors authorized University President John Lloyd Newcomb to apply for a federal Public Works Administration grant for improvements to the Rotunda.[623] In July 1938 the University's Department of Buildings and Grounds made drawings of the Rotunda in preparation for repairs. A special meeting was called at which Rector Frederic W. Scott and the Board of Visitors gathered to accept the PWA grant on August 12, 1938. A $75,000 appropriation from the General Assembly of Virginia supplemented the grant.[624]

On August 12, 1938, the same day that it accepted the PWA grant, the University entered into contracts with architect Stanislaw Makielski, of Charlottesville, for the "restoration of the Rotunda" and with J. S. Miller Jr. for the "electrical engineering services in connection with the restoration of the Rotunda." Fiske Kimball, an authority on Thomas Jefferson's architectural work and the neo-classical revival in America, served as consultant on the project. Kimball had been a professor of art and architecture at the University from 1919 to 1923. The minutes of the meeting of the Board of Visitors from August 12, 1938, do not provide any further details.[625] At the time, Makielski was associate professor of architecture in the University's McIntire School of Fine Arts. Instead of awarding a contract to an outside construction firm, the University decided that the work should be carried out under the direction of the superintendent of buildings and grounds, Frank Hartman.[626] The $136,373 project would include new marble steps for both the north and south porticos and new marble balustrades to replace the crumbling concrete ones installed as part of the 1896 restoration. The brickwork of the building would also be "treated" and water drains replaced, in addition to "other minor improvements." The cryptoporticus may have been added at this time.[627]

On January 21 the building committee assembled to receive the bids for other components of the work — marble work, terrace paving, roofing, and sheet-metal work. Building-committee members Hollis Rinehart, Lewis C. Williams, and C. O'Conor Goolrick, as well as University president John Lloyd Newcomb, Stanislaw Makielski, and resident engineer G. B. Hazelgrove, were present for the opening of the bids. Contracts were awarded to the lowest bidders: the Georgia Marble Company of Nelson, Georgia, would furnish and set all marble for $65,200; N. W. Martin and Brothers of Charlottesville would furnish and set all stone flagging for $4,550 and provide the roofing, waterproofing, and sheet-metal work for $4,340, for a total of $74,090.[628] Work was underway by the early fall of 1938. On October 6 it was reported that workmen were tearing down the balustrade and steps of the Rotunda in preparation for the new marble replacements.[629]

The minutes from the April 7, 1939, meeting of the Board of Visitors provide details of the nature of the work to be done on the exterior. The Board of Visitors approved the following contracts, all from Southern firms, involving amounts under $1,000 for the work at the Rotunda:

| To | Amount | Description |
|---|---|---|
| Hull Coal Company, Charlottesville, Va. | $767.50 | Est. Cement Requirements |
| Barnes Lumber Corp., " " | 133.60 | Est. Masonry Cement |
| Charlottesville Stone Corp., " " | 630.00 | Est. Crushed Rock Requirements |
| E. T. Mankin, Inc., Richmond, Va | 189.60 | Est. Washed Sand Requirements |
| Barnes Lumber Corp., Charlottesville, Va. | 210.00 | Est. Common Brick Requirements |
| Noland Company, Inc., Richmond Va. | 151.90 | Est. Galv. Wrought Iron Pipe for Water Lines |
| C. B. Anderson, Profitt, Va. | 325.00 | Est. Concrete and Mortar Sand Requirements |
| Virginia Steel Co., Richmond, Va. | 105.00 | Reinforcing Steel for North Steps |
| Charlottesville Hdwe. Co., Charlottesville, Va. | 254.00 | Reinforcing Mesh |
| Dietrich Brothers, Baltimore, Md. | 216.00 | Reinforcing Steel for Slabs |
| Hajoca Corporation, Staunton, Va. | 575.00 | Pipe and Fittings for Heating |
| Massey Bldr's Supply Co., Staunton, Va. | 185.47 | Sewer Pipe |
| General Elec. Supply Co. Richmond, Va. | 865.25 | Electric Conduit and Fittings |
| Richmond Struc. Steel Co., Richmond, Va. | 290.00 | Built-up Steel Beams for Colonnades |
| Charlottesville Lbr. Co., Charlottesville, Va. | 620.00 | Est. Plaster and Lime Requirements |
| Cinder Block Company, Richmond, Va. | 353.40 | Cinder block for Partitions and back up |
| Bowker & Roden, Richmond, Va. | 182.50 | Cork Expansion Joint |
| Charlottesville Lumber Co., Charlottesville, Va. | 655.42 | Est. Lath and Furring Channel Requirements |
| Tomlinson Co., Inc., Richmond, Va. | 842.80 | Galv. Wrought Iron & C. I. Pipe for Drainage |
| Richmond Struc. Steel Co., Richmond, Va. | 285.00 | 3" Channels for Supporting Furring Channels in 4 basement wings |
| Dyke Dean, Elkton, Va. | 216.53 | Scaffolding Lumber |
| Harris Hdwe., Co., Charlottesville, Va. | 104.57 | Plaster Bond & Waterproofing[630] |

Additional contracts awarded on June 7, 1939, indicate that doors and frames were being replaced and that parts of the exterior were being repainted:

| To | Amount | Description |
|---|---|---|
| Barnes Lumber Corp., Charlottesville, Va. | $174.00 | Paving Brick |
| Westinghouse Elec. Sup. Co., Richmond, Va. | 188.02 | 3,000' galvanized conduit |
| R. E. Richardson & Son, Richmond, Va. | 1,180.80 | Millwork (wdw. frames, etc.) |
| General Elec. Sup. Corp., Richmond, Va. | 325.00 | Five Panel Boxes |
| John T. Lewis & Bros., Philadelphia, Pa. | 275.78 | White Lead |
| Harris Hardware Co., Charlottesville, Va. | 276.36 | Bay State White Paint |
| Barnes Lumber Corp., Charlottesville, Va. | 676.00 | Doors and Frames[631] |

Drawings of the new doors by Stanislaw Makileski show that four different styles were needed for four different locations within the building. The exterior doors to the offices under the south terraces were replaced, as were the interior connecting doors between those offices, the doors to the oval rooms on the ground level, and the exterior doors in the north terraces.

A drawing made by Makileski in December 1938 and corrected in May 1939 [*Figure 90*] shows the uses of three of the terrace rooms at that time: the northwest terrace served as the bursar's office; the northeast terrace served as the registrar's office; and the southwest terrace served as the Bureau of Public Administration. Asphalt tile floors were indicated in the south terrace rooms.

Due to difficulties encountered in the detailing, fabrication, setting, and fitting of the marble, as well as a shortage of skilled marble cutters, setters, and pointers, the work was delayed, and the deadline for completion was extended from August 20 to September 28, 1939. The marble work was described as being "very complicated" and had to be "carefully cut and fitted to existing work, which was found to be out of square, not aligned and at varying levels," thus requiring an "unanticipated amount of detailing and checking." "Many pieces of marble," the Board of Visitors reported in the minutes of its July 19, 1939, meeting, "had to be cut and fitted on site," which contributed to the delay. The extension of the deadline also allowed more time for finishing the stone flagging and the roofing, waterproofing, and sheet-metal work.[632]

The contracts for the exterior work were closed out at the Board of Visitors' meeting on October 3, 1939. In January 1940 the *Baltimore Sun* reported that the exterior work had been completed for months, but interior painting was still in progress as workmen touched up the blue spangled ceiling of the dome. In addition to the exterior restoration, new office furniture, both metal and wood, was purchased to outfit the interior.[633] On January 26, 1940, the first in a new series of dances was held in the Rotunda, similar to the balls and receptions held there before the fire.[634] Further work on the interior was delayed because of World War II and would not be undertaken until the 1970s.[635]

In late 1941 Superintendent of Buildings and Grounds Frank Hartman sought to solve an "acoustical problem" in the Rotunda and contacted Dr. V. L. Chrisler of the National Bureau of Standards to consult. Though Hartman consulted with both Chrisler and Acoustics, Inc., of Washington, D.C., about the unnamed problem and the University had been "practically assured" of receiving funding for the work, the funding never came through and the project was "shelved" indefinitely.[636]

In 1944 the Board of Visitors elected to create a committee to investigate the best possible functions for the building.[637] A few years earlier, in 1939, the Board had begun considering appropriate uses of the dome room, when it appointed a committee of three men to investigate the possibilities. The results of the committees' findings are not known, but in 1944 Lewis C. Williams was appointed chair of the Committee on the Use of the Rotunda, and in March 1945 he reported to the Board that he needed architectural advice and "requested permission to employ the services of Eggers & Higgins to prepare plans."[638] The use of the Rotunda was discussed at the Board of Visitors' March 7, 1947, meeting, but no details of the discussion were included in the minutes.[639]

In February 1950 the Rotunda was the victim of an act of vandalism when a "carefully drawn Communist slogan" translated as "The Government of the Soviet Union — Glory to Stalin" and the hammer and sickle symbols of the U.S.S.R. were painted on the wall of the Rotunda near the Woodrow Wilson School of Foreign Affairs.[640]

## PLANS FOR THE RESTORATION OF THE ROTUNDA'S INTERIOR, 1955 TO 1973

After the removal of the library in 1938 the Rotunda received limited attention in University budgets, and it gradually deteriorated. By the mid-1950s Stanford White's changes to the Rotunda were viewed by some at the University as an abomination, in direct conflict with Jefferson's plans.[641]

On January 13, 1955, Professor Frederick D. Nichols of the University's School of Architecture met in the Rotunda with the Buildings and Grounds Committee of the Board of Visitors on how to "correct the alterations" made by Stanford White and restore the Rotunda interior to Jefferson's design. With Jefferson's original drawings and notes in hand, the committee discussed restoring the three oval rooms on the main floor to provide space for the University president's office and for a meeting room that could be used by the Board of Visitors. Following the alterations at the end of the nineteenth century the Board had ceased to hold its meetings in the Rotunda for want of an appropriate space therein, and the Buildings and Grounds Committee discussed the prospect of resuming Board meetings in the Rotunda. The use of the dome room was also discussed, and committee member Emily P. Smith, president of the Garden Club of Virginia, suggested that it be used as a museum of the University's history. The meeting concluded with the committee agreeing to consult with the Virginia Fine Arts Commission on Nichols's proposal to convert the Rotunda back to Jefferson's plan.[642642] BV, Minutes, 14 Jan. 1955.

The committee and Nichols met with the commission on February 11, 1955, and presented to the commission Nichols's plan for the restoration accompanied by copies of Jefferson's drawings for the Rotunda. The commission was reportedly "impressed" with the "unusual detail of the documentation" in the drawings and "approved heartily" of the proposal for the restoration of the Rotunda to its original plan and appearance.[643] Fiske Kimball, who had served as a consultant in the exterior restoration in the late 1930s, was called upon to comment on Nichols's proposal. Though Kimball had expressed some initial hesitation over tampering with any work done by an architect as important as Stanford White, Kimball reportedly expressed "great enthusiasm" for Nichols's ideas. Minutes of the Board of Visitors' meeting of February 12, 1955, report that Kimball remarked that "Jefferson was a greater architect than Stanford White" and that the Rotunda was Jefferson's last great architectural monument. Kimball supported Nichols's proposal for making the Rotunda the administrative center of the University, maintaining that this was "strictly in accord with Jefferson's conception of academic architecture."[644]

In anticipation of the interior restoration, University president Colgate Whitehead Darden Jr. requested that a model of Jefferson's Rotunda in its original form be constructed.[645] Further consideration of the Rotunda restoration was deferred until the model was completed and set up for viewing on the main floor of the Rotunda during the spring of 1957. The model was constructed by S. Rex Whitehurst, a student in the University's School of Architecture [*Figure 98*].[646] After viewing the model, the Board of Visitors quickly approved Nichols's plans to restore the interior of the Rotunda to its original design, as it stood from the time of its construction until the fire in 1895. However, construction was entirely contingent upon Nichols's ability to raise the funds for the work from private sources.[647]

Returning the interior of the Rotunda to Jefferson's plan would be a massive undertaking that would require gutting the entire McKim, Mead and White interior. Ultimately, it would take Frederick Nichols more than fifteen years to secure the necessary funds to commence work. At the same time the University had many other building projects that it perceived as being of higher priority, including continued work on the University hospital, an addition to the law school building, and renovations to Minor and Madison halls, among other projects.[648]

On September 25, 1965, President Edgar Finley Shannon Jr., who had succeeded Darden in 1959, appointed a Rotunda Restoration Committee to guide planning.[649] The restoration committee met for the first time on November 9, 1965, and agreed unanimously on the general plan for the restoration as outlined by Nichols, to make the dome room a visitor center for exhibits, receptions, and meetings and to replace the oval rooms on the main floor for use of the president and the Board.[650]

On December 20, 1965, the U.S. Secretary of the Interior designated the Rotunda as one of four National Historic Landmarks in Virginia, and President Shannon signed an agreement with the National Park Service for preservation of the Rotunda as a National Historic Landmark on January 7, 1966. A ceremony was held at the Rotunda on April 13, 1966, to recognize the Rotunda's status as a National Historic Landmark.[651]

On April 2, 1966, the Board of Visitors selected the architectural firm of Ballou and Justice of Richmond to prepare plans for the restoration of the Rotunda.[652] Werner K. Sensbach, director of the University's Planning Department, formally informed Ballou and Justice on April 29, 1966, that they had been selected to carry out the work.[653]

By September 1968 the firm had drawn up plans and sections of the Rotunda both of which were based on "probable actual construction as determined by analysis of pre-fire photos and original plates of Palladio and others referred to as sources." Existing critical dimensions were also noted on the drawings.[654] Another set of drawings prepared by Ballou and Justice in May 1969 indicates the tentative uses of the reconstructed oval rooms on the main floor: the president's office would be located in the west oval room, the Board of Visitors' meeting room would be in the east oval room, and secretaries would occupy the hourglass-shaped hallway between the two rooms.[655] A project report and project criteria were submitted by the architect on May 8, 1969. The criteria outlined the uses and the square footage of the planned reconstructed rooms, as well as what areas would be demolished, reconstructed, or restored.[656]

The University entered into contract with Ballou and Justice on December 29, 1970. The contract stated that the fee would be calculated on a cost-plus basis without an upset cost because the Rotunda was a "national historic monument."[657] By the end of March 1971 the project report, project criteria, cost estimate, and contracts between the University and Ballou and Justice had been approved by the governor's office. Though the planning work was "well underway" at that time, there was a prolonged delay in starting construction because the plans needed to be finalized and also because funding had not been secured.[658]

In a composite wall section prepared in May 1971 the architects continued to work out details as they compared their plans to Jefferson's and the existing conditions.[659]

The engineering firm of Torrence, Dreelin, Farthing and Buford, of Richmond, conducted a preliminary engineering investigation of the Rotunda in June 1971 and found that the roof was sound and that the existing dome could be retained. The firm also concluded that Stanford White's "masonry liner wall" within the walls of the Rotunda should be preserved, as it was “necessary, both to support the dome and the dome-room floor and to buttress the original walls of the structure weakened in the fire.” Francis L. Berkeley, assistant to President Shannon, reported on the University’s preferences to architect Louis Ballou at the end of June 1971, based on the engineering firm’s findings:

> The proposed sole alternative [to retaining the masonry liner wall and dome], demolition of the entire Rotunda structure, and reconstruction of it in a total restoration from the ground up, would serve only one purpose: it would make the dimensions of the interior rooms more faithful to the original dimensions by a few inches. Such an act would be self-defeating, however, because we would thus destroy all that remains (the major part of the exterior) of Jefferson’s original structure in order to achieve a slightly more mathematical precision in restoring the lost portion thereof.
>
> In view of the fire of 1895 and recent legislation, the State Fire Marshal will not in any case permit reconstruction of Jefferson’s wooden roof. The best fireproof roof that we could have is the present dome (built by one of the greatest of a half dozen architects who have shaped the Rotunda), which we judge to conform to the location of Jefferson’s original as closely as possible for tile and masonry construction.
>
> The thrust of your recommendations appears to be to preserve the most that is possible of Jefferson’s work while doing the least violence to the subsequent architectural history of the structure, but always deferring to Jefferson wherever there is a choice between his work and Stanford White’s. This approach and the implementation you recommend are highly acceptable.[660]

By October 1971 Ballou and Justice prepared a full set of drawings, including sections, floor plans for each level, framing plans, details of the first-floor cornices and dome-room colonnade, and mechanical plans showing ductwork and piping below the basement floor, as well as preliminary electrical plans [*Figures 100-106*].[661] The preliminary specifications for the restoration of the Rotunda interior are dated October 1, 1971. The scope of work included the following:

1. Remove all present interior construction and finishes including plaster in the original portion of the Rotunda, retaining only the following:

a. Exterior walls, including masonry added to inner face in 1896.

b. Present Guastavino tile dome

c. Present Basement Oval Room masonry walls

d. Present window sash and exterior metal trim and cornices

e. North and South Porticos, including attics above and present spaces beneath and steps leading to Porticos.

f. All present facilities in wings beneath terraces adjacent to the Rotunda on east and west sides.

2. Provide proper shoring and bracing to all retained portions of the Rotunda during demolition and construction to prevent damage or collapse thereof.

3. Remove present copper roofing, skylight and plinths from the Dome.

4. Construct the following facilities within the shell of the Rotunda, as shown on drawings:

a. New duct and pipe space below Basement Hallway floor

b. New Basement floor slab and brick flooring

c. New Toilet and Service Facilities beneath the South Portico

d. New Mechanical Facilities beneath the North Steps, and beneath the South Portico

e. New Basement North Oval Room walls

f. New First Floor construction

g. New First Floor Oval Room walls

h. New Second Floor construction

i. New Dome Room (second floor) Colonnade and Galleries

j. New fireplaces and chimneys at all floors east and west sides and in North Oval Room (First Floor) and at stair landing

k. New Structural Floor in Attic over South Portico

l. New Main stairway from Basement to First Floor and From First Floor to Second Floor

m. New steel spiral staircases in NW and NE stairwells, extending from Basement to Dome Room Upper Gallery, with new exits to exterior at Basement level

n. New Elevator in SE stairwell at First Floor and Second Floor (Dome Room)

o. New Toilets in SW stairwell at First Floor and Second Floor (Dome

Room)

p. New interior finishes, trim, doors, ceilings, wood flooring, etc.

q. New air-conditioning systems to all spaces in Basement, First Floor and Dome Room (Second Floor)

r. New sprinkler system above ceilings in Basement and First Floor, in spaces beneath North and South Porticos, at ceilings under Dome Room Galleries and in Attics over North and South Porticos

s. New electrical system and lighting throughout building.[662]

The Board of Visitors approved the architects' plans on April 7, 1972. The Buildings and Grounds Committee had met on the previous day with Louis Ballou and John Allen of Ballou and Justice to review the preliminary drawings. Ballou and Allen described the drawings for the restored Rotunda as "almost exactly as built by Thomas Jefferson" but explained that certain deviations were necessary to preserve the structural integrity of the Rotunda and to provide such modern conveniences as an elevator and air conditioning. They reported that the Rotunda's dome was sound and that the reconstruction work would not in any way alter the outside appearance of the Rotunda.[663]

At its April 7, 1972, meeting the Board of Visitors authorized University president Edgar Finley Shannon Jr. to apply for a grant from the Department of Housing and Urban Development for one half of the total construction estimate of $2,176,500. The University's goal was to match the HUD funds with non-Federal sources and to have the building restored to its original design by the nation's Bicentennial in 1976. The U.S. Bicentennial Committee recommended that the Rotunda restoration be the nation's number one priority, in terms of preservation projects, for the Bicentennial celebration.[664] Between 1963 and 1972 several hundred contributions were received by the University for the restoration, including gifts from alumni and an appropriation of $55,000 from the General Assembly of Virginia.[665]

On April 28, 1972, in the presence of state, local, and national officials, the Department of Housing and Urban Development awarded the University of Virginia a grant in the amount of $1,088,250.[666] The Cary D. Langhorne Trust made a gift of $460,000, with additional income earmarked for the restoration over the next seven years for a total of $1,017,903. With this gift from the foundation, the University received the matching funds that it needed to begin the restoration work.[667]

Though the HUD grant was indeed a coup, it was subsequently discovered that the grant was actually made without the necessary approvals. The University was not aware of Section 106 regulations of the National Historic Preservation Act of 1966 requiring the state historic preservation office to review and approve of the project. Calder Loth, of the Virginia Historic Landmarks Commission, was assigned to act as a liaison between the state commission and Ballou and Justice. A special committee was set up by the commission to review the preliminary plans.[668]

In a report dated June 9, 1972, the Virginia Historic Landmarks Commission outlined several aspects of the planned work and the commission's suggestions, indicating that more elements of the McKim, Mead and White restoration would need to be retained beyond those outlined in the October 1971 specifications. The report supported the engineers' assessment that it was too risky to remove the reinforcing of the exterior wall installed after the fire, since demolishing it would compromise the structural stability of the original walls. Retention of the reinforcing, however, would make it impossible to recreate Jefferson's exact dimensions for either a new dome or the new oval rooms and would cause the window reveals to be overly thick. Consequently the Virginia Historic Landmarks Commission agreed with Francis Berkeley's 1971 assessment that Stanford White's dome should be retained. The exterior height and curvature of White's dome was found to conform closely enough to Jefferson's dome, and its retention, "with necessary adjustments to the design," was not considered a significant compromise in recreating Jefferson's plan. Furthermore, contrary to earlier reports and some leaking in the dome, it was, in fact, structurally sound.[669] The Virginia Historic Landmarks Commission formally approved the preliminary plans on June 20, 1972.[670] In its written approval of the plan, the commission included the following remarks on its decision to approve the restoration:

> Although the Commission endorses the philosophy that historic buildings should reflect their full history and thus should retain major architectural additions and alterations acquired throughout the building's existence, the Rotunda meets the principal qualification for an exception to this policy: it is a completely documented architectural monument and thus can be returned to its original appearance without compromise occasioned by lack of knowledge.
>
> The present interior developed by Stanford White, following the fire of 1895, now creates the requirement to choose between the retention of the work of one noted American architect and the re-creation of that of the original designer. The quandary of making this selection is modified by the virtual loss of function of the structure since the removal of the Library in 1938 and the unadaptability to effective use of the present cavernous space.
>
> The Commission recognizes that preservation of the White interior as an example of the work of this architect would, under normal circumstances, be most urgently defended. The judgment to remove it must be based on more substantial grounds than the rationale of better adaptive use of convenience to the institution. The factors contribute but the choice must be one of the greater

> aesthetic and architectural value of the re-created Jefferson design as against the de facto White adaptation.[671]

The commission endorsed the retention of both the 1896 dome and eight-inch-thick McKim, Mead and White reinforcement of the exterior walls. The commission also commented on the proposed function of the restored Rotunda:

> By good fortune the restoration of the original interior will result in making the Rotunda a more functional building, in contrast to its present, somewhat abandoned state. The Dome Room is intended to be used as a much needed museum and visitor center as well as meeting place and reception hall. The East Oval Room appropriately is assigned to the use of the Board of Visitors. The West Oval Room, North Oval Room, and approximately one-half of the central hourglass-shaped hall is to be given over to the use of the President's Office.
>
> While ideally the Commission would prefer to see the completed interior restoration made fully available and open to visitors for their inspection and appreciation, it recognizes that adaptive reuse will limit its accessibility. This condition is offset, however, by its increased use as the administrative focus of the University and the consequent increased use by faculty, students, and officials.[672]

Louis Ballou proceeded with preparing the working drawings that summer.[673] The Virginia Fine Arts Commission reviewed and gave approval of the working drawings and specifications after meeting with President Edgar Finley Shannon and the architects on August 4, 1972.[674] The architects continued to work out details and prepared another set of drawings dated August 25, 1972. These drawings included sections; elevations; floor plans; schedules for doors and room finishes; foundation, fireplace, chimney, mantel, toilet, staircase, bookcase, entablature, and column details; and elevator plans and details.[675] The drawings were approved on September 15, 1972, though revised drawings and specifications were made in late January 1973 to resolve lighting, mantle designs, design of the glass partition in the main-level corridor, location of a proposed serving pantry, detailing of the bookcases, and handicapped facilities.[676]

The cover article of the July-August issue of the *Alumni News* was dedicated to the restoration. The University issued 7,500 reprints of the article, which was widely distributed among faculty, students, alumni, and others.[677] In commemoration of the 77th anniversary of the 1895 fire on October 26, 1972, a brandy-soaked cake shaped like the Rotunda was flambéd.[678]

DEMOLITION OF THE MCKIM, MEAD AND WHITE INTERIOR, 1973

The University advertised in the *Richmond Times-Dispatch* in March 1973 for bids for a general contractor to undertake the demolition and restoration work. On July 10, 1973, Virginia governor A. Linwood Holton Jr. authorized the award of the construction contract for the Rotunda restoration work to the lowest bidder, R. E. Lee and Son of Charlottesville for $1,995.824; the Department of Housing and Urban Development subsequently authorized the award of the contract on July 16, and the University gave its authorization on July 18.[679] R. E. Lee and Son's original bid had been for $2,130,824, but the firm indicated that the construction cost could be reduced by $135,000 if the column capitals could be "furnished of cast plaster rather than carved wood as specified," thereby lowering the construction cost to $1,995,824.[680] R. E. Lee and Son had undertaken extensive restoration and repair work at Mount Vernon and Monticello, as well as renovations and additions to several buildings on the University of Virginia grounds, including Thornton, Newcomb, and Madison halls and the Alderman Library.[681]

On July 18, 1973, Louis Ballou met with R. E. Lee and Son's president and project manager J. A. Kessler Jr. and with Waller Hunt of the University's Planning Department in the Rotunda.[682] On September 20, 1973, the University gave R. E. Lee and Son notice to proceed with the work, which was to be completed on December 31, 1975.[683] Most of the work was done under the supervision of foreman Fred Warner after the first foreman died suddenly, early in the project.[684]

In demolishing the interior of the Rotunda, the University requested that the following items be removed intact: plaster column capitals (if these could be saved), the main floor skylight, the mosaic flooring of the first floor, the cast-iron balcony railings and wood handrail, the metal balcony floor plates, the stair rails and newel posts, and all finish hardware.[685]

During the demolition in July and August 1973 [*see Figures 107-110*], "all plaster, mortar, bricks, and steel from the Stanford White interior," plus the tile floor of the dome room, "were removed piece by piece, and the rubble was collected for removal through windows and doors, usually in wheelbarrows." The skylight and the copper roofing were also removed, revealing the Guastavino dome, as were the plaster eagles and stars decorating the ceiling. The west colonnade, linking the north and south terrace wings, was temporarily dismantled for more convenient removal of debris.[686] The copper from the roof was sold for $4,717 to Coiners Scrap Iron and Metal, in Charlottesville, and the amount was credited to the work at the Rotunda.[687] David Morris, associate professor of civil engineering at the University, acted as consultant to Ballou and Justice on "construction techniques and procedures to be used during demolition and underpinning operations."[688]

Within just a few weeks of starting demolition workmen found three circular staircases walled up in the hollow spaces in the corners between the Rotunda's inner and outer walls. The staircases were similar to the one in the southeast corner, which had been built by workmen during the 1896–1898 reconstruction and had been in use since that time. The uncovered staircases were not functional, however, in that they led to brick walls. Unfinished, the staircases had no longer been needed when plans for the fourth floor gallery were abandoned in 1897. During the 1970s restoration the staircases were dismantled and the remnants discarded.[689]

In addition to the staircases a pair of small fireplaces, recessed in the north wall of the east oval room in the basement, was also uncovered. It is believed that these fireplaces, or ovens, date to the original construction and were used for chemistry lectures and demonstrations in that room. When they were uncovered, the fireplaces, each about 15 inches wide and 2 feet high, still contained "shards of melted glass and bits of burned wood and charcoal from the 1895 fire." Gas and electric lines, presumably installed in 1896–1898 to carry lighting and utilities to the upper levels of the Rotunda, were also uncovered at this time.[690]

In July 1973 Lynchburg Steel and Specialty Company of Madison Heights, Virginia, prepared a set of drawings detailing framing plans and beams. The plans were approved, with corrections, by Ballou and Justice on February 1, 1974. Guille Steel Products Co., Inc., of Virginia Beach, Virginia, prepared framing plans for Lynchburg Steel in September 1973, and Ballou and Justice approved them, with corrections, on December 6, 1973.[691]

As demolition of the interior continued, the architects worked out various design details, addressing the Rotunda's stairways in December 1973 and the chimneys and fireplaces in March, August, and November 1974.[692] On January 26, 1974, the Otis Elevator Company prepared drawings for the elevator that was to be installed in the southeast circular stairwell. Ballou and Justice approved these plans on March 15, 1974. The architects approved corrected plans prepared by Greendale Ornamental Iron Company of Richmond for the railing around the middle gallery of the dome room on March 20, 1974.[693]

Photographs of the original interior of the Rotunda brought to light in the spring of 1974 led to alterations in the plans for the middle gallery and the bookcases in the dome room. In a letter dated April 12, 1974, Louis Ballou described the information provided by the photographs and the resulting changes:

> First, it appears quite conclusively to us that the ceiling under the Middle Gallery is at the same elevation as the paneled soffits of the window reveals. Second, the greater clarity of the photo allows a more precise evaluation of the proportions of the height of the Middle Gallery relative to the height of the

> columns. Also, the proportion of the height of the Gallery facia to the height of the columns can also be determined. The result of these studies has resulted in raising the level of the Middle Gallery to a height of 9'-10" above the Dome Room Floor instead of the originally indicated 9'-6", and increasing the facia depth from 11-1/2" to 12-3/4". These dimensions as applied to the existing window opening vary only in fractions of inches from the apparent proportions of the photo.[694]

The photographs also showed that there had been no railing at the edge of the middle gallery, nor had there been a spiral staircase in the northwest "corner" of the room; the staircase had been part of Stanford White's design only. Though these features were not original to Jefferson's design, they were retained in the restoration to meet with modern safety codes.[695]

The photographs also shed light on the design of the original bookcases, which proved to be one foot longer than Louis Ballou had originally thought. Ballou explained the details of the bookcases seen in the photographs:

> The clearer photograph definitely shows a vertical muntin on each glazed door in addition to the horizontal muntins as we had indicated, and these muntins appear to be painted a dark color. We had indicated that the ledge of the lower portions of the bookcases had an overhang of about ¾", whereas the photo indicates almost no overhang. Finally, the photo indicated that the crown molding was actually more subtle that we had originally shown.[696]

By July 1974 the Rotunda had been stripped of the McKim, Mead and White interior, leaving a "cavernous, dark, coliseum-like" structure.[697] After what was described as a "brief lull in activity," construction work began on the interior. Reports distributed at the meetings of the Board of Visitors during 1974 and 1975 indicate that work proceeded on schedule throughout the entire restoration project and that the Rotunda would be ready for occupancy in January 1976.[698]

## DEBATE OVER THE USE OF THE ROTUNDA, 1974–1976

As the Rotunda's interior was being demolished, concern over the future use of the restored space grew among the student body. Plans for the Rotunda as the administrative center for the University were discussed on campus and in local newspapers and were strongly discouraged by segments of the student body that felt that converting the Rotunda to an administrative center would limit students' rightful access to the building. In March 1974 a twelve-member Student Council Rotunda Committee was formed; it included six student representatives and six faculty members, including Frederick Nichols and Joseph Bosserman, the dean of the School of Architecture. University president

Frank Loucks Hereford Jr., who succeeded Edgar Finley Shannon Jr. in 1974, took an active part in the dialogue with students. The committee wanted the Rotunda to be used as a "focal point," where students, faculty, and administration could come together, and they encouraged "maximum openness and flexibility" in the usage of the building. The committee met frequently during an eighteen-month period in 1974 and 1975 to discuss the "hotly contested question" of Rotunda usage.[699] In April 1974 the committee reported that "it must be remembered that this building belongs to no specific person, group, or institution, but rather is a national landmark entrusted to the stewardship of the University." "It should not be our intention simply to replicate the original uses of the Rotunda during its first fifty years," the report stated; "rather, the restored Rotunda should again accommodate those availabilities which enrich the life of the students and faculty within the academical village."[700]

University officials wanted the new dome room to "work really well" for "committee meetings, dinners and banquets, lectures, musical performances and recitals, symposia, ceremonies and receptions;" improving the acoustics of the room would thus be very important.[701] Louis Ballou consulted with Robert B. Newman of Bolt Beranek and Newman, Inc., consultants in acoustics and vibration based in Waltham, Massachusetts, in October 1974 regarding what treatment of the dome would best improve the acoustics. In response Newman indicated that the "acoustics problems that have always been in evidence in the Dome Room will continue to plague the space unless we face squarely the problem of making the domed surface highly sound absorbing." "In other words," Newman wrote, "we get rid of it as a troublesome, focusing reflector. There is no hard sound-reflecting dome in the world that acts as a satisfactory ceiling for an 'auditorium.'"[702] Newman recommended installing "some type of perforated facing of metal or vinyl over a highly efficient sound-absorbing glass fiber blanket." He warned, however, that "such a treatment must be more or less a permanent installation" because the room was simply too large to add or remove components as needed. In conclusion, Newman made the following statement:

> I wish we had a magic answer that would give you high sound-absorbing efficiency with the appearance of smooth plaster. There simply isn't any such thing and to search for it is like looking for the fountain of youth or to hope that, when one jumps out of a window, he will go up, not down. The behavior of sound in rooms is governed by simple, physical laws. There is no way around it. If the Dome Room is going to work, we must make it work by application of known physical principles.[703]

Spitz Space Systems, Inc., of Chadds Ford, Pennsylvania, prepared a sample panel of the proposed acoustical treatment, and on December 6, 1974, representatives from the University, Ballou and Justice, and the Virginia Fine Arts Commission inspected the panel, which had been installed in the Rotunda for testing. The group unanimously agreed that though the treatment was "in no way a true or Jeffersonian restoration," it was the "best presently available solution to the problem of rendering the dome room useful for the activities set forth by the Rotunda Committee." The arts commission voted to recommend approval of the material by the governor.[704]

As the controversy over the ultimate use of the Rotunda swelled, the University frequently had to stave off trespassers and, in one case, attempted arson, when someone set fire to the dome in early November 1974. The fire resulted in minimal damage. R. E. Lee and Son held a contract with a private security firm, but it had expired on October 31, and the contract was not renewed, leaving security to the University police, who did not have the resources to patrol the Rotunda when the workmen were not on site.[705] At the end of the first week of November the firm hired a new night watchman to be stationed at the Rotunda for the duration of construction.[706]

The question of the use of the Rotunda continued after the construction work was completed in 1976. A nine-member Historic Central Grounds Committee was formed to supervise the general appearance and use of the Rotunda, the Lawn and its gardens, and the nearby McIntire Amphitheater, located to the west of Cocke Hall and completed in 1920. Guidelines for the Rotunda's usage were reworked periodically throughout the next few decades as questions about the building continued to be raised, and "conditions and fees for scheduled uses" became points of contention.[707]

## CONSTRUCTION CONTINUES, 1974–1976

Forms for the poured-concrete walls for the access tunnel beneath the basement were in place in May 1974, as local plasterers ran continuous curved cornices and prepared supports for the premolded decorations that would later be applied throughout the building.[708]

Architect Louis Ballou determined the design for the new skylight in the Rotunda by reviewing notes from the early proctors. "We had no information on the shape of the [original] skylight — how many divisions it had or anything about the slope," he wrote, but "we did know that its diameter was shown as sixteen feet on Mr. Jefferson's drawing of the Dome Room. We also knew that Mr. Jefferson had built a skylight that didn't last very long and leaked almost immediately." In reviewing the papers of Arthur S. Brockenbrough, who was proctor during the original construction, Ballou discovered that Brockenbrough "had ordered three trapezoidal shaped pieces of glass to replace three pieces broken in the skylight." "The largest dimension of these pieces was over two feet," Ballou wrote. This is the largest piece of glass that would have been available at that time. From that assumption they calculated the number of panels and the height of the skylight. By December 1974 the new skylight was in place, as were the furring strips on the Guastavino dome, which was ready to receive the new metal roof.[709]

The question of the color of the roof was discussed in late summer 1975. Several different color samples — white and varying shades of gray, green, and red — were painted on the dome for comparison. After much debate, the roof was painted white; the architects had determined that this was most likely the color of the original dome, as Jefferson had purchased only white paint for the University buildings while the Rotunda was under construction. It was also agreed that white was the most attractive color from a distance.[710]

During the demolition work Louis Ballou had discovered that leaks in the floor under the north portico had caused damage to the "structural system holding up the North Portico stairs, within the storage rooms along the cross corridor" and that the system was in a "bad state of deterioration." Ballou recommended that R. E. Lee and Son examine the area with the structural engineers and make necessary improvements and corrections.[711] The contractors replastered the corridors under the north portico sometime before May 1975 but did not identify the source of the leakage.[712] In August 1975 the contractors assessed the scope of the work needed to correct the problem:

> We have completed removal of marble on the upper landing including the upper step and installed the waterproofing membrane. We have flooded this area and found it to be tight without leaks. We have also flooded the step area and found that while we still have considerable leakage here, the leakage can be traced almost entirely, if not entirely to the joints.
>
> It appears to us that there is no leakage in the steps except through open joints and that if these joints are recaulked, we will have a waterproof area without the necessity of removing and replacing the marble steps. We point out that the cost of caulking the step joints is relatively minor compared to the large cost of removing the steps, waterproofing beneath them and replacing the steps. Since we believe our chances of success are very good, we recommend this approach and will proceed in this manner unless you advise us on the contrary…
>
> When the work is complete, the upper landing will have a complete new waterproofed membrane installed and the marble relaid with the joints pointed. The steps and adjacent buttresses and balustrade will be completely recaulked.[713]

In a July 17, 1975, letter to Raymond Bice, the chairman of the Restoration and Adaptation of the Rotunda Committee, Louis Ballou described the columns in the dome room and their placement, indicating changes that had been made to the architects' plans based on photographs of the columns in the original dome room and Jefferson's original specifications:

> The decision was made by the Committee to reduce the diameter of the columns to 17½ inches, simultaneously correcting the entasis and increasing the apparent space between the columns.
>
> It may interest you to know that according to Mr. Jefferson's original specifications, he called for columns 18 inches in diameter with a space of one foot between them and a space of 4 ½ feet between pairs of columns. This of course was in his first rough computations and would of necessity require adjustment because of the fractional dimension in circumference of a 54-foot circle.
>
> A study of photographs of the original Dome Room reveals that the spacing of the columns was actually determined by the spacing of the modillions in the entablature above. There is a modillion centered over each column. There are 220 modillions in a complete circle, and in each bay, which is 1/20th of the circle, there are 11 modillion spaces. Each pair of columns has three modillion spaces between column centers, and there are eight modillion spaces between pairs of columns. This slightly reduces the space between columns and increases the space between pair[s] of columns from Mr. Jefferson's original rough computations described above.
>
> The photographs also indicate that the height of the columns, including the base and the capital, is ten times the diameter, or 15 feet for an 18 inch column. A study of the relationship of the diameter of the columns to the spacing of the columns, which can be calculated, reveals that the columns were 18 inches in diameter.
>
> It appears that Mr. Jefferson may have varied the proportions of the composite order of Palladio, which he used as a guide, so that there would be more space between adjacent column bases and capitals with his closer column spacing, than could be obtained by exactly following the proportions of Palladio's original.[714]

With these revisions, Ballou indicated to Bice, the new columns and their spacing would be "as reasonably close to Mr. Jefferson's original as possible."[715]

Steel load-bearing posts were inserted in the center of one column in each pair, and the column capitals were cast from plaster to replicate the original wood capitals. Wood column shafts and bases for the columns in the dome room were manufactured by Knipp and Company of Baltimore and shipped in sections to be assembled on site. The columns were installed in September 1975.[716] The plaster capitals, as well as the decorative moldings in the oval rooms, were made by Knipp's subcontractor, Decorator's Supply Corporation, of Chicago.[717]

Prefabricated balustrades had been delivered to the site in sections and assembled atop the entablature in the dome room in June 1975. Though a handrail was not part of

Jefferson's design for the intermediate balcony, one was installed along the edge of the balcony in July to fulfill code requirements.[718]

By early March 1975 Spitz Space Systems's recommended acoustical panels for the interior of the dome had been accepted by all parties, as well as by the governor. The contract amount, $95,995, included fabrication and installation of the panels, as well as the installation of a fiberglass duct liner on the backside of the panels. Frames for the panels were installed in September 1975. The frames were attached to the Guastavino tile and supported "sound-absorbing panels of plastic-coated aluminum backed with fiberglass." The ceiling panels were installed in October 1975.[719]

The 140-year-old heart-pine flooring for the dome room was salvaged from other buildings and was laid in the direction from fireplace to fireplace, as indicated by a pre-fire photo of the dome room.[720] In 1981 Joseph Lee Vaughan and Omer Allan Gianniny Jr. described the method in which the floor was installed: "Two-by-four 'sleepers' were nailed to the poured concrete over steel joists. Voids were filled with sound-deadening insulation and a continuous plywood subfloor was nailed to the sleepers. The finished floor was then nailed to the sleepers. This effort helped deaden sound in the Dome Room." The floors were sanded, stained (with Min-wax stain no. 211), and coated with polyurethane. The floors were lightly buffed with steel wool and then waxed and buffed again. Installation of the dome room floor was completed in March 1976.[721]

The "free-form" stairs, Vaughan and Gianniny reported, "required close attention to detail." "Said to be the first double free-standing stairs in the United States," they wrote in 1981, "they are of special interest to architects and builders. Framed over steel, the wooden stairs follow smooth curves along the walls of the oval rooms until they intersect with the exterior walls. There they turn along another set of curves." A master craftsman from New York installed the railings, and the stairs were completed in November 1976. The fireplace located in the turn of the east stairway in the original design and covered up in the McKim, Mead and White construction was restored.[722]

A sophisticated new heating and cooling system, required to control the environmental conditions in the building to preserve it and the contents, was installed by the end of October 1975. The "labyrinth of valves, pipes, and tanks" used to maintain the climate-control system was contained in a "small room off the ground floor hall." Other utilities were "placed inconspicuously in the attic of the south portico, beneath the steps of the north portico, in the basement, and in a new access tunnel beneath the floor of the basement. The trench for the tunnel was dug twelve feet beneath the floor of the hitherto undisturbed red clay, along the north-south diameter of the building."[723] The Valley Steel Corporation of Salem, Virginia, which undertook this phase of the work, had prepared drawings of the "tunnel slab detail showing supporting accessories" in August 1973. Ballou and Justice approved the plans that same month.[724]

A NEW ROTUNDA

The Board of Visitors held its first meeting in the east oval room on the main floor of the Rotunda on January 23, 1976, though the restoration project was not entirely completed at that time. At the meeting a report on the status of the construction was distributed and discussed, and February 20, 1976, was set as the completion date.[725] On March 26, 1976, the restoration of the Rotunda was described as "essentially completed," and the dedication was held on April 13, 1976, Thomas Jefferson's 233rd birthday.[726] As part of the ceremony University president Frank L. Hereford Jr. received the key to the Rotunda's main entrance in the south portico from the Rector, William L. Zimmerman III. The newly revived Jefferson two-dollar bill was issued as part of the ceremony.[727]

For the nation's Bicentennial, the *AIA Journal* asked forty-six architects, critics, and historians to nominate what they considered to be the "proudest achievements" of American architecture. The results of the survey were published in the July 1972 issue of the *Journal*: with twenty-nine mentions, the University of Virginia's "Jeffersonian campus" received more recognition than any of the other thirty-seven nominees.[728]

One of the principal justifications for the entire restoration project — moving the president's office to the Rotunda — was never implemented. In December 1974, while the project was still underway, President Hereford determined that the spaces were too limited to adequately accommodate the Office of the President, and he felt that having the building serve simultaneously as a tourist attraction would be disruptive to office functions.[729] Although never used as the president's office, the design configuration of the first floor, with an interconnecting passage between the west oval room and the north oval room, and the toilet to the south of the west oval room, remained unchanged. In the first few years after its completion in 1976, the Rotunda was visited by between 800 and 1,000 visitors per day.[730]

In mid-April 1977 Louis Ballou submitted to the University an itemized statement for $251,920.85 for his firm's architectural services and engineering fees. Of this amount, $191,161.48 was for architectural services from January 1967 to July 1976. Electrical consultant Leo T. Griffin's bill amounted to $29,435.45; structural consultants Torrence, Dreelin, Farthing and Buford's bill totaled $10,763.19; $19,060.73 was due for "consultants, research, and expenses"; and $1,500 was billed by Ballou and Justice for "coordinating work with consultants."[731]

R. E. Lee and Son's charges for the work carried out on the Rotunda totaled $2,375,758.77. An additional $27,556 was billed for supervision, $131,451.50 for equipment, and $26,055.11 for other expenses. The total cost amounted to $2,812,742.23.[732]

In May 1977 Werner Sensbach, director of the University's Planning Department, proposed to the Virginia Historic Landmarks Commission that glass doors be installed "on the south side of the Rotunda for both the main floor and the ground floor." The door on the ground floor would "provide a vestibule through which visitors enter the Rotunda." The glass doors on the main floor were meant to "open up the view of the Lawn for visitors inside the Rotunda."[733]

In the few years following the completion of work, the role that the Rotunda was to play at the University became more clearly defined, in many ways fulfilling the desires voiced by the Student Council Rotunda Committee in 1974 and 1975. The dome room was accessible to students as a place to study, and, as planned, receptions and special academic events were held there. On the main floor, the Board of Visitors met regularly in the east oval room, and doctoral examining committees and small groups used the north oval room. During the first year after construction was completed, the west oval room was used as the Bicentennial office for the University, but after 1976 it served as the president's ceremonial office. The basement oval rooms housed the University Guide Service and a University museum. The admissions office regularly used the west oval room in the basement to hold meetings with prospective students. Offices for the vice presidents of academic affairs, student affairs, finance, and development were located in the wings.[734]

## A PROGRAM OF REPAIR, 1982–1985

By the early 1980s the University's buildings — both the old structures and the newer construction — were in need of repairs and improvements. Over the years, when funds were short, the University had been required to return funds appropriated for maintenance, so such work, especially repairs slated for the older buildings, was often deferred. As maintenance was delayed, more expenditures were inevitably required.

In 1980 the University initiated a comprehensive program of continuous facilities inspection aimed at identifying in detail the nature and magnitude of the deferred-maintenance problem. By October 1982 it was estimated that more than $10 million would be needed to make up for the deferred-maintenance backlog throughout the entire University. Meanwhile, in June 1980 the Buildings and Grounds Committee had proposed to undertake the repair of some of the University's older buildings, which included "extensive work" to "correct leaking under the Rotunda deck." By the spring of 1982 nearly $4 million had been appropriated by the Virginia General Assembly for deferred maintenance, $250,000 of which was earmarked for replacing the Rotunda's decking. The need for "certain roofing and repair projects" was mentioned, though not elaborated on, in the minutes for the Board of Visitors' meeting on January 22, 1983. Overall the University's 1982–1984 budget gave first priority for an initial phase of corrective work on the older buildings. These buildings required continual maintenance, and an endowment for that purpose was needed.[735]

In May 1984 the esplanades on the roofs of the Rotunda's terrace buildings were in the process of being rebuilt "at a cost of some $200,000."[736] The January 24, 1985, minutes of the meeting of the Buildings and Grounds Committee indicate that at least some of the repair work, though unspecified in the report, done to the Rotunda was completed by that time and that the Rotunda's terraces had "required extensive work."[737]

In February 1985 the University's Department of Physical Plant prepared a drawing of the existing roof structure of the dome and porticos and annotated the drawing with notes about needed repairs. The notes included specifications for paint types, as well as recommended cleaning and application directions.

At the same time University officials were still attempting to define the best or most appropriate use of the Rotunda. An ad hoc Committee on the Use of the Rotunda presented a report on its findings to the Board of Visitors in October 1986. The report updated the guidelines for the use of the building that had been outlined in 1976, after the restoration was complete.[738]

The Committee on the Use of the Rotunda concluded that while it was very important to regard the Rotunda as an active, working building rather than a "sterile shrine," the building's special characteristics and historical significance dictated that its use be carefully considered. Especially since the Rotunda's restoration in the 1970s, there had been heavy demand by University groups — including the University Senate, Student Council, the Honor Committee and some fraternities — for use of the building's facilities, and the demand far outstripped the available space. In addition, several thousand people visited the Rotunda in a typical month. Because of the "irreplaceable and fragile nature" of the interior, it was important that the building be used in ways that would not shorten its life. The committee therefore recommended that the University establish a small standing committee to assist the Rotunda administrator in making decisions about requests for use. They recommended that the standing committee have both faculty and student representation.[739] The committee found that the use of the dome room to be of special concern because of the "fragile and irreplaceable" heart-pine flooring.[740] A policy on the use of the Rotunda was approved by the Board of Visitors on October 3, 1986.[741]

On January 29, 1987, the Buildings and Grounds Committee discussed "reworking the Rotunda front steps."[742]

In December 1987 the University of Virginia, along with Monticello, was added to the World Heritage List because it was considered a site of "outstanding universal value to mankind" and because its "deterioration or disappearance would be a harmful impoverishment of the heritage of all nations of the world."[743]

By the late summer of 1988 almost $5 million had been spent on the repair and restoration of the University's historic buildings since the inspection program began in 1980. Over the next two years another $700,000 was expended. Principal funding sources were the "operating budget, maintenance reserve appropriations, and private funding, with substantial support being developed by the Jeffersonian Restoration Advisory Board," which had been established in 1984.[744] The advisory board became the fundraising arm of the University for the Jeffersonian buildings and grounds, as well as the principal adviser to the Board of Visitors on policies related to the restoration and preservation of those properties.[745]

In its September 1988 report the Buildings and Grounds Committee of the Board of Visitors summarized the work that had been completed on the historic buildings during the previous eight years: the committee recounted that major exterior and interior repairs were made to many of the Pavilions and to the Monroe Hill House, built in 1826. The Rotunda was not mentioned in this brief report, nor was it mentioned in a similar report released two years later.[746] Similarly, there was no specific mention of the Rotunda in the recommended program of repairs for 1990 to 1992.[747]

After 1985 the University had greatly increased its maintenance and restoration activities in the Jeffersonian Precinct, to a level of $1 million per year. These funds covered the cost of building materials, staff time, research, training of craftsmen, and materials analysis; additional funds were still needed to support capital outlays. The Jeffersonian Restoration Advisory Board began working toward creating the endowment that would be needed to maintain the historic buildings; the initial endowment target was $5 million.[748]

## CONSIDERING THE ROTUNDA'S ROLE AT THE UNIVERSITY

During the 1970s construction University officials began to seriously consider how the Jeffersonian buildings were being used, and these questions carried into the 1980s and 1990s. In 1990 the University began to develop policies that would guide treatment of the Jeffersonian buildings and grounds based on the principles of the Venice Charter of 1964. The University's new goal was to occupy and use the University's historic buildings rather than treat them as "museum pieces only to be toured and/or studied." "At the present time," the Buildings and Grounds Committee declared in 1990, "research, maintenance, and restoration must be conducted simultaneously, owing to the constant use of the buildings and the inability to isolate the site from both users and events."[749]

At the same time the University needed to consider the capital requirements for the upgrade and modernization of the historic buildings to bring them into conformance with modern fire-protection and safety standards, to provide satisfactory utility systems, and to adapt them to contemporary functions. This goal proved to be a significant problem for the University due to the magnitude of its inventory of older buildings. In 1990 nearly a third of the University's academic buildings had been built before World War II, and six percent of the buildings had been built in the nineteenth century.[750]

In order to assess the magnitude of the capital renewal requirements, the University initiated a facilities audit program. Based on the audits completed by early 1990, which included the inspection of 24 buildings, the total capital renewal cost for the University's pre–World War II buildings was estimated to be approximately $76 million.[751]

Beginning in the early 1990s the University had formulated its primary goal, which was to restore Thomas Jefferson's "vision of the reciprocity between the academic and the physical plan of the University." A large part of achieving and maintaining this goal was "to reverse the dispersion of the University across a larger countryside and restore its concentration around the central grounds," reestablishing academic programs and student residences in that area. With no building more central to the University than the Rotunda, these new goals would surely affect its usage.[752]

Early in 1992 the Office of Architect of the University was officially established, and architect Harry Porter, dean of the University's School of Architecture, was hired to fill the position. The Architect of the University and his staff were to establish their office in the Rotunda. In his new role, Porter was chair of the Master Planning Council and played an active role in the presentations of the Buildings and Grounds Committee.[753]

A report published in December 1992 illustrated expenditures on restoration projects in the academical village from 1983 to 1992. The spreadsheet shows that the only funds expended for work on the Rotunda during that time, the sum of $60,000, was in 1985.[754] After construction was complete in 1976 the Rotunda was used as the University's visitors' center, but by the early 1990s studies by the Buildings and Grounds Committee showed, surprisingly, that visitors to the University, especially prospective students and their families, "probably don't want or need to go there."[755]

In 1993 the University began investigating ways of making the Academical Village accessible to disabled students and visitors. Mesick, Cohen, Waite Architects, now John G. Waite Associates, Architects, along with EDAW landscape architects and Barrier Free Environments, Inc., an accessibility consultant, called for the installation of a mechanical lift near the Rotunda steps to the Upper Lawn Terrace and the modification of four toilets (two in the cryptoporticus and two near the lower north oval room), as well as improvements to the serviceability of the Rotunda's elevator. The consultants also recommended regrading the walkway and raising the level of the paving in the arcade adjacent to the principal office entries at the northwest corner of the Rotunda office wings and installing a lift device to ground-floor toilet rooms inside the Rotunda.[756]

REPAIRS AND IMPROVEMENTS AT THE END OF THE TWENTIETH CENTURY

Harry Porter resigned as Architect of the University in 1994 and was replaced by University alumnus Samuel A. "Pete" Anderson III in May 1995.[757] In May 1995 the American Institute of Architects awarded the University the Institute Honor Award for the University's decade-long curatorial program to preserve and restore the buildings in Thomas Jefferson's Academical Village, including the Rotunda.

During the late 1990s University officials, including curator and architect for the Academical Village James Murray Howard, realized that the Rotunda continued to be in need of repair and improvements, especially as use of the building was considered. In June 1997 Howard compiled a report on the Rotunda, discussing, largely, the dome and roof:

> You may have noticed that the dome turned black briefly, from December [1996] until March [1997]. What you were seeing was a chemical primer applied to the metal surface to neutralize rust that blossomed there in late fall. The action was consistent with the University's posture during the last decade — sustain the present steel outer skin of the dome for as long as may be practical. Thus our immediate aim this year was first to neutralize the rust, then repaint in the white color that has, for the last twenty years, been seen by the public. That repainting has now been accomplished. The four-month project, which had to lie dormant during the coldest months, yielded unexpected insights into the nature of the dome, past and present. Research into historic documents and photographs showed that the dome has undergone many episodes of change. While it is still difficult to prove how the dome was first skinned, we can demonstrate that its shape and color were altered at least five times over 150 years. It is doubtful that the curved surface was white even in the earliest years, when it was more likely a medium gray color; and photographs prove that it was very dark in color throughout much of the 19th and 20th centuries. But we do know that the present brilliantly white dome is a product only of the 1970s. Should we therefore change the dome's appearance now? No. This year's physical investigations have allayed the recent belief that we would have to replace the metal skin in a very few years. We now think that this chapter in the life of the building could endure for perhaps another ten years, with adequate maintenance. We also know that the masonry inner structure of the dome is sound, yet it dates only from the era of rebuilding just after the 1895 fire; prior to that the structure was of wood. So whenever we do confront the unavoidable need to replace the metal skin, we face dilemma — what is the appropriate covering for a non-original but perfectly sound masonry structure? Would Jefferson's earliest skin be correct if the structure below does not correspond historically, or would Stanford White's copper skin be "truer"? But that

> question is for the distant future. Be assured that, for now, the dome can and should remain as we see it, until the next chapter is ready to be written.[758]

Early in 1997, as part of a survey of the existing conditions, the University Facilities Planning and Construction Department mapped out the scope of water damage and likely sources of water penetration into the spaces below the terrace esplanades. Based on the results of the survey, the department recommended concentrated testing of the northeast terrace wing as well as removing a section of the marble base from the south portico for laboratory testing.[759]

James Murray Howard provided the following report on the Rotunda's exterior in June 1997:

> Outside, the Rotunda suffers from increasing water problems on the decks that surround the original circular building. Expanded by Stanford White in 1896, reworked in 1938 and 1983, the decks are now subject to chronic leakage that makes some of the office spaces below unsightly and unpleasant. We are presently engaged in studies with architectural consultants to better understand the failure mechanisms and to find ways to resolve them. Phase I of the work, completed in the winter of 1997, surveyed and documented the problem areas. Phase II, now underway, will include testing of the affected areas, necessitating the removal of some marble and bluestone components to determine subsurface conditions and enable us to better predict trustworthy responses. Resolution of the problems at all four decks will probably require several years, which would constitute Phase III of the work. We want to be sure that any new work will stop the habitual destruction that has plagued these decks for many years.[760]

Also in June 1997 the guidelines on the use of the Rotunda, which had been approved in October 1986, were revised and updated. A handicap-access ramp to the Rotunda was being considered in the spring of 1998.[761] Three access ramps were ultimately installed: one at the southwest corner, one on the south side between Pavilion I and the south steps of the Rotunda, and one at the southeast corner.

In the summer of 1997 the Design Committee of the Jeffersonian Restoration Advisory Board initiated improvements in the lower east oval room, which then served, and still does, as a visitors' reception and information area. Since the 1970s restoration the room had been arranged as a museum-like space for visitors. Until 1991 the office of the Rotunda administrator was also located in the east oval room, when it was moved to the lower north oval room. By the late 1990s, however, the University's goal was to alter the museum-like atmosphere of the east oval room and make it more useful as an impressive but informal meeting space that would include displays about the history of the Jeffersonian precinct.[762]

By the spring of 1998 the marble bases of the columns on the south side of the Rotunda were showing wear and were in need of repair. The plinths were "cracked and the caulked/mortared joints between the pieces opened"; one plinth had completely broken loose, and the plinth beneath the southwest pilaster was "severely damaged." When that damaged plinth was removed in summer 2000, Stephen P. Ratliff, senior construction manager of the University's Facilities Planning and Construction Department, found two coins that had been deliberately placed underneath the plinth block. One coin, an 1865 two-cent piece, had the initials "JMB" scratched onto the surface, and the other, an 1879 one-cent piece, bore the initials "CWH." The number "97" was scratched into the reverse of both coins, suggesting that they had been placed there during the rebuilding of the Rotunda after the fire and that the pilaster plinth had been replaced at that time.[763]

In spring 1998 workers replaced the stone paving on top of the southwest terrace offices, and steel-and-brass guardrails were installed at each side of the main stair leading from the Rotunda deck to the Lawn level following the designs of James Murray Howard. The rails were fabricated and installed by Iron Crafters, Inc., of Gordonsville, Virginia, at a cost of $17,180 and were completed in time for graduation exercises in mid-May.[764]

The survey that had been carried out in 1997 was the first phase of a four-phase construction project for the improvement of the Rotunda decking, the final three stages of which were to take place during the summers of 2000 through 2003. The design work was carried out by Stoneking von Storch Architects, of Charlottesville, and Whitlock Dalrymple Poston and Associates, consulting engineers of Manassas, Virginia.[765]

On June 21, 2005, a Request for proposal was issued by the University of Virginia for "consulting services in connection with the writing of an historic structures report for the Rotunda at the University of Virginia." John G. Waite Associates, Architects PLLC submitted a proposal, dated July 11, 2005, in response to the request and signed a contract with the University on May 5, 2006, for these services.

## NOTES

***Abbreviations used in notes***

| | |
|---|---|
| AG | Alexander Garrett |
| ASB | Arthur Spicer Brockenbrough |
| JCC | Joseph Carrington Cabell |
| JD | James Dinsmore |
| JHC | John Hartwell Cocke |
| JM | James Madison |
| JN | John Neilson |
| SW | Stanford White |
| TJ | Thomas Jefferson |
| WJC | William J. Coffee |
| Coolidge Coll. | The Coolidge Collection of Thomas Jefferson Manuscripts, Massachusetts Historical Society. |

The texts of many documents relating to the University that date from 1817 to 1828 have been transcribed and are available in the Thomas Jefferson Digital Archive at the University of Virginia, Electronic Text Center (http://etext.lib.virginia.edu/jefferson/). In those instances where only a portion of the text appears in the transcript, the microfilm version or on-line scan of the original document was consulted. The original spellings have been maintained.

The *Documentary History of the Construction of the Buildings at the University of Virginia, 1817-1828*, by Frank E. Grizzard Jr., also available at the Thomas Jefferson Digital Archive, was an invaluable guide to documents relating to the construction of the Rotunda, as was William B. O'Neal, *Jefferson's Buildings at the University of Virginia, The Rotunda* (Charlottesville: University of Virginia Press, 1960).

The published annual reports of the Rector and Board of Visitors include financial information on payments made for construction. These amounts are often at variance with the sums shown in the manuscript versions of the proctor's ledgers for the same time periods. In this report the published financial records were used unless otherwise noted.

1. TJ to L. W. Tazewell, 5 Jan. 1805, transcript in Mary N. Woods, "Thomas Jefferson and the University of Virginia: Planning the Academic Village," *Journal of the Society of Architectural Historians* 44 (Oct. 1985), 282-283. See this article also for a discussion of architectural precedents for colleges and other institutional structures in the U. S. and Europe that were known to Jefferson.
2. TJ to [trustees for the lottery of East Tennessee College], 6 May 1810, Library of Congress.
3. BV, Central College, Minutes, 5 May 1817.
4. TJ to L. W. Tazewell, 5 Jan. 1805, [source?]
5. TJ to William Thornton, 9 May 1817.
6. Thornton to TJ, 27 May 1817.
7. TJ to B. H. Latrobe, 12 June 1817.
8. Latrobe to TJ, 17 June 1817, in John C. Van Horne, ed., *The Correspondence and Miscellaneous Papers of Benjamin Henry Latrobe*, Vol. 3 (New Haven and London: Yale Univ. Press for Maryland Historical Society, 1988), 903-4.The editors of the Latrobe papers have commented that "While certain aspects of Jefferson's design may well have impressed BHL, this statement probably also reveals both BHL's flattery of Jefferson and his own false modesty." The editors cite (p. 904) a plan by Latrobe for a national university in Washington, D.C., that resembled many aspects of Jefferson's scheme.
9. Latrobe to TJ, 28 June 1817, in Thomas Jefferson Papers, Library of Congress, American Memory database.
10. TJ to Latrobe,16 July 16, 1817, in Van Horne, 907-8.
11. TJ to Latrobe, 16 July 1817, in Van Horne, 907-8.
12. Latrobe to TJ, 24 July 1817, in Van Horne, 914-916.
13. TJ to Latrobe, 3 Aug. 1817.
14. BHL to TH, 12 Aug. 1817; TJ to BHL, 24 Aug. 1817.
15. Latrobe to TJ, 6 Oct. 1817.
16. TJ to BHL, 12 Oct. 1817.
17. TJ to BHL, 19 May 1818.
18. *Report of the Commissioners Appointed to Fix the Scite of the University of Virginia* (Richmond: John Warrock, 1818), 3-4.
19. *Report of the Commissioners Appointed to Fix the Scite of the University of Virginia* (Richmond: John Warrock, 1818), 4.
20. TJ to JCC, 28 Jan. 1819.
21. *Report and Documents Respecting the University of Virginia* (Richmond: Thomas Ritchie, 1820), 6-7; this is the report filed in 1819. *Report and Documents Respecting the University of Virginia* (Richmond: Thomas Ritchie, 1820), 7; this is the report filed in 1820. BV, Minutes, 29 March 1819, 4 Oct. 1819.
22. TJ to John Wayles Eppes, 30 June 1820. TJ, Statement of Probable Costs for the Buildings, 28 Nov. 1820.

23. These drawings are illustrated in William B. O'Neal, *Jefferson's Buildings at the University of Virginia, The Rotunda* (Charlottesville: Univ. of Virginia Press, 1960), plates VI-IX, XI, XII.
24. O'Neal, 3.
25. O'Neal, 50-52.
26. TJ, Operations at and for the College, [1817-1826], last page. This book contains Jefferson's specifications for the pavilions, dormitories, and hotels; similar information for the Rotunda appears on the back of his drawings for the Rotunda.
27. ASB to TJ, 29 March 1821, cited in O'Neal, 19-20.
28. BV, Minutes, 2 April 1821.
29. Chapman Johnson and James Breckenridge to JHC, 5 April 1821.
30. Chapman Johnson and James Breckenridge to JHC, 5 April 1821.
31. TJ to Francis Wayles Eppes, 8 April 1821.
32. TJ to JHC, 9 April 1821.
33. TJ to JHC, 9 April 1821.
34. TJ to Thomas Appleton, 16 April 1821. TJ to John Patterson, 15 May 1821.
35. TJ to Board of Visitors, 30 Sept. 1821. TJ, A View of the Expenses & Funds, 30 Sept. 1821.
36. TJ to James Madison, 30 Oct. 1821.
37. JCC to JHC, 21 Nov. 1821.
38. TJ to William Short, 24 Nov. 1821.
39. ASB to the Rector and BV, 26 Nov. 1821.
40. BV, Minutes, 29-30 Nov. 1821.
41. *Report and Documents Respecting the University of Virginia* (Richmond: Thomas Ritchie, 1821), 3-4.
42. JHC to JCC, 8 Dec. 1821.
43. TJ to Thomas Cooper, 9 March 1822.
44. TJ to James Madison, 7 April 1822.
45. TJ to William Short, 19 Oct. 1822, LOC.
46. BV, Minutes, 7 Oct. 1822.
47. BV, Minutees, 7 Oct. 1822. *Report and Documents Respecting the University of Virginia* (Richmond: Thomas Ritchie, 1823), 3; this is the report for 1822.
48. TJ to ASB, 11 Oct. 1822.
49. TJ to Thomas Mann Randolph Jr., 23 December 1822.
50. TJ to Robert Walsh Jr., 21 Dec. 1822. JCC to TJ, 23 Dec. 1822.
51. William Cabell Rives to TJ, 19 Dec. 1822.
52. TJ to Thomas Mann Randolph Jr., 23 Dec. 1822.
53. TJ to JCC, 28 Dec. 1822.

54. TJ to JCC, 28 Dec. 1822.
55. JCC to TJ, 30 Dec. 1822.
56. *Report and Documents Respecting the University of Virginia* (Richmond: Thomas Ritchie, Printer, 1823), 4.
57. TJ to Maria Hadfield Cosway, 24 Oct. 1822.
58. TJ to JCC, 13 Jan. 1823.
59. AG to JHC, 18 Feb. 1823.
60. JN to JHC, 22 Feb. 1823.
61. JN to JHC, 22 Feb. 1823. Neilson claimed that Thorn had not in fact made those bricks but that he had made the ones for Pavilion VIII, Hotel C, and the proctor's house.
62. JN to JHC, 22 Feb. 1823.
63. TJ to JM, 6 Jan. 1823. TJ to JCC, 28 Jan. 1823.
64. TJ to JM, 24 Feb. 1823.
65. Abiah B. Thorn and Nathanial Chamberlain, contract with University of Virginia, 8 March 1823. Notes on the quality and details of the work had been drafted by Jefferson; see TJ, Instructions for Bricklaying and Carpentry, c. 1823, and Brockenbrough appears to have drawn on some of Jefferson's text when writing the contracts.
66. ASB, Contract with JD and JN, 11 March 1823.
67. Abiah B. Thorn and Nathanial Chamberlain, contract with University of Virginia, 8 March 1823. JD and JN, contract with University of Virginia, 11 March 1823.
68. JD and JN, contract with University of Virginia, 11 March 1823.
69. ASB to TJ, 11 March 1823.
70. TJ to ASB, 12 March 1823. TJ to JHC, 13 March 1823.
71. TJ to JM et al, 12 March 1823.
72. TJ to JM et al, 12 March 1823.
73. JM to TJ, 21 March 1823.
74. JCC to TJ, 24 March 1823.
75. BV, Minutes, 7 April 1823.
76. TJ, Memorandum on Finances, 6 April 1823.
77. JCC to Louisa Maxwell Holmes Cocke, 8 April 1823.
78. TJ to JHC, 22 April 1823.
79. ASB to JHC, 13 March 1823.
80. ASB to JHC, 7 April 1823; 13 April 1823.
81. JHC to ASB, 14 April 1823.
82. ASB to TJ, 28 Nov. 1823.
83. ASB to JHC, 7 April 1823.
84. JHC to ASB, 14 April 1823.

85. JM to JCC, 16 April 1823.
86. TJ to JM, 30 April 1823.
87. TJ to JM, 30 April 1823.
88. JM to JCC, 16 April 1823. TJ to JM, 30 April 1823; fuller text in James Madison Papers,
89. TJ to JM, 30 April 1823; JM to JCC, May 10, 1823.
90. TJ to ASB, 22 April 1823.
91. JN to TJ, 5 May 1823.
92. TJ to ASB, 16 June 1823.
93. TJ to ASB, 10 Aug. 1823.
94. ASB to TJ, 11 Aug. 1823. TJ to ASB, 11 Aug. 1823.
95. Martha Jefferson Randolph to Nicholas P. W. Trist, 4 April 1824.
96. O'Neal, plate XIII.
97. TJ to JCC, July 4, 1823.
98. ASB to JCC, 27 July 1823.
99. JN to JHC, 23 Aug. 1823.
100. TJ to E. S. Davis, 27 Aug. 1823. TJ to William Short, trans., 8 Sept. 1823, TJP, LC.
101. TJ to John Trumbull, 15 July 1823, quoted in Grizzard, Appendix K, 24-25.
102. *Report and Documents Respecting the University of Virginia* (Richmond: Thomas Ritchie, Printer, 1823), 30-42; LD 5662, Univ. of Virginia, Special Collections.
103. *Report and Documents Respecting the University of Virginia* (Richmond: Thomas Ritchie, Printer, 1823), 30-42.
104. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 20, 22.
105. ASB to TJ, 28 Nov. 1823.
106. TJ to ASB, 28 Dec. 1823.
107. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 24, 26.
108. TJ to ASB, 2 Sept. 1823. Giacomo Raggi and ASB, contract, 8 Sept. 1823.
109. BV, Min., 6 Oct. 1823.
110. TJ to TA, 8 Oct. 1823.
111. TH to ASB, 22 Nov. 1823. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 22.
112. TA to TJ, 8 Feb. 1824.
113. TA to TJ, 8 Feb. 1824.
114. ASB to TJ, 3 May 1824.
115. TJ to TA, 17 May 1824.

116. TJ to ASB, 29 March 1824.
117. ASB to TJ, 28 March 1824.
118. TJ to ASB, 29 March 1824.
119. TJ to Joseph G. Swift, 22 May 1824. William Bainter O'Neal, *Jefferson's Fine Arts Library, His Selections for the University of Virginia Together with His Own Architectural Books* (Charlottesville: University Press of Virginia, 1976), 83-87; plate 24 is a reproduction of a DeLorme drawing of the laminated ribs.
120. Notes on the quality and details of the work had been drafted by Jefferson; see TJ, Instructions for Bricklaying and Carpentry, c. 1823,
121. TJ to Joseph G. Swift, 21 June 1825.
122. TJ to WJC, 31 May 1824, Coolidge Coll.
123. D.W. and C. Warwick to ASB, 6 April 1824.
124. John Brockenbrough to ASB, 3 May 1824, PP, Box 4, Folder May 3, 1824. ASB to TJ, 3 May 1824.
125. D.W. and C. Warwick to ASB, 7 June 1824.
126. D. W. and C. Warwick to ASB, invoice, 14 June 1824. John Brockenbrough to ASB, 3 May 1824, PP, Box 4, Folder May 3, 1824.
127. Anthony Bergamin to ASB, 21 June 1824.
128. D. W. and C. Warwick to ASB, invoice, 14 June 1824; D. W. and C. Warwick to ASB, 14 June 1824.
129. Warwick to ASB, invoice, 6 July 1824.
130. Warwick, invoice, 13 July 1824.
131. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 32. These published figures differ from the handwritten proctor's ledgers, which show that Bergamin was paid $626.82 on September 13, 1824. The description of the work is quoted in O'Neal, 14.
132. Brockenbrough and Harvie to ASB, 4 Oct. 1824. Andrew Smith to ASB, invoice and letter, 10 Nov. 1824. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 24.
133. BV, Minutes, 5 April 1824, RG 1/1/2, Vol. 1, p. 57, Small Collections.
134. TJ to WJC, 10 April 1824, Coolidge Coll.
135. John M. Perry and ASB, agreement for brickwork, 25 May 1824, PP, Box 4, Folder 1824, Workmen's Papers.
136. ASB to TJ, 4 June 1824.
137. ASB, Estimate of the Cost of the Rotunda, 5 April 1824.
138. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 28, 30, 32.
139. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 34.

140. Proctor's Ledger, Rotunda Account, May 10, 1824, p. 318. ASB to TJ, 14 July 1824.

141. TJ to WJC, 4 Sept. 1824, Coolidge Coll.

142. TJ to WJC, 4 Sept. 1824, Coolidge Coll.

143. WJC to TJ, 11 Sept. 1824.

144. TJ to WJC, 19 Sept. 1824, Coolidge Coll.

145. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 3.

146. BV, Min., 4 Oct. 1824, pp. 68, 74-75..

147. ASB to TJ, 21 Dec. 1824, quoted in O'Neal, 33.

148. Henry Marshall, "Charlottesville and the University: An 1824 View," *Magazine of Albemarle County History* 29 (1971), 29-30.

149. Lafayette to TJ, 29 Aug. 1824, in Marie Joseph Paul Yves Roch Gilbert du Motier, Marquis de Lafayette, *Letters of Lafayette and Jefferson* (Baltimore: The Johns Hopkins Press, 1929), 420.

150. TJ to TA, 8 Oct. 1824.

151. TJ to Joseph Coolidge, 12 Oct. 1824, microfilm edition, Thomas Jefferson Papers, University of Virginia. *Report of the Rector and Visitors of the University of Virginia to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1824), 3. In a letter of 4 Feb. 1825, Bergamin to ASB, Bergamin states that his work had been finished but he had not been paid. TJ to ASB, 21 April 1825.

152. TJ to Lafayette, 9 Oct. 1824.

153. *Richmond Inquirer*, 16 Nov. 1824; a partial transcription of this account, which was originally published in Charlottesville's *Central Gazette*, appears as "Reception of General Lafayette in Albemarle," *The Magazine of Albemarle County History* 24 (1965-66), 53-66.

154. *Richmond Inquirer*, 16 Nov. 1824.

155. *Richmond Inquirer*, 16 Nov. 1824.

156. Mémoires, Correspondance et Manuscrits du Général Lafayette, publiés par sa famille, Vol. 16 (Paris: H. Fournier Ainé, 1838), 183-184.

157. TJ to Coffee, 9 Dec. 1824.

158. WJC to TJ, 20 Dec. 1824.

159. WJC to TJ, 1 Jan. 1825; 16 Jan. 1825; 31 Jan. 1825. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1825), 26.

160. Ann. Report 1825 p. 30.

161. John Brockenbrough to ASB, 11 March 1825, Proctors' Papers, RG 5/3, Box 5, Folder 460.

162. TJ to JCC, 11 Jan. 1825.

163. TJ to Joseph Coolidge, Jr., 12 April 1825.

164. TJ to ASB, 21 April 1825.

165. Thomas May to ASB, 8 Jan. 1825, 11 Jan. 1825, 14 Feb. 1825, 10 March 1825, 4 April 1825, 14 May 1825. More glass was ordered in 1825, but it is not clear whether it was intended for the Rotunda; Thomas May to ASB, 9 July 1825, 20 July 1825.

166. Thomas May to ASB, 27 July 1825, 4 Aug. 1825, 24 Aug. 1825.

167. Invoice, Benjamin Blackford to ASB, 15 Aug. 1825.

168. BV, Min., 5 March 1825, RG 1/1/2, Vol. 1, p. 85.

169. TJ to ASB, 9 March 1825.

170. JD and JN to ASB, 5 March 1825.

171. TJ to JCC, 11 Jan. 1825.

172. TJ to ASB, 11 March 1825.

173. TJ, Statement of University Funds, 15 March 1825.

174. TJ to TA, 17 May 1824.

175. TA to TJ, 10 and 25 June 1824, 28 July 1824.

176. TJ to TA, 8 Oct. 1824.

177. TA to TJ, 8 Oct. 1824, LC.

178. TA to TJ, 4 May 1825. TA, Account for Marble Columns, 4 May 1825. TA to TJ, 22 June 1825. Jefferson wrote Appleton on 10 Aug. 1825 stating that he had not heard from him since 8 Oct. 1824 and setting forth the accounts for the marble.

179. TA to TJ, 22 June 1825. Appleton sent his final accounting for the project in July; TA to TJ, 12 July 1825.

180. TJ to ASB, 23 July 1825.

181. TJ to ASB, 30 Aug. 1825. Jonathan Thompson to TJ, 9 Sept. 1825. The tax collector at the custom house in New York, Jonathan Thompson, told Jefferson that he had shipped the marble to Richmond on board the sloop *Eliza Allen*; Jonathan Thompson to TJ, 9 Sept. 1825.

182. Henry A. S. Dearborn to TJ, 6 Sept. 1825. TJ to ASB, 13 Sept. 1825.

183. Henry A. S. Dearborn to TJ, 20 Sept. 1825.

184. Henry A. S. Dearborn to TJ, 22 Sept. 1825.

185. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 12.

186. BV, Minutes, 5 Oct. 1825, RG 1/1/2, pp. 95-96.

187. TJ to Ellen W. R. Coolidge, 14 Nov. 1825. Jonathan Thompson to TJ, 17 Nov. 1825.William Cabell Rives to TJ, 13 March 1826, 30 Nov. 1826. TJ to ASB, 2 May 1826. John Brockenbrough to ASB, 9 May 1826. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 20. William Cabell Rives to TJ, 13 May 1826.

188. BV, Min., 7 April 1826 (from UVL, ETC. Copy transcribed from Small Coll may be imperfect)

189. TJ to Coolidge, 12 April 1825.

190. TJ, Specifications for the Rotunda's Clock & Bell, c. 11 April 1825.

191. Joseph Coolidge Jr. to TJ, 5 Aug. 1825.

192. TJ to Coolidge, 13 Oct. 1825.

193. TJ to ASB, 3 Jan. 1826.

194. TJ to Ellen W. R. Coolidge, 14 Nov. 1825.

195. TJ to JHC, 20 May 1826.

196. TJ to ASB, [c. May 1826].

197. TJ to Coolidge, 4 June 1826.

198. TJ to ASB, 22 June 1826

199. ASB to TJ, 6 June 1825.

200. TJ to ASB, 7 June 1825. The drawing has been lost.

201. ASB to TJ, 9 June 1825.

202. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1825), 34.

203. John Patton Emmet to TJ, 12 May 1825. ASB to TJ, 6 June 1825.

204. TJ to ASB, 7 June 1825.

205. Emmet to ASB, 5 January 1826, quoted in Grizzard, chapter 10, p. 7.

206. Charles Bonnycastle to ASB, 10 April 1826.

207. TJ to TA, 8 Oct. 1823.

208. TA to TJ, 8 Feb. 1824.

209. Peter Sturtevant to ASB, 17 June 1824.

210. Peter Sturtevant to ASB, 18 June 1825.

211. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 16, 22. Peter Sturtevant to ASB, 13 July 1826. Sturtevant wrote Brockenbrough in the fall wanting an advance of $300; Sturtevant to ASB, 5 Nov. 1826.

212. Sturtevant to ASB, 5 Nov. 1826.

213. WJC to ASB, 12 July 1825.

214. ASB to TJ, 23 July 1825.

215. TJ to ASB, 24 July 1825.

216. WJC to ASB, 26 July 1825. WJC to TJ, 19 Aug. 1825.

217. WJC to ASB, 4 Sept. 1825.

218. WJC to ASB, 25 Sept. 1825. ASB to TJ, 1 Oct. 1825.

219. ASB to TJ, 1 Oct. 1825. It is not clear from the Proctor's Ledgers or Jefferson's papers that Coffee ever did this work; there is no listing in the ledgers under his name in the Rotunda accounts between 1825-1830 (although payment might have been made to someone else on his behalf); similarly no payments to him are included in the accounts published in the annual reports between Sept. 1825 and July 1828.

220. TJ to ASB, 12 Oct. 1825.

221. TJ to ASB, 19 Sept. 1825.

222. TJ to ASB, 15 Nov. 1825.

223. *Richmond Enquirer*, Sept. 6, 1825.

224. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1825), 24-38. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 12-14.

225. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1825), 4.

226. TJ to ASB, 21 April 1825.

227. TJ to ASB, 3 Jan. 1826.

228. TJ to JCC, 4 Feb. 1826.

229. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1826), 22.

230. TJ to ASB, [7] April [1826].

231. TJ to JHC, 20 May 1826.

232. TJ to ASB, 5 May 1826. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 12-14.

233. TJ to ASB, 5 May 1826. TJ to JHC, 20 May 1826. TJ to ASB, [c. May 1826].

234. TJ to ASB, [c. May 1826].

235. A. H. Brooks to ASB, 13 June 1826. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 22.

236. Invoice, Daniel Warwick to ASB, 12 June 1826.

237. TJ to ASB, [c. May 1826].

238. TJ to ASB, 5 May 1826. TJ to JHC, 20 May 1826.

239. TJ to ASB [c. May 1826].

240. TJ, Operations at and for the College, pages 3, 4, 39, quoted in O'Neal, 52-54.

241. JHC and Alexander Garrett, 31 May 1826.

242. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1826), 22.

243. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1826), 18, 22

244. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1826), 18, 22.

245. TJ to Gen. T. Smith, 22 Oct. 1825.

246. TJ to Robert Mills, March 3, 1826, TJ Papers, DLC.

247. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 3.

248. *Report of the Rector and Visitors of the University of Virginia, Exhibiting the Results of an Examination into the Progress of the Students, &c., &c.* (Richmond: Thomas Ritchie, 1827), 3, 7.

249. *Report of the Rector and Visitors of the University of Virginia, Exhibiting the Results of an Examination into the Progress of the Students, &c., &c.* (Richmond: Thomas Ritchie, 1827), 3.

250. Joseph Antrim to ASB, 7 Aug. 1826.

251. JHC to ASB, 27 Sept. 1826.

252. ASB to JHC, 20 Aug. 1826.

253. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1826), 3.

254. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1829), 20. ASB to JHC, 8 Aug. 1827.

255. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1826), 4.

256. BV, Min., 3-7 Oct. 1826.

257. BV, Min., 1 Oct. 1828.

258. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1827), 18, 20, 22, 24.

259. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1829), 20.

260. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1829), 20, 22, 28.

261. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, 1826), 22.

262. Joseph Coolidge to ASB, 31 March 1827. The University paid for Willard's expenses in Charlottesville; *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1827), 28. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1829), 20.

263. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund* (Richmond: Thomas Ritchie, Printer, 1829), 20, 24, 32.

264. BV, Min., 18 July 1827.

265. Nicholas P. W. Trist to ASB, 11 Sept. 1827.

266. ASB to JHC, 7 Oct. 1827.

267. JHC to ASB, 10 Nov. 1827. Grizzard, Chap. 11, p. 9.

268. ASB to JHC, 8 Aug. 1827.

269. ASB to JHC, 8 Aug. 1827, 7 Oct. 1827.

270. ASB to JCH, 4 March 1828, quoted in Grizzard, Chap. 11, note 802.

271. JHC to ASB, 10 Nov. 1827. ASB, Memorandum, 9 Nov. 1827, quoted in Grizzard, Appendix K, 38. Trouble with the chimneys continued in the fall of 1828; BV, Min., 3 Oct. 1828. Grizzard, Chap. 11, p. 13.

272. Charles Bonnycastle, Plan for Curing Smoking Chimneys [c. 5 Oct. 1828], transcribed in Grizzard, Appendix S.

273. Coleman Sellers to JHC, 19 Jan. 1828.

274. Grizzard, Chap. 11, p. 8.

275. William Wertenbaker to ASB, 15 Jan. 1828, quoted in Grizzard, Chap. 11, p. 7. Benjamin Blackford of the Isabella Furnace sent an invoice on Nov. 30, 1827, for "2 Largest Oval Stoves" and one large Philadelphia stove; since this invoice predates the faculty resolution, these stoves may have been intended for another location.

276. BV, Min., 20 July 1829.

277. Margaret Bayard Smith to Anna Bayard Boyd and Jane Bayard Kirkpatrick, 2 Aug. 1828, 12 Aug. 1828, quoted in Grizzard, Epilogue, notes 2, 6.

278. William Leitch to the University of Virginia, 4 Jan. 1833, Proctors' Papers, RG 5/3, Box 9, Bills and Accounts, Univ. of Virginia. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 1 (New York: MacMillan Co., 1920-22), 269.

279. Contract,William Leitch and University of Virginia, 1833, Proctors' Papers, RG 5/3, Box 9, Bills and Accounts, Univ. of Virginia, Special Collections.

280. *Report of the Rector and Visitors of the University of Virginia, 1834*, p. 6. John Smith, invoice, 29 April 1833, RG 5/3, Box 9, Bills and Accounts, Proctors' Papers, Univ. of Virginia, Special Collections. William Leitch, invoice, May 1833, RG 5/3, Box 9, Bills and Accounts, Proctors' Papers, Univ. of Virginia, Special Collections.

281. BV, Minutes, 17 July 1833, p. 307. There is no indication in the annual reports of 1833 or 1834 that repairs to the skylight were made during those years.

282. *Report of the Rector and Visitors of the University of Virginia, 1836*, p. 9.

283. BV, Minutes, 17 Aug. 1837, p. 394. *Report of the Rector and Visitors of the University of Virginia, 1838*, p. 17.

284. *Report of the Rector and Visitors of the University of Virginia, 1839–40*, p. 22,

285. *Report of the Rector and Visitors of the University of Virginia, 1837*, pp. 6–7. *Report of the Rector and Visitors of the University of Virginia, 1839–40*, p. 22, University of Virginia health System Web site, http://www.healthsystem.virginia.edu/internet/library/historical/uva_hospital/centennial/beginnings.cfm (accessed 6 Dec. 2006). The Anatomical Hall was designed by Jefferson and built in 1826. It was razed in 1938.

286. BV, Minutes, 4 July 1840, p. 427. William B. O'Neal, ed., *The American Association of Architectural Bibliographers, Papers,* vol. 6 (Charlottesville: Univ. of Virginia Press, 1969), 102–122. Though the Rotunda's weathervane is usually depicted as having been in the shape of an arrow, O'Neal writes that its form is not certain. In 1933 University alumnus John M. Payne, who attended the University from 1858 to 1860, distinctly recalled that the

weathervane was indeed in the form of a quill during his tenure at the University, and it was the quill-shaped weathervane that was removed in 1860: "The Vane was in the form of a Qwill [*sic*] Pen some 8 or 10 feet long — gilded. The point of the pen would point to the letter N. E. S. W. as the wind blew."

287. *Report of the Rector and Visitors of the University of Virginia, 1839–40*, pp. 12–13,

288. *Report of the Rector and Visitors of the University of Virginia, 1840*, p. 3,

289. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co., 1920-22), 16. Francis Fry Wayland, *Andrew Stevenson, Democrat and Diplomat* (Philadelphia: Univ. of Pennsylvania Press, 1949), 212. In the spring of 1845 student enrollment at the University was 194. Ten years later, in the 1855–1856 academic year, it was 558, and then next year it grew to 645, the largest for any year prior to the Civil War. By comparison, in 1855–1856 enrollment at Yale was 619, at Harvard 669. When Virginia had 645 students in 1857, Harvard had 697. Supplement to the Annual Report of the Rector and Visitors of the University of Virginia, 1849, Univ. of Virginia, Special Collections. City of Charlottesville, Virginia, Web site, "History of Charlottesville Transit Service," http://www.charlottesville.org/Index.aspx?page=672 (accessed 4 Dec. 2006). *Report of the Rector and Visitors of the University of Virginia, 1850*, p. 9. George Humphrey Yetter, "Stanford White at the University of Virginia: The New Buildings on the South Lawn and the Reconstruction of the Rotunda in 1896" (master's thesis, Univ. of Virginia, May 1980), 10.

290. BV, Minutes, 9 Oct. 1849, pp. 549–551. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 22. "University of Virginia's Loss," *NYT*, 28 Oct. 1895.

291. BV, Minutes, 4 July 1840.

292. BV, Minutes, 1 July 1841.

293. George W. Spooner, Proposal for Gymnasia, 20 July 1833, University of Virginia Web site, 22 Documents Concerning the Founding of the University of Virginia, 1829–1860, http://etext.virginia.edu/toc/modeng/public/Jef14Gr.html (accessed Dec. 6, 2006). *Report of the Rector and Visitors of the University of Virginia, 1842*, p. 9.

294. George Spooner to the University of Virginia, invoice for converting the two gymnasia on each side of the Rotunda into a Lecture room and Chapel furnishing all materials for same, July 1842, RG 5/3, Box 14, Folder 1842, Bills and Accounts, Univ. of Virginia, Special Collections.

295. BV, Minutes, 1 July 1841..

296. BV, Minutes, 4 July 1840..

297. Day and Welsh, invoice , 29 Aug. 1842, RG 5/3, Box 14, Folder 1842, Bills and Accounts, Univ. of Virginia, Special Collections. John Day to the University of Virginia, invoice, 9 March 1842, RG 5/3, Box 14, Folder 1842, Bills and Accounts, Univ. of Virginia, Special Collections.

298. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund, for the Year Ending June 30, 1845*, p. 12.

299. BV, Minutes, 3 July 1845.

300. BV, Minutes, 9 Oct. 1849.

301. BV, Minutes, 29 June 1850.

302. Andrew Stevenson and Thomas J. Randolph to Joseph C. Cabell, 14 Aug. 1851, Report E, in *Report of the Rector and Visitors of the University of Virginia, 1851*, p. 21.

303. *Report of the Rector and Visitors of the University of Virginia, 1850*, p. 9.

304. BV, Minutes, 25 Sept. 1850.. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 22. Andrew Stevenson to Joseph C. Cabell, 28 Dec. 1850, Cabell Family Papers, 38-111, Box 38, Univ. of Virginia, Special Collections.

305. Andrew Stevenson to John Hartwell Cocke, 15 Oct. 1850, Cocke Papers, 640, Box 134, Univ. of Virginia, Special Collections.

306. Andrew Stevenson to Joseph C. Cabell, 28 Dec. 1850, Cabell Family Papers, 38-111, Box 38, Univ. of Virginia, Special Collections. Rhodri Windsor Liscombe, *Altogether American: Robert Mills, Architect and Engineer* (New York: Oxford Univ. Press, 1994), 282. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 22.

307. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 3 (New York: The MacMillan Co. 1921), 23.

308. National Archives Web site, National Historical Publications and Records Commission (NHPRC), "Documenting the Career of Architect Robert Mills," *Annotation* (Newsletter of the NHPRC) 26:3 (1998): http://www.archives.gov/nhprc/annotation/september-98/robert-mills.html (accessed 1 Dec.2006). Great Buildings Web site, "Robert Mills," http://www.greatbuildings.com/architects/Robert_Mills.html (accessed Dec. 1, 2006). U.S. Treasury Web site, "Robert Mills, 1781-1855," http://www.ustreas.gov/offices/management/curator/exhibitions/2002exhibit/print_robertmills.html

309. Rhodri Windsor Liscombe, *Altogether American: Robert Mills, Architect and Engineer* (New York: Oxford Univ. Press, 1994).

310. Andrew Stevenson to Joseph C. Cabell, 24 Jan. 1851, Cabell Family Papers, 38-111, Box 38, Univ. of Virginia, Special Collections.

311. Robert Mills, Specifications of the manner of executing a certain Building proposed to be added to the Rotunda on the north side of the University buildings, 3 Jan. 1851, RG 31/1/2:6.771, Folder 1851 Jan. 3, pamphlet and spec., Univ. of Virginia, Special Collections.

312. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York:MacMillan Co. 1920-22), 22-24.

313. Robert Mills, Specifications of the manner of executing a certain Building proposed to be added to the Rotunda on the north side of the University buildings, 3 Jan. 1851, RG 31/1/2:6.771, Folder 1851 Jan. 3, pamphlet and spec., Univ. of Virginia, Special Collections.

314. Andrew Stevenson to Joseph C. Cabell, 24 Jan. 1851, Cabell Family Papers, 38-111, Box 38, Univ. of Virginia, Special Collections. After consulting with foundries in the North, Stevenson reported to Cabell that the University could save upwards of $13,000 on the column capitals and bases.

315. *Report of the Rector and Visitors of the University of Virginia, 1851*, p. 11.

316. Andrew Stevenson to Joseph C. Cabell, 8 April 1851, Cabell Family Papers, 38-111, Box 38, Univ. of Virginia, Special Collections. Rhodri Windsor Liscombe, *Altogether American:*

*Robert Mills, Architect and Engineer* (New York: Oxford Univ. Press, 1994), 283. George Spooner is listed in the 1837, 1838, 1839-40, 1842, 1845, 1846, 1847, 1848, 1849 annual reports of the Rectors and Visitors of the University of Virginia as having done repair work on various buildings during those years.

317. Univ. of Virginia Bursar's Account Book, 8437 (1851–1854), 59–64, as cited in Rhodri Windsor Liscombe, *Altogether American: Robert Mills, Architect and Engineer* (New York: Oxford Univ. Press, 1994), 283.

318. *Report of the Rector and Visitors of the University of Virginia, 1851*, p. 16. Bursar's Records, Addition to the Rotunda, 1851, p. 59, Univ. of Virginia, Special Collections.

319. Bursar's Records, Addition to the Rotunda, 1851, p. 59, Univ. of Virginia, Special Collections.

320. Andrew Stevenson and Thomas J. Randolph to Joseph C. Cabell, 14 Aug. 1851, Report E. in *Report of the Rector and Visitors of the University of Virginia, 1851*, p. 21, Univ. of Virginia, Special Collections.

321. Gessner Harrison to Joseph C. Cabell, 20 Sept. 1851, Cabell Family Papers, 38-111, Box 39, Univ. of Virginia, Special Collections.

322. Bursar's Records, Addition to the Rotunda, 1851, pp. 59–60, Univ. of Virginia, Special Collections.

323. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 24.

324. Andrew Stevenson to Joseph C. Cabell, 8 May 1852, Cabell Family Papers, 38-111, Box 38, Univ. of Virginia, Special Collections.

325. *Report of the Rector and Visitors of the University of Virginia, 1853–54*, p. 9.

326. *Report of the Rector and Visitors of the University of Virginia, 1853–54*, pp. 28–29.,

327. *Report of the Rector and Visitors of the University of Virginia, 1854*, p. 16.

328. Bursar's Records, Addition to the Rotunda, 1852, p. 64, Univ. of Virginia, Special Collections.

329. *Report of the Rector and Visitors of the University of Virginia, 1853–54*, p. 10.

330. BV, Minutes, 29 June 1853.

331. *Report of the Rector and Visitors of the University of Virginia, 1853–54*, p. 10.

332. *Report of the Rector and Visitors of the University of Virginia, 1853–54*, p. 9.,

333. *Report of the Rector and Visitors of the University of Virginia, 1853–54*, p. 9.,

334. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 23-24.

335. Rivanna Archaeological Consulting, "Archaeological Mitigation Adjacent to the Cryptoporticus, University of Virginia Rotunda Access Project," 2001, p.8. BV, Minutes, 28 June 1852. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 18–19.

336. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 20–21.

337. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 20–21. Jeanette Cabell Coley, "A Biography of Charles Ellet Jr.," Civil

War Studies.org Web sitehttp://civilwarstudies.org/articles/Vol_5/charlesellet.htm (accessed 1 Dec. 2006). Charles Ellet Jr. was originally from Bucks County, Pennsylvania, but traveled across Europe and the eastern part of the United States, studying engineering and canal systems, and, eventually, designing suspension bridges. His most famous bridges were the first wire suspension bridge built in the United States, which spanned the Schuylkill River at Fairmount, Philadelphia, in 1842, another at Niagara Falls in 1848, and a third over the Ohio River at Wheeling, West Virginia, in 1849. The Wheeling bridge, at 1,010 feet, was then the longest suspension bridge in the world. Ellet enlisted in the Union Army in March 1862. He died on June 21, 1862, from a gunshot wound sustained at the Battle of Memphis, sixteen days earlier.

338. William A. Pratt, Report to the Executive Committee, 1858, Proctor's Papers, Accession #38-174, Univ. of Virginia, Special Collections, as cited in Rivanna Archaeological Consulting, "Archaeological Mitigation Adjacent to the Cryptoporticus, University of Virginia Rotunda Access Project," 2001, p. 8. Features on a plan of the University that Pratt drew in 1858 and on another, anonymous plan drawn in 1870 may indicate the presence of cisterns. It is unclear whether the cisterns mentioned by Pratt were built in addition to the three that were installed in 1851 or if they are two of those three.

339. BV, Minutes, 29 June 1853.

340. BV, Minutes, 29 June 1853. *Report of the Rector and Visitors of the University of Virginia, July 1, 1855*, p. 53.

341. BV, Minutes, 27 June 1854.. BV, Minutes, 29 June 1854.. *Report of the Rector and Visitors of the University of Virginia, 1854*, p. 9.. Sometime during 1853 or early 1854 the University appealed to distinguished New York architect Alexander Jackson Davis for "the most advisable mode and the probable cost of permanently repairing the terraces" at the University. The Report of the Rector and Visitors from July 1, 1854, does not specify which terraces were in need of repair, but they may have included the two south terraces of the Rotunda. Though Davis did not come to the University himself, he sent builder George Nichols, who made a "detailed estimate and a report on the subject of the terraces," which was presented before the Board of Visitors in June 1854. Nichols's estimate and report were approved, and Davis was appointed as architect of the project at the June meeting. Between June and the end of July, Davis "furnished a working plan and estimate to be used in letting work to the contractors."

342. *Report of the Rector and Visitors of the University of Virginia, 1857*, pp. 55–56.

343. *Report of the Rector and Visitors of the University of Virginia, 1857*, pp. 55–56.

344. BV, Minutes, 30 June 1859.

345. *Report of the Rector and Visitors of the University of Virginia, 1857*, pp. 47–48.

346. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 25.

347. *Report of the Rector and Visitors of the University of Virginia, 1859*, pp. 36–37.

348. H. E. Howard, *Charlottesville and the University of Virginia in the Civil War* (Lynchburg, Va.: H. E. Howard, Inc., 1988), 17, 50.

349. CWSAC Battle Summaries, http://www.cr.nps.gov/hps/ABPP/BATTLES/bystate.htm (accessed 7 Dec.2006).

350. H. E. Howard, *Charlottesville and the University of Virginia in the Civil War* (Lynchburg, Va.: H. E. Howard, Inc., 1988), 50. Howard reports that the Board of Visitors complained that the University's use as military hospital had been ordered without proper authorization and that its continued presence would be a detriment to the University's educational mission. The Board demanded removal of the patients and stated that it would not give consent for such usage of the University grounds. The University also sought compensation for damages and called upon Confederate authorities to pay "a proper rent for the use of the buildings." Though the University supported the Confederacy, it is clear that its top priority remained the education of its students.

351. *Report of the Rector and Visitors of the University of Virginia, 1866*, p. 3.

352. BV, Minutes, 4 July 1863. BV, Minutes, 6 July 1865.

353. BV, Minutes, 27 June, 1867. BV, Minutes, 29 June 1868.

354. *Report of the Rector and Visitors of the University of Virginia, 1866*, pp. 3, 4, 8. BV, Minutes, 29 June 1868. In 1866 there were 258 students enrolled at the University, "of whom 167 are from Virginia, 18 from Maryland, 17 from Alabama, 10 from North Carolina, and the rest distributed amongst eighteen other states."

355. BV, Minutes, 30 June 1869.

356. BV, Minutes, 29 June 1870..

357. BV, Minutes, 25 June 1872.

358. BV, Minutes, 28 June 1873. BV, Minutes, 30 June 1873.

359. BV, Minutes, 1 July 1874.

360. BV, Minutes, 1 July 1874.

361. BV, Minutes, 28 June 1874.

362. BV, Minutes, 30 July 1880.

363. *Report of the Rector and Visitors of the University of Virginia, 1881–1882*, p. 6.

364. *Report of the Rector and Visitors of the University of Virginia, 1882–1883*, p. 8.

365. *Report of the Rector and Visitors of the University of Virginia, 1882–1883*, p. 8.

366. BV, Minutes, 26 June 1883.

367. *Report of the Rector and Visitors of the University of Virginia, 1883–1884*, p. 3.

368. *Report of the Rector and Visitors of the University of Virginia, 1884–1885*, p. 4.

369. Unsigned letter to Col. C. S. Venable, 31 May 1886, RG 5/3, Box 16, Proctor's Papers, Univ. of Virginia Special Collections.

370. "Missing Rotunda Bell Found," *Daily Progress*, 25 Nov. 1964. "Ding Dong," *Cavalier Daily*, 9 Dec. 1964. "For 'Hoos the Bells Toll," *Inside UVA*, 15 Feb. 1990.

371. *Report of the Rector and Visitors of the University of Virginia, 1887–1888*, p. 12.

372. *Report of the Rector and Visitors of the University of Virginia, 1889–1890*, pp. 3–4.

373. "A Sketch of the University Architecture," *Corks and Curls*(1891): 14–15.

374. BV, Minutes, 8 Dec. 1892.

375. BV, Minutes, VII (1895–1903), p. 67, as cited in George Humphrey Yetter, "Stanford White at the University of Virginia: The New Buildings on the South Lawn and the Reconstruction of the Rotunda in 1896" (master's thesis, Univ. of Virginia, May 1980),, 14.

376. *Richmond Dispatch*, 28 Oct. 1895; [Richmond] *Times*, 28 Oct. 1895; *Norfolk Virginian*, 29 Oct. 1895; *Washington Post*, 29 Oct. 1895; *NYT*, 28 Oct. 1895. All sources cited in note 3 Richard Guy Wilson, of *"Arise and Build!" A Centennial Commemoration of the 1895 Rotunda Fire* (Charlottesville: University of Virginia, 1995), 3. *College Topics*,, 4 Nov. 1895. From University of Virginia, *Manual of Information* (Roanoke: 1899), quoted in Paul B. Barringer, *University of Virginia: Its History, Influence, Equipment and Characteristics* (New York: Lewis Publishing Co., 1904), 112. In volume 42 of *Corks and Curls* (1956-57), the cause for the fire was attributed to "faulty insulation" resulting in "a short circuit in the wiring of the roof of the auditorium [Annex]."

377. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895.. *College Topics*, 4 Nov. 1895. *College Topics*, 9 Nov. 1895. "University of Virginia's Loss," *NYT*, 28 Oct. 1895.

378. "University of Virginia's Loss," *NYT*, 28 Oct. 1895. Morgan Poitiaux Robinson, *The Burning of the Rotunda* (Richmond: F. J. Mitchell Printing Co., 1908), 20. University of Virginia, *Manual of Information* (Roanoke: 1899), quoted in Paul B. Barringer, *University of Virginia: Its History, Influence, Equipment and Characteristics* (New York: Lewis Publishing Co., 1904), 112.

379. *College Topics*, 4 Nov. 1895.

380. *College Topics*,4 Nov. 1895. Morgan Poitiaux Robinson, *The Burning of the Rotunda* (Richmond: F. J. Mitchell Printing Co., 1908), 16.

381. *College Topics*, 4 Nov. 1895.

382. Morgan Poitiaux Robinson, *The Burning of the Rotunda* (Richmond: F. J. Mitchell Printing Co., 1908), 14, 17.

383. Morgan Poitiaux Robinson, *The Burning of the Rotunda* (Richmond: F. J. Mitchell Printing Co., 1908), 17–18.

384. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. *College Topics*, 4 Nov. 1895. Bell Dunnington to Sadie Dunnington, 28 Oct. 1895, in *Arise and Build!: The Great Fire, Firsthand Accounts*, www.lib.virginia.edu/small/exhibits/rotunda/fire/dunnington.html (accessed 24 Aug. 2006)

385. Morgan Poitiaux Robinson, *The Burning of the Rotunda* (Richmond: F. J. Mitchell Printing Co., 1908), 23.

386. "University of Virginia's Loss," *NYT*, 28 Oct. 1895. "Rotunda Walls All Right," *Charlottesville Daily Progress*, 31 Oct. 1895. University of Virginia, *Manual of Information* (Roanoke: 1899), quoted in Paul B. Barringer, *University of Virginia: Its History, Influence, Equipment and Characteristics* (New York: Lewis Publishing Co., 1904), 112. Morgan Poitiaux Robinson, *The Burning of the Rotunda* (Richmond: F. J. Mitchell Printing Co., 1908), 21, 23.

387. "University of Virginia's Loss," *NYT*, 28 Oct. 1895.

388. *College Topics*, 11 Jan. 1896, from University of Virginia, *Manual of Information* (Roanoke: 1899), quoted in Paul B. Barringer, *University of Virginia: Its History, Influence, Equipment and Characteristics* (New York: Lewis Publishing Co., 1904), 112. The University of Virginia

Annual Report from 1895–96 indicated that out of the 62,000 volumes in the library only 15,000 were saved. *University of Virginia Annual Report, 1895–96*, p. 3.

389. *College Topics*, 16 May 1896.

390. John T. Thornton to Rosalie Thornton, 27 Oct. 1895, in *Arise and Build!: The Great Fire, Firsthand Accounts*, www.lib.virginia.edu/small/exhibits/rotunda/fire/docs/thornton_letter.html (accessed 24 Aug. 2006). Barringer, 24.

391. "University of Virginia's Loss," *NYT*, 28 Oct. 1895. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. While it was used as a temporary storage space for the displaced library and Annex collections, the Natural History Museum was entirely closed to visitors. *University of Virginia Annual Report, 1895–96*, p. 3..

392. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895..

393. "Rotunda Walls All Right," *Charlottesville Daily Progress*, 31 Oct. 1895. Thomas J. Randolph was Rector of the University of Virginia from 1857–1864. He was the son of Martha "Patsy" Jefferson Randolph — her second child of twelve. Rector W. C. N. Randolph was, therefore, Thomas Jefferson's great-grandson.

394. "The Library," *The Alumni Bulletin* (Feb. 1895): 110. This report also states that the Rotunda, during the "severe winter" of 1895–96, suffered from water damage, "on account of the melting of the heavy snow-fall."

395. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. "The University of Virginia Appeals," *NYT*, 10 Nov. 1895.

396. "Rotunda Walls All Right," *Charlottesville Daily Progress*, 31 Oct. 1895. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. Society of Architectural Historians Web site, http://www.sah.org/oldsite06012004/aame/biom.html (accessed on 17 Aug.2006). Harry P. McDonald, FAIA,., was born at Romney, Virginia, in 1847 and graduated from Washington and Lee University in 1870. In 1880 he settled in Louisville, Kentucky, and with his brothers practiced architecture under the firm name of McDonald Brothers. Among the works he executed are the Kansas State House and St. Paul's Episcopal Church in New Orleans. He was elected a member of the Western Association of Architects in 1885 and by act of consolidation became a Fellow of the AIA in 1889. He died on February 18, 1904.

397. Margaret Lewis Randolph to Patsy Jefferson Taylor, 30 Oct. 1895, as cited in Frederick Doveton Nichols and Omer Allan Gianniny Jr., "Thomas Jefferson, Stanford White and the University of Virginia Rotunda: A Controversy of Styles," unpublished manuscript (Charlottesville: 1984), 3-5.

398. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895.

399. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. There was some dissent over the recommendation that the interior of the Rotunda be reconstructed differently that the original building. While some members of the faculty and the Board of Visitors supported the idea of the single, open space beneath the dome, there was enough opposition to the idea that a statement was publishedin the 7 Dec.1895, issue of *College Topics* that the "internal arrangement" of the Rotunda would be "exactly as it was before." Ultimately, however, the space beneath the dome was not divided by floors, as it had been in the original construction.

400. *College Topics*, 7 Dec. 1895.

401. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895.

402. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. *College Topics*, 7 Dec. 1895. Stanford White, "The Buildings of the University of Virginia," *Corks and Curls* 11 (1898): 127. "It was evidently Jefferson's intention to build a portico at the north end of the Rotunda," White wrote in *Corks and Curls* in 1898, after the restoration was completed. "In the restoration this new portico was added, and a great flight of steps carried down to the terrace and then to the road, with a happy and dignified result."

403. "University of Virginia's Loss," *NYT*, 28 Oct. 1895. "University Relief Fund," *Charlottesville Daily Progress*, 31 Oct. 1895. "The New Buildings," *The Alumni Bulletin* (Aug. 1898): 47.

404. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. The report states that the money "already in hand" was the "Fayerweather money."

405. "University Relief Fund," *Charlottesville Daily Progress*, 31 Oct. 1895.

406. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895. In order to make the most of the next building season in the coming spring and to move the work along quickly, the faculty proposed that new bricks matching those used to construct the Rotunda be manufactured immediately in preparation for the imminent construction.

407. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895.

408. "The Work of Restoration," *The Alumni Bulletin* (Feb. 1896): 133.

409. BV, Minutes, 4 Nov. 1895.. *College Topics*, 9 Nov. 1895.

410. "University Building Fund," *Richmond Dispatch*, 8 Nov. 1895.

411. "It Must Be Rebuilt," *Richmond Dispatch*, 30 October1895. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co. 1920-22), 273.Acts and Joint Resolutions of the General Assembly of the State of Virginia, 1895-96 (Richmond: J. H. O'Bannon, 1896), 159. These sources were cited in "The Conflagration and the Making of the 'New' University," *Arise and Build!*, by Richard Guy Wilson, www.lib.virginia.edu/small/exhibits/rotunda/physical/keepsake/RGWarticle.html (accessed 23 Aug. 2006).

412. *College Topics*, 6 Jan. 1896. "W. M. Thornton Dies; Virginia Educator," *NYT,* 12 Sept. 1935.

413. "The Work of the Restoration," *Alumni Bulletin* (Feb. 1896): 137.

414. "The Work of the Restoration," *Alumni Bulletin* (Feb. 1896): 137–38. Richmond contributed $14,125; Norfolk, $2,967; Lynchburg, $573; Staunton, $319; Lexington, $260; Winchester, $175; and Roanoke, $156. It is not clear how the sum of $2,930 from the University reported in the *Alumni Bulletin* figures into the other funds raised by the University.

415. *College Topics*, 6 Jan. 1896.

416. *College Topics*, 6 Jan. 1896.

417. Univ. of Virginia Report for the Session 1896–97, Rector W. C. N. Randolph to Super of Pub. Ins. John E. Massey, (Charlottesville Printing Company and Old Dominion Press, n.d.), 14.

418. Univ. of Virginia Report for the Session 1895–96, Rector W. C. N. Randolph to Super of Pub. Ins. John E. Massey, (Charlottesville Printing Company and Old Dominion Press, n.d.), 3.

419. "The University Bill," *Charlottesville Chronicle*, 24 Jan. 1896, cited in *College Topics*, 25 Jan. 1896.

420. "The New Buildings," *Alumni Bulletin* (Aug. 1898): 47.

421. “Design for Restoration of Rotunda, University of Virginia, McDonald Bros. Architects, Louisville, Ky., Section A-B,” n.d., Univ. of Virginia, Special Collections.

422. “Design for Restoration of Rotunda, University of Virginia, McDonald Bros. Architects, Louisville, Ky., Section,” Ground-floor Plan, n.d., Univ. of Virginia, Special Collections.

423. “Design for Restoration of Rotunda, University of Virginia, McDonald Bros. Architects, Louisville, Ky., Section,” Ground-floor Plan, n.d., Univ. of Virginia, Special Collections.

424. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895.. Richard Guy Wilson, “The Conflagration and the Making of the ‘New’ University,” *Arise and Build!*, www.lib.virginia.edu/small/exhibits/rotunda/physical/keepsake/RGWarticle.html (accessed 23 Aug.2006). Thornton to White, 24 Jan. 1896, Box 172, File 1, MMW, N-YHS.

425. BV, Minutes, 4 Nov. 1895.

426. BV, Minutes, 13 March 1896. The record shows that inadequately engineered work on the Rotunda and its wings in the winter of 1896 resulted in the building committee asking for the McDonald Brothers’ resignation. This must have occurred before January 18, 1896, when Thornton wrote to Stanford White that the “McDonald Brothers had retired from work which they had undertaken.”

427. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895.

428. Report of the Faculty, 31 Oct. 1895, in BV, Minutes 4 Nov. 1895.

429. William R. Mead to Doctor [Thornton?], 5 Nov. 1895, RG-5/3, Proctor’s Records, Box 22, Misc. Correspondence, 1895–1910, Univ. of Virginia, Special Collections.

430. White to J. A. Chanler, 2 Nov. 1895, SW,Press Book 14, p. 233, Avery Architectural Library. White to Mr. Coleman, 8 Nov. 1895, SW, , Press Book 14, p. 255, Avery Architectural Library.

431. Carrère to Charles A. Coolidge, 14 Jan. 1896, Box M-15, Univ. of Virginia, Special Collections.. Carrère reveals in this letter that he had spoken with Mead about the prospect of an architectural competition for the work at the University and that the firm of McKim, Mead and White did “not want to compete at all,” that from a “business standpoint” they could not be “justified in competing,” but because of the “interesting” connection with the University of Virginia they were willing to make “a very marked exception.”

432. W. Gordon McCabe to Carrère, 20 Jan. 1896, Box 171, File 1, MMW, N-YHS.

433. Randolph to Carrère, 18 Jan. 1896, Box 172, File 3, MMW, N-YHS.

434. Richard Guy Wilson, “The Conflagration and the Making of the ‘New’ University,” *Arise and Build!*, www.lib.virginia.edu/small/exhibits/rotunda/physical/keepsake/RGWarticle.html (accessed Aug. 24, 2006). Charles C. Baldwin*, Stanford White*, (New York: Da Capo Press, 1931): 113, as cited in George Humphrey Yetter, “Stanford White at the University of Virginia: The New Buildings on the South Lawn and the Reconstruction of the Rotunda in 1896” (master’s thesis, Univ. of Virginia, May 1980), 34.

435. Randolph to White, 18 Jan. 1896, Box 173, File 3, MMW, N-YHS. Thornton to White, 18 Jan. 1896, Box 172, File 1, MMW, N-YHS. Richard Guy Wilson, “The Conflagration and the Making of the ‘New’ University,” *Arise and Build!*, note 34, www.lib.virginia.edu/small/exhibits/rotunda/physical/keepsake/RGWarticle.html (accessed Aug. 24, 2006). The construction of a separate law school building was also part of the original plan, but this plan was scrapped because of expense.

436. BV, Minutes, 13 March 1896.

437. Randolph to White, 18 Jan. 1896, Box 173, File 3, MMW, N-YHS.

438. Randolph to White, 18 Jan. 1896, Box 173, File 3, MMW, N-YHS.

439. BV, Minutes, 13 March 1896.

440. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York:MacMillan Co. 1920-22), 274. Frederick Doveton Nichols and Omer Allan Gianniny Jr., "Thomas Jefferson, Stanford White and the University of Virginia Rotunda: A Controversy of Styles," unpublished manuscript,1984, i-14.

441. Benjamin P. Ford, "Archaeological Mitigation Adjacent to the Cryptoporticus, University of Virginia, Rotunda Access Project" (Charlottesville: Rivanna Archaeological Consulting, 2001), 8.

442. Two documents, Harry McDonald's account of the Jan. 18 meeting of the building committee and W. C. N. Randolph's letter to McDonald Brothers, were cited in Nichols and Gianniny's manuscript, pp. n-2–3. The only note that the authors gave as to the provenance of these documents was University of Virginia, correspondence, Dir. of Grounds and Buildings, W. H. Echols, 1895–1896.

443. Frederick Doveton Nichols and Omer Allan Gianniny Jr., "Thomas Jefferson, Stanford White and the University of Virginia Rotunda: A Controversy of Styles," unpublished manuscript, 1984, n-7.

444. Thornton to White, 8 Feb. 1896, Box 172, File 3, MMW, N-YHS.

445. Frederick Doveton Nichols and Omer Allan Gianniny Jr., "Thomas Jefferson, Stanford White and the University of Virginia Rotunda: A Controversy of Styles," unpublished manuscript,1984, 1-8.

446. Thornton to White, 8 Feb. 1896, Box 172, File 3, MMW, N-YHS.

447. McDonald Brothers to the Univ. of Virginia Building Committee, 2 Feb. 1896, RG-1/1/3.682, Univ. of Virginia, Special Collections.

448. Randolph to Carrère, 18 Jan. 1896, Box 172, File 3, MMW, N-YHS.

449. Thornton to White, 24 Jan. 1896, Box 172, File 1, MMW, N-YHS.

450. Randolph to White, 24 Jan. 1896, Box 172, File 3, MMW, N-YHS.

451. White to Thornton, 27 Jan. 1896, Box M-4, File 1, MMW, N-YHS.

452. Thornton to White, 1 Feb. 1896, Box 172, File 1, MMW, N-YHS. Thornton to White, 29 Jan. 1896, Box 172, File 3, MMW, N-YHS.

453. Randolph to White, 24 Jan. 1896, Box 172, File 3, MMW, N-YHS. Thornton to White, 1 Feb. 1896, Box 172, File 1, MMW, N-YHS. BV, Minutes, 13 March 1896, p. 20.

454. Edward Simmons, *From Seven to Seventy: Memories of a Painter and a Yankee* (New York and London: Harper and Brothers, 1922), 241.

455. McKim, Mead and White, receipt of drawings delivered to Thomas H. Carter, June 1898, MMW, N-YHS, Box 171, Folder I. Thomas H. Carter, list of Thomas Jefferson drawings received from McKim, Mead and White, June 1898, Box 171, File 1, MMW, N-YHS. This list is an inventory of Thomas Jefferson drawings that were used by McKim, Mead and White and returned to the University by them. The list includes the "bird's-eye view of the University

grounds and buildings, and drawings of the Rotunda south front; interior library; ground plan; interior view; and a sketch with notes, specifications, estimates, etc., on the reverse side."

456. White to Thornton, 21 Feb. 1896, RG-5/5, Mss. 8437, Univ. of Virginia, Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections.

457. White to Thornton, 21 Feb. 1896, RG-5/5, Mss. 8437,Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections.

458. White to Thornton, 26 Feb. 1896, RG-5/5, Mss. 8437, , Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections..

459. White to Thornton, 26 Feb. 1896, RG-5/5, Mss. 8437, Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections.

460. Richard Guy Wilson, "The Conflagration and the Making of the 'New' University," *Arise and Build!*, www.lib.virginia.edu/small/exhibits/rotunda/physical/keepsake/RGWarticle.html (accessed 24 Aug.2006).

461. BV, Minutes, 13 March 1896. William M. Thornton, "Engineering Instruction at the University of Virginia," 1924, Mss. 2612, p. 6, Univ. of Virginia, Special Collections..

462. BV, Minutes, 13 March 1896, p. 21. The report of the building committee provided these numbers but made an error in its calculation: the report states that a total of $9,050.43 was spent as of March 13, 1896. For more information on the breakdown of expenses, including the incidentals, see the March 13 report of the Board of Visitors.

463. BV, Minutes, 13 March 1896.

464. BV, Minutes, 13 March 1896, p. 29. White to Ethel[red?], 19 March 1896, Press Book 15, p. 334, Stanford White Collection, Avery Architectural Library.

465. "Report of the Architects to the Building Committee,"*Alumni Bulletin* (Feb. 1896): 139. In the *History of the University of Virginia* (p. 276) Barringer suggests that Jefferson split the area within the Rotunda into two floors "by the imperative need of obtaining space for laboratories and lecture-halls" (p. 276).

466. "Report of the Architects to the Building Committee,"*Alumni Bulletin* (Feb. 1896): 139. "The Work of the Restoration," *Alumni Bulletin* (Feb. 1896): 135–36. *College Topics*, 14 March 1896. Memorandum on Letterhead of Chairman's Office, University of Virginia, c. 29 Jan 1896, Box 171, File 2, MMW, N-YHS. This document, in Thornton's hand and probably dating to around January 29, 1896, indicates how the new rooms associated with the Rotunda would be used. The "East Basement Room" would "be assigned to Greek"; the "West Basement Room" would be used for Latin instruction; the "East Terrace Room" would be used for English Literature; the "West Terrace Room" would be used for French and German instruction; and the "Room under the North Portico" would be used for History and Political Economy. Frederick Doveton Nichols and Omer Allan Gianniny Jr., "Thomas Jefferson, Stanford White and the University of Virginia Rotunda: A Controversy of Styles," unpublished manuscript,1984, d-7.

467. Randolph to White, 27 March 1896, Box 172, File 3, MMW, N-YHS. White to Echols, 25 April 1896, RG-5/5, Box 1, MMW Correspondence, Univ. of Virginia, Special Collections.

468. McKim, Mead and White, untitled ground-floor plan, 7 April 1896; "First Gallery Plan (Second Gallery Plan Similar) for Restoration of Rotunda, University of Virginia," 7 April 1897, Univ. of Virginia, Special Collections.

469. McKim, Mead and White, "Basement Plan for Restoration of Rotunda, University of Virginia," 7 April 1897; "Plan of Rotunda & Garden, University of Virginia," 7 April 1896, Univ. of Virginia, Special Collections.

470. McKim, Mead and White, "Basement Plan for Restoration of Rotunda, University of Virginia," 7 April 1897; "Longitudinal Section, , Restoration of Rotunda, University of Virginia," 7 April 1896, Univ. of Virginia, Special Collections.

471. McKim, Mead and White, untitled ground-floor plan, 7 April 1896; "First Gallery Plan (Second Gallery Plan Similar) for Restoration of Rotunda, University of Virginia," 7 April 1897, Univ. of Virginia, Special Collections. R. Guastavino made annotations to McKim, Mead and White's 7 April, 1896 plans sometime during 1897. On the plans Guastavino indicates that the fourth floor was omitted in the final design.

472. McKim, Mead and White, "Side Elevation, Restoration of Rotunda, University of Virginia," 7 April 1897, Univ. of Virginia, Special Collections. McKim, Mead and White, "Carpentry, Roofing, and Glazing, Restoration of the Rotunda, University of Virginia, Charlottesville, Va." 22 April 1896, Box 2485, Acc. 3263, Univ. of Virginia, Special Collections.

473. R. Guastavino to MMW, 18 Feb. 1896, Box 171, File, 1, MMW, N-YHS.

474. Peter Austin, "Rafael Guastavino's Construction Business in the United States: Beginnings and Development," *APT Bulletin* 30:4 (1999): 15. Frederick Doveton Nichols and Omer Allan Gianniny Jr., "Thomas Jefferson, Stanford White and the University of Virginia Rotunda: A Controversy of Styles," unpublished manuscript ,: 1984, q-1.

475. Guastavino to MMW, 11 March 1896, Box 171, File 1, MMW, N-YHS.

476. J. T. Wagner, W. H. Mullins Architectural Sheet Metal to MMW, 11 March 1896, Box 171, File 2, MMW, N-YHS.

477. Piccirilli Brothers to White, 15 April 1896, Box 172, File 1, MMW, N-YHS.

478. Thornton to White, 1 Feb. 1896, Box 172, File 1, MMW, N-YHS. Thornton to White, 8 Feb. 1896, Box 172, File 3, MMW, N-YHS.

479. BV, Minutes, 13 March 1896.

480. Skinner to Echols, 27 April 1896, RG-5/5, Box 1, MMW Correspondence, Univ. of Virginia, Special Collections.

481. Echols to Skinner, 29 April 1896, Box 171, File 1, MMW, N-YHS.

482. Echols to White, 4 May 1896, MMW, N-YHS.

483. Thornton to White, 20 March 1896, Box 172, File 3, MMW, N-YHS.

484. "The Work of the Restoration,"*Alumni Bulletin* (Feb. 1896): 135–36.

485. "The Work of the Restoration," *Alumni Bulletin* (Feb. 1896): 135–36.

486. Specification for the Repair of the Terrace Roofs at the University of Virginia, Charlottesville, Virginia, 1 Feb. 1896, Box 172, File 3, MMW, N-YHS.

487. Thornton to White, 3 Feb. 1896, Box 172, File 3, MMW, N-YHS.

488. Thornton to White, 8 Feb. 1896, Box 172, File 3, MMW, N-YHS.

489. BV, Minutes, 13 March 1896.

490. Thomas Hastings to White, 6 Feb. 1896, Box 172, File 4, MMW, N-YHS.

491. White to Echols, 27 March 1896, RG-5/5, Mss. 8437, Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections..

492. Randolph to White, 28 March 1896, Box 172, File 2, MMW, N-YHS.

493. White to Randolph, 6 April 1896, RG-5/5, Mss. 8437, Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections.

494. "The University Buildings,"*Alumni Bulletin* (May 1896): 13. Skinner to White, 28 Feb. 1896, Box 172, File 2, MMW, N-YHS.

495. Skinner to Mead, 26 July 1896, Box 172, File 3, MMW, N-YHS.

496. McKim, Mead and White, Bill Books, Vol. 6, p. 298, MMW, N-YHS.

497. White to Randolph, 18 April 1896, RG-5/5, Mss. 8437, Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections. Randolph to White, 22 April 1896, Box 172, File 2, MMW, N-YHS.

498. Randolph to McKim, Mead and White, telegram, 4 May 1896, Box 172, File 2, MMW, N-YHS.

499. Skinner to Echols, 2 May 1896, RG-5/5, Mss. 8437,Correspondence of Buildings and Grounds, Box 1, Univ. of Virginia, Special Collections. Thornton to White, 5 May 1896, Box 172, File 1, MMW, N-YHS. Charles E. Langley Co. to McKim, Mead and White, 6 May 1896, Box 171, File 2, MMW, N-YHS. Randolph to White, 5 May 1896, Box 172, File 2, MMW, N-YHS. Charles E. Langley to MMW, 3 Feb 1896, Box 171, File 2, MMW, N-YHS.

500. Proposed list of Bidders on University of Virginia, [1896], Box 172, File 3, MMW, N-YHS. The three Richmond firms in addition to Langley were W. A. Chesterman and Co., G. J. Hunt, and Menton E. Ancarrow. John P. Pettijohn and Co. were from Lynchburgh, Va; A. F. Withrow Lumber Co. was from Charleston, W. Va.; M. T. Lewman and Co. were from Louisville, Ky.; and Walton and Vandergrift haled from Charlottesville. Thornton to White, 18 March 1896, Box 171, File 1, MMW, N-YHS. Regarding Pettijohn, Chesterman, and Withrow, Thornton wrote to White on March 18, 1896, that there were "reasons both of fact and of policy why these should be invited to make a tender on the work."

501. Skinner to White, telegram, 20 May 1896, Box 172, File 2, MMW, N-YHS.

502. C. P. Benson,, copy of resolutions adopted at meeting of building committee on 9 Nov. 1896, Box 172, File 1, MMW, N-YHS. BV, Minutes, 17 June 1896.

503. Thomas Hastings to White, 6 Feb. 1896, Box 172, File 4, MMW, N-YHS. William M. Thornton, "Engineering Instruction at the University of Virginia," 1924, Mss. 2612, p. 6, Univ. of Virginia, Special Collections. In this 1924 report Thornton made the following observation about the acceptance of Langley: "The Norcross Brothers, a firm of first-class repute, bid $450,000. Langley after several months of active work, went bankrupt. The University took over the job, completed it, and as shown by the Proctor's final report, spent in all $450,000. The Norcross bid was doubtless fair and reasonable and ought to have been accepted."

504. Contract, University of Virginia and C. C. Cocke, 12 Aug. 1896, RG 5/3, Box 22, Folder 1895–96/Robertson; Contract, University of Virginia and Adams Bros. and Payne, 4 May 1896, RG 5/3, Box 22, Folder 1895–96/Robertson; Contract, University of Virginia and Edgar N. Cox, 5 June

1896, RG 5/3, Box 22, Folder 1895–96/Robertson; Contract, University of Virginia and E. Dillon and Co., 5 June 1896, RG 5/3, Box 22, Folder 1895–96/Robertson. All files in University of Virginia, Special Collections.

505. "The University Buildings,"*Alumni Bulletin* (May 1896): 13. White to [?], 25 May 1896, MMW, SW,, Press Book 16, p. 138, Avery Architectural Library. Shortly after the contracts were signed, Stanford White left for a six-week trip to Canada and returned to New York in mid-July 1896.

506. Thornton to the Friends and Alumni of the University of Virginia, 7 July 1896, RG 19/1/2.991, Box RG +8/1/1.281, Folder 1896, July 7, Univ. of Virginia, Special Collections.

507. Skinner to Haase, 24 June 1896, Box 172, File 3, MMW, N-YHS.

508. Skinner to White, 7 July 1896, Box 172, File 3, MMW, N-YHS.

509. Skinner to White, 7 July 1896, Box 172, File 3, MMW, N-YHS.

510. Skinner to White, 8 July 1896, Box 172, File 3, MMW, N-YHS.

511. Skinner to White, 29 July 1896, Box 172, File 3, MMW, N-YHS.

512. Skinner to White, 6 Aug. 1896, Box 172, File 3, MMW, N-YHS.

513. Nichols and Gianniny, s-6. "University Buildings," *Charlottesville Chronicle*, 7 Aug. 1896.

514. Skinner to White, 11 Aug. 1896, Box 172, File 3, MMW, N-YHS.

515. Skinner to MMW, 17 Aug. 1896, Box 172, File 3, MMW, N-YHS.

516. Skinner to White, 28 Sept. 1896, Box 172, File 3, MMW, N-YHS.

517. Nichols and Gianniny, q-7.

518. "The Roof Fell In," *Richmond Dispatch*, 20 Oct. 1896. "Disaster at the University," *Charlottesville Daily Progress*, 19 Oct. 1896.

519. "Disaster at the University," *Charlottesville Daily Progress*, 19 Oct. 1896.

520. "The Roof Fell In," *Richmond Times-Dispatch*, 20 Oct. 1896.

521. "The University Accident," *Charlottesville Daily Progress*, 20 Oct. 1896.

522. "The Verdict," *Charlottesville Daily Progress*, 23 Oct. 1896.

523. Skinner to White, 29 Oct. 1896, Box 172, File 2, MMW, N-YHS.

524. Skinner to White, 29 Oct. 1896, Box 172, File 2, MMW, N-YHS.

525. Randolph to A. C. Gordon, 31 Oct. 1896, Gordon Papers, File 1896, Univ. of Virginia, Special Collections,

526. White to Richard Grant White, 29 Oct. 1896, SW, Press Book 17, p. 44, Avery Architectural Library.

527. Skinner to White, 24 Oct. 1896, Box 172, File 3, MMW, N-YHS.

528. Charles E. Langley and Co. to Skinner, 28 Oct. 1896, Box 172, File 2, MMW, N-YHS.

529. Skinner to White, 29 Oct. 1896, Box 172, File 2, MMW, N-YHS. It is not known if White authorized this change.

530. Nichols and Gianniny, s-7–8.

531. C. P. Benson, Secretary, Superintendent of Grounds and Buildings of the University of Virginia, 9 Nov. 1896, Box 172, File 1, MMW, N-YHS.

532. Skinner to White, 10 Nov. 1896, Box 172, File 2, MMW, N-YHS.

533. Skinner to White, 12 Nov. 1896, Box 172, File 2, MMW, N-YHS.

534. Skinner to White, 28 Nov. 1896, Box 172, File 2, MMW, N-YHS.

535. Nichols and Gianniny, q-7–8.

536. White to Skinner, 12 Nov. 1896, PR 42, Box 501 M/3, Folder Univ. of Virginia, MMW, N-YHS.

537. Skinner to White, 5 Dec. 1896, Box 172, File 2, MMW, N-YHS.

538. Nichols and Gianniny, q-7–8.

539. Skinner to Haase, 29 Nov. 1896, Box 172, File 2, MMW, N-YHS.

540. Skinner to White, 5 Dec. 1896, Box 172, File 2, MMW, N-YHS.

541. Sanborn Map Co., *Insurance Maps of Charlottesville, Va.*, Dec. 1896.

542. Skinner to Haase, 6 Dec. 1896, Box 172, File 2, MMW, N-YHS.

543. Antonio Patrizios, Pres., National Mosaic Co. to White, 12 Jan. 1897, Box 171, File 2, MMW, N-YHS.

544. Charles E. Langley and Co. to McKim, Mead and White, 15 Jan. 1897, Box 171, File ?, MMW, N-YHS.

545. Charles E. Langley and Co. to McKim, Mead and White, 19 Jan. 1897, Box 171, File ?, MMW, N-YHS.

546. Skinner to White, 17 Jan. 1897, Box 172, File 2, MMW, N-YHS.

547. Skinner to Haase, 28 Jan. 1897, Box 172, File 2, MMW, N-YHS.

548. Skinner to Haase, 8 Feb. 1897, Box 172, File 2, MMW, N-YHS.

549. Skinner to Haase, 15 Feb. 1897, Box 172, File 2, MMW, N-YHS. The sketch plan and section of the third-floor gallery that Skinner enclosed with his letter to Haase have not been located.

550. Skinner to White, 10 March 1896, Box 172, File 2, MMW, N-YHS.

551. Skinner to Robert Robertson, 12 Jan. 1897, RG 515, Box 1, File MMW Correspondence, Univ. of Virginia, Special Collections..

552. Skinner to Mr. Martin, 10 March 1897, Box 172, File 2, MMW, N-YHS.

553. Langley and Co. to White, telegram, 13 March 1897; telegram [17?] March 1897, Box 171, File 2, MMW, N-YHS.

554. Skinner to White, 29 March 1897, Box 172, File 2, MMW, N-YHS.

555. Skinner to White, 6 April 1897, Box 172, File 2, MMW, N-YHS.

556. Randolph to White, 8 April 1897, Box 172, File 2, MMW, N-YHS.

557. "The New University—Her Buildings and Equipment," *Corks and Curls* 10 (1897), 119-120.

558. "The New University—Her Buildings and Equipment," *Corks and Curls* 10 (1897), 119-120.

559. White to Randolph, 16 April 1897, Box 172, File 3, MMW, N-YHS.

560. White to Randolph, 16 April 1897, Box 172, File 3, MMW, N-YHS. Randolph to White, telegram, 22 April 1897, Box 172, File 2, MMW, N-YHS. White had planned to attend that meeting, but it is not clear whether that happened; McKim, Mead and White to Randolph, 16 April, Box 172, File 3, MMW, N-YHS. Skinner to McKim, Mead and White, 19 April 1897, Box 172, File 2, MMW, N-YHS.

561. BV, Minutes, 23 April 1897, pp. 120–124.

562. Randolph to White, 3 May 1897, Box 172, File 2, MMW, N-YHS.

563. Charles E. Langley to White, 4 May 1897, Box 171, File 2, MMW, N-YHS.

564. Piccirilli Brothers to McKim, Mead and White, 3 May 1897, Box 172, File 3, MMW, N-YHS.

565. Piccirilli Brothers to McKim, Mead and White, 12 May 1897, Box 172, File 1, MMW, N-YHS.

566. Piccirilli Brothers to McKim, Mead and White, 20 May 1897, Box 172, File 1, MMW, N-YHS.

567. BV, Minutes, 15 June 1897, p. 144.

568. BV, Minutes, 15 June 1897, pp. 144-145.

569. BV, Minutes, 15 June 1897, pp. 176-177. These minutes include a summary of expenditures of the building committee from 15 Nov. 1895 to15 June 151897. Overall $264,991.60 was spent on the building projects. Relevant to the Rotunda on the itemized list are references to the cost of tearing down the remains of the Annex ($617.34) and the heating of the Rotunda in the winter of 1897 ($244.56)

570. Ross F. Tucker of the Manhattan Concrete Company to McKim, Mead and White, 21 May 1897, Box 171, File 2, , MMW, N-YHS. Manhattan Concrete Co. to Judge Moon, 4 June 1897, Box 171, File 2, MMW, N-YHS.

571. Ross F. Tucker of the Manhattan Concrete Company to McKim, Mead and White, 21 May 1897, Box 171, File 2, MMW, N-YHS. Manhattan Concrete Co. to Judge Moon, 4 June 1897, Box 171, File 2, MMW, N-YHS.

572. [Ross F. Tucker?], Schedule of Defects, University of Virginia, c. 1897, Box 172, File 3, MMW, N-YHS.

573. [Ross F. Tucker ?], Schedule of Defects, University of Virginia, c. 1897, Box 172, File 3, MMW, N-YHS.

574. Ross F. Tucker to McKim, Mead and White, 21 May 1897, Box 171, File 2, MMW, N-YHS. Manhattan Concrete Co. to Judge Moon, 4 June 1897, Box 171, File 2, MMW, N-YHS.

575. Skinner to Mead, 17 June 1897, Box 172, File 17, MMW, N-YHS.

576. Tucker to Mead, 4 June 1897, Box 171, File 2, MMW, N-YHS.

577. W. H. Hoffman to Mead, 6 June 1897, Box 171, File 2, MMW, N-YHS.

578. Moon to Mead, 14 June 1897, Box 171, File 2, MMW, N-YHS. White to Randolph, 28 July 1897, RG-5/5, Mss. 8437, Correspondence of Buildings and Grounds, Box 1, Special Collections, Special Collections..

579. BV, Minutes, 15 June 1897, p. 139.

580. Skinner to Mead, 17 June 1897; 19 June 1897; Box 172, File 2, MMW, N-YHS.

581. Hoffman to Mead, 19 June 1897, Box 171, File 2, MMW, N-YHS. It is not clear from the letter whether this was a meeting of the executive or the building committee.

582. Skinner to Mead, 19 June 1897, Box 172, File 2, MMW, N-YHS.

583. Hoffman to Mead, 22 June 1897, Box 171, File 2, MMW, N-YHS.

584. Skinner to Mead, 17 June 1897; 19 June 1897; Box 172, File 2, MMW, N-YHS.

585. Agreement for General Work and Materials for Rotunda, Physical, Academical, Mechanical and Boiler House Buildings at Charlottesville, Virginia, The Rector and Visitors of the University of Virginia with Ross F. Tucker, July 15, 1897, MMW, N-YHS, Box 3, File ?

586. Agreement for General Work and Materials, Rector and Visitors of the Univ. of Va. with Ross F. Tucker, 20 July 1897, Box 172, File 4, MMW, N-YHS.

587. Southern Electric Co. to Skinner, 8 July 1897, Box 172, File 2, MMW, N-YHS.

588. W. H. Spelman and Co. to McKim, Mead and White, 10 July 1897, Box 172, File 1, MMW, N-YHS.

589. J. Franklin Whitman and Co. to McKim, Mead and White, 22 July 1897, Box 172, File 4, MMW, N-YHS.

590. George Humphrey Yetter, "Stanford White at the University of Virginia: The New Buildings on the South Lawn and the Reconstruction of the Rotunda in 1896" (master's thesis, Univ. of Virginia, May 1980), 77.

591. Ross F. Tucker to McKim, Mead and White, 1 Aug. and 1 Sept. 1897, Box 172, File 1, MMW, N-YHS. Ross F. Tucker, orders for extra work, 1 Sept. 1897– 3 Dec. 1897, Box 172, File 1, MMW, N-YHS. Tucker submitted to the University several orders for extra work from Sept. to Dec., none of which clearly relate to the Rotunda.

592. Skinner to MMW, 30 Sept. 1897, Box 172, File 2, MMW, N-YHS.

593. White to Randolph, 10 Dec. 1897, Box 172, File 4, MMW, N-YHS.

594. BV, Minutes, 10 Dec. 1897.

595. BV, Minutes, 10 Dec. 1897.

596. Ross F. Tucker to Richard M. White, 28 Dec. 1897, Box 171, File 2, MMW, N-YHS.

597. R. White to White, 29 Dec. 1897, Box 172, File 4, MMW, N-YHS.

598. Tucker to R. White, 29 Dec. 1897, Box 172, File 4, MMW, N-YHS.

599. R. White to White, 5 Jan. 1898, Box 172, File 4, MMW, N-YHS.

600. Tucker to McKim, Mead and White, 6 Jan. 1898, Box 171, File 2, MMW, N-YHS.

601. R. White to White, 7 Jan. 1898, Box 172, File 4, MMW, N-YHS. D. Harmon to White, 11 Jan. 1898, Box 171, File 2, MMW, N-YHS.

602. Richard M. White to Stanford White, 26 Feb. 1898, Box 172, File 4, MMW, N-YHS.

603. BV, Minutes, 18 March 1898, p. 268.

604. Skinner to White, 15 Feb. 1898; 20 March 1898, Box 172, File 15, MMW, N-YHS.

605. Thomas H. Carter to McKim, Mead and White, 21 March 1898, Box 171, File 1, MMW, N-YHS.

606. J. E. Phillips to White, 6 Oct. 1898, Box 171, File 1, MMW, N-YHS. The original inquiry for the pipe under the urinals was made in March, and it is evident from this letter written seven months later that the work was still not done. Phillips estimated that the work would cost at least $90.

607. Skinner to White, 25 March 1898, Box 172, File 2, MMW, N-YHS.

608. "Commencement, June 1898," *Alumni Bulletin* (Aug. 1898): 52. James C. Carter was a New York City lawyer who had ties to Virginia. According to his obituary in the *Virginia Law Register*, 11 (May 1905), Carter was "remembered by Virginia lawyers as having several times attended the annual meeting of our State Bar Association, and for a splendid lecture in opposition to certain legal reforms in pleading. After that address but little was ever heard of these reforms in Virginia…all his life he had a high admiration for Virginia and Virginians." Upon his death in 1905, Carter bequeathed $10,000 to the University of Virginia.

609. "Commencement, June 1898," *Alumni Bulletin* (Aug. 1898): 52.

610. "Dedication of the YMCA Building," *Alumni Bulletin* (Aug. 1898): 49.

611. Thomas H. Carter to McKim, Mead and White, 28 July 1898, Box 171, File 1, MMW, N-YHS.

612. Skinner to White, 31 July 1898, Box 172, File 2, MMW, N-YHS.

613. Skinner to White, 31 July 1898, Box 172, File 2, MMW, N-YHS.

614. "The New Buildings," *Alumni Bulletin* (Aug. 1898): 47.

615. "The New Buildings,"*Alumni Bulletin* (Aug. 1898): 47.

616. Stanford White, "The Buildings of the University of Virginia," *Corks and Curls* 11 (1898): 130.

617. John S. Patton, "University of Virginia," *Annual Reports of Officers, Boards, and Institutions of the Commonwealth of Virginia for the Year Ending September 30, 1899* (Richmond: J. H. O'Hannon, 1899), xcvi.

618. Leland M. Roth, *The Architecture of McKim, Mead and White, 1870–1920, A Building List* (New York and London: Garland publishing Co., 1978), 160.

619. Sanborn Map Co., *Insurance Maps of Charlottesville, Va.*, Sept. 1902, Oct. 1907, Nov. 1913.

620. Charles Hancock to E. A. Alderman, 28 Nov. 1921, RG 1/1/2, Box 9, Folder Board of Visitor Minutes, Univ. of Virginia, Special Collections.

621. Sanborn Map Co., *Insurance Maps of Charlottesville, Va.*, 1929.

622. University of Virginia Web site, Maps of the University of Virginia, http://www.virginia.edu/imap, (accessed Oct. 23, 2006). Alderman Library was designed by University alumnus Robert E. Lee Taylor of Baltimore and built between 1936 and 1938. It was named in honor of Edwin Anderson Alderman, the University's first president.

623. BV, Minutes, 11 June 1938, vol. 10, p. 297.

624. BV, Minutes, 11 June 1938, vol. 10, p. 301. The PWA grant was made in a letter to the University by H. T. Cole, Regional Director under the date of 2 Aug.1938, Docket No. Va. 1312-F, Federal Emergency Administration of Public Works.

625. BV, Minutes, 12 Aug. 1938, vol. 10, p. 303. "Fiske Kimball," FactMonster, http://www.factmonster.com/ce6/people/A0827648.html (accessed 21 Nov.2006).

626. Francis L. Berkeley Jr., "Mr. Jefferson's Rotunda: Myths and Realities," *UVa Alumni News* (July–Aug. 1972): 7. William H. Wraneck, "Jefferson Rotunda at University of Virginia Reopening after Second Restoration," *Baltimore Sun*, 14 Jan. 1940. Univ. of Virginia, Office of the Landscape Architect, Binder 3, Rotunda and Lawn.

627. “Restoration Work on Rotunda Opens,” *Charlottesville Daily Progress*, 6 Oct. 1938, Univ. of Virginia, Office of the Landscape Architect, Binder 3, Rotunda and Lawn.

628. BV, Minutes, 21 Jan. 1939. The Vermont Marble Company, the Georgia Marble Company, the Marsteller Corporation, the Vickery Stone Company of Indiana, Bailey Plumbing and Heating Company, Brown and Taylor, and N. W. Martin and Brothers each submitted bids.

629. “Restoration Work on Rotunda Opens,” *Charlottesville Daily Progress*, 6 Oct. 1938, Office of the Landscape Architect, Univ. of Virginia, Binder 3, Rotunda and Lawn.

630. BV, Minutes, 7 April 1939.

631. BV, Minutes, 7 June 1939.

632. BV, Minutes, 19 July 1939.

633. William H. Wraneck, “Jefferson Rotunda at University of Virginia Reopening after Second Restoration,” *Baltimore Sun*, 14 Jan. 1940. Univ. of Virginia, Office of the Landscape Architect, Binder 3, Rotunda and Lawn. BV, Minutes, 3 Oct. 1939, vol. 10, p. 334. Security Steel Company of Avenel, N.J., supplied the metal office furniture and Anderson Bros., Inc., of Charlottesville supplied the wood office furniture.

634. “The Rotunda Dances,” Office of the Landscape Architect, Univ. of Virginia, Binder 3, Rotunda and Lawn.

635. Francis L. Berkeley Jr., “Mr. Jefferson’s Rotunda: Myths and Realities,” *UVa Alumni News* (July–Aug. 1972): 7.

636. Frank E. Hartman to V. L. Chrisler, 2 Dec. 1941; V. L. Chrisler to Frank E. Hartman, 5 Dec. 1941; Roy G. Pratt to Frank E. Hartman, telegram, 28 Dec. 1941; Frank E. Hartman to Roy G. Pratt, 21 February 1942, Univ. of Virginia, Facilities Management Project Files.

637. BV, Minutes, 14 Oct. 1944.

638. BV, Minutes, 8 March 1939; 15 March 1945. The committee appointed in 1939 to investigate the use of the dome room was made up of University president John Lloyd Newcomb, R. Gray Williams, and C. O’Conor Goolrick.

639. BV, Minutes, 7 March 1947.

640. “Communist Paints Sign on Rotunda,” *The Cavalier*, 16 Feb. 1950.

641. BV, Minutes, 4 Nov. 1895, as cited in Francis L. Berkeley Jr., “Mr. Jefferson’s Rotunda: Myths & Realities,” University of Virginia Alumni News (July-Aug. 1972): 7. Nichols and Gianniny, w-4.

642. BV, Minutes, 14 Jan. 1955.

643. BV, Minutes, 12 Feb. 1955.

644. BV, Minutes, 12 Feb. 1955.

645. BV, Minutes, 17 Dec. 1955. The model has been preserved and is kept in a university storage facility.

646. BV, Minutes, 15 Sept. 1956; 7 June 1957.

647. BV, Minutes, 7 June 1957.

648. BV, Minutes, 8 Oct. 1960. At the 8 Oct.1960, meeting of the Board of Visitors the Rotunda project was deferred while it waited for funding. Plans for the northwest wing of the Rotunda

were evidently discussed at the meeting but were not approved by the Building and Grounds Committee at this time. According to the minutes, no details about the plans were given at the meeting.

649. Rotunda Chronology, attachment in BV, Minutes, 17 May 1974, http:// etext.virginia.edu/minutes/bov (accessed 2 2 Aug. 2006).

650. Rotunda Chronology, attachment in BV, Minutes, 17 May 1974, http:// etext.virginia.edu/minutes/bov (accessed 2 Aug. 2006).

651. Rotunda Chronology, attachment in BV, Minutes, 17 May 1974, http:// etext.virginia.edu/minutes/bov (accessed 2 Aug.2006).

652. BV, Minutes, 2 April 1966.

653. Werner K. Sensbach to Ballou and Justice, 29 April 1966, Univ. of Virginia, Facilities Management Project Files.

654. Ballou and Justice, "Composite Typical Section, The Rotunda, University of Virginia," 10 Sept. 1968, no. 21930, Facilities Management, Univ. of Virginia. Ballou and Justice, "Dome Room Half Plan, Composite Plan, The Rotunda, University of Virginia," 10 Sept. 1968, no. 21930, Facilities Management, Univ. of Virginia.

655. Ballou and Justice, "First Floor Plan, Alterations and Restoration of the Rotunda, University of Virginia," 8 May 1969, no. 21924, Facilities Management, Univ. of Virginia.

656. Alteration and Restoration of the Rotunda, University of Virginia, Charlottesville, Virginia, Project Criteria, 8 May 1969. Univ. of Virginia, Facilities Management Project Files.

657. Contract between the Rector and Visitors of the University of Virginia and Ballou and Justice, 29 Dec. 1970. Univ. of Virginia, Facilities Management Project Files.

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# THE ROTUNDA

# LANDSCAPE HISTORY

## LANDSCAPE FEATURES AROUND THE ROTUNDA

The development of the major landscape features around and near the Rotunda occurred in three successive phases or periods. The first begins with the establishment of the University and continues until just before the construction of the Annex in 1851. The second period was sparked by the construction of the Annex and ends with the fire in 1895. The third phase of development begins with the redesign and reconstruction campaign that followed the fire and the treatment of the landscape during the twentieth century. While the restoration campaign carried out in the 1970s completely revamped the Rotunda's interior, little change was made to the landscape at that time.

Throughout the Rotunda's history, changes to its surrounding landscape were made largely to the areas to the east, west, and north of the building. Dozens of views of the central grounds from various periods, whether drawn or photographed, show that the features of the upper Lawn on the south side of the Rotunda changed very little. Views dating from the early and mid-nineteenth century and photographs taken from the 1860s until today all depict the Rotunda free of shrubbery, trees, or visual impediments. These images suggest that there were never plantings immediately in front of the Rotunda or its wings. A walkway ran across the front of the Rotunda at the bottom of the steps beginning in the building's early years, and at various times pairs of lamps were installed on posts on the Lawn, flanking the steps.

Until Stanford White's plans for the landscape were implemented in 1898, the grounds to the north of the Rotunda were essentially utilitarian and only lightly tended, if at all. In the earliest years the areas north of the Rotunda were used for vegetable gardens or athletic exercises by students. The areas just east and west of the Rotunda were covered with patchy grasses and shrubs and a few trees, some naturally occurring, some planted by the proctors or superintendents. The entire area was scarred with footpaths in changing patterns over the years, worn into the field by students forging shortcuts to other areas. Constructed from 1851 to 1854, the Annex covered more than 8,000 square feet of land immediately north of the Rotunda, and massive, fortress-like battered stone walls were constructed around the east, west, and north sides of the

Annex, considerably altering the landscape. After the Annex burned, Stanford White tamed the Rotunda's relatively wild backyard and softened the precipitous drop-off by imposing an orderly Beaux-Arts design. Since then many improvements and changes have been made, including the removal of the stone walls in the late 1950s, but much of the plan has remained the same since 1898.

Perhaps because the Lawn was the landscape focus for so much of the University's history or because the University often had other, more pressing priorities, there is a relative dearth of information on work carried out in the areas surrounding the Rotunda for, in some cases, entire decades of the nineteenth century and for some years in the twentieth century as well.

## THE LAY OF THE LAND, 1817–1851

As evidenced by his plans for the grounds at Monticello, Thomas Jefferson was as interested in landscape design as he was in architecture. Though no record of his plans for landscaping the University's grounds survive, it is clear from a June 12, 1817, letter to Benjamin Henry Latrobe that Jefferson did have definite preferences for the treatment of the Lawn and intended it to be covered with grass and planted with at least some trees. Beyond this, however, little is known about Jefferson's ideas for the central grounds, and even less is known about his intentions for the areas immediately surrounding and just north of the Rotunda.[1]

When Jefferson purchased the 43.75-acre plot of land for the new university in 1817, it was an "impoverished, disused cornfield, rising high and dry by itself and without obstructions in the way of trees and bushes."[2] In the early days of the University the central grounds consisted of the land lying between East and West streets, defined at the north end by the Staunton Pike, now University Avenue, and at the south end by Fry's Spring Road, now Jefferson Park Avenue. East Street is now part of Hospital Drive, and West Street ran from the Staunton Pike along the West Range and connected with what is now part of Stadium Road, southwest of the central grounds.[3]

Views of the University grounds dating from 1826 to 1851 [*see Figures 27, 31*] consistently depict the University from a southerly perspective, looking north up the Lawn and past the flanking pavilions, dormitories, and terraces toward the Rotunda and its wings, which enclose the north end of the Lawn. The publication of so many versions of this same view underscores the fact that the Lawn had become the central landscape feature of the University grounds. No early views of the Rotunda's north facade or of the terrain north of the Rotunda have been located, perhaps because the area had not been developed; only a few scant contemporary descriptions provide clues to its appearance.

In a November 1, 1825, letter to Proctor Arthur S. Brockenbrough, Jefferson indicated that he planned to erect a fence in the open field north of the Rotunda in order to “prevent people’s passing through the grounds” from the north and to thereby direct all traffic approaching the University to the entrance at the south end of the grounds. Three-Notch’d Road, which became the Staunton Pike and is now University Avenue, cut through this field and was a busy thoroughfare even in 1825, when it was the main highway linking Richmond to the agricultural markets of the Shenandoah Valley. In this same letter Jefferson also indicated that he preferred seeding “grass in that North lot to planting trees because they would mask the building & prospect.”[4] At this time the land north of the Rotunda was described as having been a “poor old turned out field” and an “old bald hill” covered with nut-bearing chinquapin bushes and a “jungle-like growth of small false oak.” Open areas were used for students’ athletic exercises.[5]

In October 1825 the Board of Visitors agreed that the faculty should have a vegetable garden and resolved that it be laid out in an area that extended from the north side of the Rotunda down to the Corner, the area along what is now University Avenue and which eventually developed into a bustling commercial district.[6] By the time construction of the Rotunda was completed in 1826, the area north of the Rotunda was probably a barren “morass of mud and construction debris” with only a few trees, the fence, and the vegetable garden.[7]

In the summer of 1827 the executive committee of the Board of Visitors directed the proctor to “plant appropriate ornamental trees to the north of the buildings and the public road.”[8]

In June 1828 the proctor paid $6.00 to one W. Goodman for locust trees, which may have been planted in this area. The two large sycamores that reportedly still stood in this area in the 1960s may date from this era as well.[9] A section of the grounds just north of the Rotunda was enclosed by a “strong and neat post and rail fence” around this time, per Jefferson’s wishes, voiced a few years earlier.[10] Expanded plans for improvement of the University grounds were made in July 1829, and as yet undeveloped land was to be planted with trees and shrubs.[11] In July 1831 the proctor delivered reports to the Board of Visitors on the proposed treatment of the “outer gardens,” as well as the “steps of the Rotunda.”[12] It is not clear whether he was referring to the steps on the south or north side of the Rotunda, or both, or what the treatment entailed.

The fence that Jefferson had mentioned to Brockenbrough in November 1825 created a lane that ran from what Jefferson referred to as “Dinsmore’s corner” to the corner of Hotel B at the north end of the East Range.[13] Dinsmore’s corner is likely a reference to part of the property owned by James Dinsmore, the principal master carpenter who worked on the Rotunda and other buildings at the University. Dinsmore owned land east of the University in the area of today’s intersection of Jefferson Park Avenue and West

Main Street.[14] Jefferson's reference to this lane in his letter to Brockenbrough is the first known mention of the Long Walk, or the path that today runs east from the Rotunda to the Corner.[15] The first views of the University to depict the grounds from the east were not published until the 1850s; an 1851 view clearly shows a lane, defined by fences, extending eastward from the Rotunda.[16] A wood engraving dated 1853–1856 also shows this lane. A steel engraving from 1856 hints at the presence of the lane, while depicting a partially wooded area east of the Rotunda, enclosed by a fence [*Figure 32*].[17]

During the summer of 1844 improvements were made to the Rotunda's immediate environs. In July the University paid laborer David Byars $7.50 for "digging a ditch to drain rotunda lot." The following month Samuel Campbell built a "stone wall around the rotunda lot," for which the University paid him $50.[18] Additional improvements to the drainage system were made later, in August 1857, when the University paid J. O. Daniels $46.75 for "ditching and draining rotunda lot and turnpike road."[19]

Mature paulownia trees that stood "near the Rotunda" as late as the 1960s may date to the mid-1840s, when Maximillian Schele de Vere came to the University as a professor of modern languages and took up residence in Pavilion IV on the East Lawn, where he planted a flower garden interspersed with trees. Today one large paulownia tree still stands at the front of the Rotunda, to the east of the upper terrace. It is known that Schele de Vere planted paulownia trees in his garden, and it is possible that at that time he planted those that were near the Rotunda as well.[20]

## CONSTRUCTION OF THE ANNEX AND MODIFICATION OF THE SURROUNDING LANDSCAPE, 1851–1895

Before construction of the Annex began in July 1851, there was reportedly a porch on the north side of the Rotunda that was approached on either side by long flights of stone steps [*see Figure 30*]. The terrain on this side of the Rotunda then "fell away abruptly; and on the face of the bank thus created, grew a waving mass of Scotch broom," an invasive, densely growing plant.[21]

The Annex extended 155 feet north of the Rotunda and was surrounded on its east, west, and north sides by high stone walls, creating an enclosed forecourt; the north wall had two battered archways. In June 1854, as construction of the Annex was nearing completion, the Board of Visitors reported that "additional work on the embankment around the new building" was needed.[22] That October, when Robert R. Prentis made repairs to the Rotunda steps, he also carried out unspecified work on the embankment, for which he was paid $32.25.[23]

In their history of the University's grounds, Edwin M. Betts and Sylvester O'Grince noted that "from Jefferson's death until 1856 all of the landscape gardening, planting of trees, and the care of the grounds was under the supervision of the Proctor, who had no special training for the work. The landscaping was done haphazardly and the open spaces were crowded with trees and shrubs of all kinds without proper regard for the buildings."[24] For several years during this time no reports were made on landscape work carried out anywhere on the University grounds, nor were reports filed on the condition of the grounds. Though an early 1851 report had indicated that the grounds and buildings were in a "state of repair and preservation," by 1855 the grounds were in a state of neglect. This laxness may be attributed to the University having channeled its resources into completing the Annex.[25]

As the University expanded its facilities, its need for a larger and more reliable supply of water grew. In 1855 the University engaged civil engineer Charles Ellet, of Philadelphia, to devise a plan for piping water to the central grounds from a number of springs, located west of the University grounds and at higher elevations. Around this time the small artificial pond located roughly at what is now the intersection of McCormick Road and University Avenue just northwest of the Rotunda may have been created to act as a reservoir as part of Ellet's system, which included installing water tanks "on top of the Rotunda." Water would be piped from the springs to the pond and "then pumped by steam into the tanks."[26] This pond appears on a map created by Ellet in 1856, as well as in late-nineteenth-century photographs of the grounds. Ellet's 1856 map also indicates the location of a cistern just west of the Rotunda.[27]

The cistern may date to as early as 1827, when such a reservoir was constructed in that area to serve the chemical laboratory in the basement of the Rotunda.[28]

Beginning in the 1850s there are many views of the grounds from the east and others from the west, presumably to showcase the new Annex. In these depictions the scope of the view seldom extends beyond the north portico of the Annex, and only a very few of these views show any part of the landscape at the north end of the grounds. The pond created around this time is evident in one of these views, an 1856 steel engraving. In other views the limited areas shown appear to be open and planted with a few trees, though these may be romanticized representations of the landscape.[29]

To relieve the overworked proctor and bring a semblance of order to the University's landscape, the office of proctor and groundskeeper was divided in 1858, and civil engineer William A. Pratt, an Englishman who had lived in Alexandria and Richmond before coming to Charlottesville, became the University's first superintendent of buildings and grounds.[30] At the meeting of the Board of Visitors at which he was appointed, Pratt presented an elaborate plan for improving the grounds. His plan included creating large parks on the east and west sides of the Rotunda and also to the north. "Stables and other unsightly buildings as well as the professors' gardens between the Rotunda and the Corner" were to be removed.[31] Evidently there was some controversy surrounding the vegetable gardens, but Pratt's plan prevailed, and the "gardens were removed to the area beyond Dawson's Row," at the southern end of the grounds.[32]

In 1858 Pratt felled trees in preparation for a road that was to pass through the ground-level arcade that connected the Rotunda and the Annex. The student body vociferously objected to the plan, and though it was never fully carried out, much of the surrounding "grove" was destroyed in the initial effort of laying out the road.[33] According to an 1858 map made by Pratt, a perimeter road or path encircled the entire central grounds but evidently never went through the connecting arcade. Pratt's map shows a semi-circular walkway extended from the Staunton Pike (University Avenue) up to the arcade between the Rotunda and the Annex and then back down to the pike. A long, undulating path runs west to east across the grounds north of the Rotunda.[34]

Two cisterns, located behind the east and west terrace wings of the Rotunda in the areas that are now the courtyards, appear on Pratt's map as well and on another map from ca. 1870. A third cistern is indicated in the field northwest of the Rotunda, in the area where the pond was located.[35]

From 1858 to 1860 Pratt oversaw the planting of many species of trees, including Norway spruce and European beech, to the north of the Rotunda, as well as in the east and southwest areas of the grounds. Many of the old trees that now shade the area north of the Rotunda are believed to have been planted during this campaign.[36] The surviving sycamores to the west and north of the Rotunda date from Pratt's time, and a large ginkgo tree to the west of the Rotunda is marked as a memorial to him.[37]

Throughout the 1840s, 1850s, and 1860s — except for the years when the grounds were managed by William Pratt — the Lawn was often reportedly in a neglected condition. Time and again fences and gates were erected across the Lawn's south end to keep cattle from grazing on the green and hogs from rooting around, but the fences were not properly maintained, and the animals frequently made their way in. Trees on the Lawn and the Ranges were sometimes vandalized and cut down by rambunctious students and not replaced, leaving unsightly stumps studding the landscape. With the Lawn itself often neglected or mistreated during these decades, even less attention may have been paid to the less visible areas north of the Rotunda.[38]

Throughout much of the Civil War the University shut down the office of superintendent of buildings and grounds in order to cut costs. William Pratt carried out his duties sporadically, as the University could afford to pay him, until the summer of 1866, when the offices of proctor and superintendent were again united, and the University appointed Col. John E. Johnson to fill the position. Johnson was succeeded sixteen months later by Maj. Green Peyton, an "accomplished engineer and skilled financier."[39] In early 1868 Peyton oversaw the planting of new trees throughout the University grounds as well as on the "upper Lawn," near the Rotunda.[40]

An 1870 map of the grounds shows the areas to the east, west, and north of the Rotunda planted with many trees and criss-crossed with walks.[41] A similar arrangement of walks appears on a map dating to 1890.[42]

Over the next few decades the position of proctor and superintendent remained unified, until 1892, when it was again divided and filled by Peyton, as proctor, and adjunct professor William. H. Echols, of the School of Applied Mathematics, as superintendent. The proctorship and superintendency were again united in 1897 under the sole responsibility of Col. Thomas Carter. During these decades, until the reconstruction following the fire in 1895, there is no record of any major work carried out on the landscape immediately surrounding the Rotunda.[43]

In 1879 however, the "sewer in the rear of the rotunda" had been replaced with an "odorless apparatus" at a cost of $265.29.[44] A photograph dating to ca. 1880 shows that two gas lanterns on posts had been installed along the walkway at the foot of the steps on the south side of the Rotunda. A fire-insurance map dating to July 1891 indicates the presence of a well to the northwest of the Rotunda. The well is not depicted on a similar map published in December 1896.[45]

## THE 1895 FIRE AND THE RESULTING MODIFICATIONS TO THE LANDSCAPE, 1896-1905

After fire destroyed the Annex in October 1895, its charred remains were quickly razed and carted away, and once again the area immediately north of the Rotunda was an open space. The landscape scheme presented by McKim, Mead and White included retaining the high stone walls that had surrounded the Annex, filling in the enclosed area, and turning it into a garden [*Figure 69*].[46] In October 1896 Theodore F. Skinner wrote to Stanford White from Charlottesville, urging that the "matter of the treatment of the sunken garden north of the Rotunda should be taken up and settled immediately"; the "bulk of the other grading" associated with the new construction had already been completed. Skinner reminded White that the building committee hoped to "get through with their earth contractors" that fall. Since the enclosed area within the walls was to be filled in and graded, material needed to be hauled to the site at once.[47]

McKim, Mead and White's original landscape plans for the north side of the Rotunda showed a wide flight of stairs leading from the Rotunda portico to an intermediate terrace. From there three separate, narrow flights of steps led down to an elaborate parterre with orthogonal paths laid out around a circular central area.[48]

A simplified design dating from 1898 did away with the elaborate parterre and walkways. The new design, which more closely reflects what was built, included a broad flight of stairs descending from the Rotunda's portico to a terrace from which a single broad flight of steps led down to a garden area. A simplified plan for the garden created a broad utilitarian space: a perimeter walkway defined two planes on either side of a paved central area with a rectangular space for statuary in the center.[49] The two archways in the north side of the rusticated stone wall were filled in, and a section of wall between the arches was removed to make way for a wide flight of stone steps leading down toward University Avenue.[50] According to an 1899 account, the landscape on the north side of the Rotunda was "laid out as a beautiful square, connected by a handsome flight of steps with the north front of the Rotunda, and by a like flight with the grounds on the north, presenting a most imposing view, with its picturesque terraces gradually descending."[51]

The construction of the new north terrace wings and the colonnades that connected them to the south terrace wings created garden courts on the east and west sides of the Rotunda. Stanford White designed these courts with "circular centers" and "axial walks separating four compartmented garden areas."[52]

These features were never completed as planned by White, but the courtyards still have magnolia trees that were planted sometime between 1901 and 1918.[53] A 1902 photograph of the west courtyard shows only a grassy area and no plantings. The 1918 photograph of the same courtyard shows that a gravel path had been laid around the perimeter, surrounding a privet hedge defining a grass center. Three southern magnolia trees are shown, as well as what appears to be a locust tree.[54]

In 1905 the office of proctor and superintendent of buildings and grounds was again split, and William A. Lambeth became superintendent of the University's buildings and grounds, while Thomas Carter remained proctor. In handing off responsibility to Lambeth, Carter submitted the following report regarding work on the walks that had been carried out around the Rotunda during his tenure and proposed work to finish what had been started:

> Granolithic walks north of the Rotunda; 1024 yards can be finished at $1.00 a yard. I recommend that it be done at once, both for economy and for appearance. Afterwards, the walks south of the Rotunda, extending from the residence of Professor Lile on the East Lawn around the Quadrangle to the residence of Professor Fitz-Hugh on the West Lawn, about 1320 yards should follow. The walks were begun in 1895, two years before I entered my duties here, and were laid around the Lawn, only to professor Lile's and to Professor Fitz-Hugh's and the Ranges, and from the Rotunda to the Post Office. They should be continued to Monroe Hill and Dawson's Row and to the Hospital and elsewhere regularly, until fully completed.[55]

## AN EVOLVING LANDSCAPE, 1905–1956

When William A. Lambeth assumed his new position in 1905, both the grounds and buildings were "in need of immediate attention."[56] Lambeth began to make improvements at once, and between 1905 and 1928, when he left the position, he planted 1,500 trees, many of which were transplanted from the surrounding woods or were gifts from individuals and private nurseries. Lambeth also thinned crowded copses of old trees, "which had been planted without proper regard to buildings," thus opening new vistas.[57]

Several important embellishments were made to the terraces on the north side of the Rotunda. Around 1906 two flagpoles, one for the U.S. flag and the other for the Virginia flag, were presented to the University by alumni Thomas F. Ryan and Paul Goodloe McIntire and erected in the "Northern plaza of the Rotunda."[58] The bronze statue of Jefferson, located at the foot of the stairway, was dedicated in 1910. It was the gift of Moses Ezekiel, a distinguished American-born sculptor who lived and worked in Rome; a decade earlier Ezekiel had created a similar statue for the city of Louisville, Kentucky. At the University the life-size, standing figure of Jefferson faces north, holding a scroll representing the Declaration of Independence and surmounting a replica of the Liberty Bell, which is embellished with four allegorical female figures—Liberty, Justice, Religious Freedom, and Human Freedom. The base of the statue is red marble.[59] In 1913 the class of 1910 gave the University a stone sun-dial and two stone benches to place "on the plaza before the north front of the Rotunda." The *Alumni Bulletin* described the arrangement as an "interesting group, with the quaintly carved and inscribed dial standing between the benches, form[ing] a break in the sunny space overlooked by the monument to Jefferson."[60]

Photographs dating to ca. 1914 show that two lamps with globe shades were installed on the south side of the Rotunda, in the place of the earlier lamps. The lamps with the globe shades appear in a 1921 photograph of the Rotunda's south side, but by 1930 they had been removed.

In 1915 William Lambeth proposed that a road be laid out between the pavilions and ranges, cutting in between the foot of the stairs of the north portico and the north court. Lambeth consulted renowned Beaux-Arts architect Henry Bacon, who that year had designed the Senff Gate to the University at the north end of Hospital Drive. Bacon came to Charlottesville that April and inspected the site for the road with Lambeth. Bacon wrote to University President Edwin Anderson Alderman, offering his full support of the plan, and included a sketch of the proposal with his letter. "The proposed road," Bacon wrote, "will not detract from the old character of the buildings, and in these days of interesting sightseeing in automobiles it is most desirable. Many will see under the best conditions the old University group who might not see it if the road is not built."[61]

Lambeth and Bacon's proposed road bisecting the terrace on the north side of the Rotunda was never built. However, a large-scale paving project was undertaken at the University between 1916 and 1922, during which the "alleys and drives between the West Lawn and West Range" were paved with "concrete and brick." "Many new walks and drives" were "laid about the University grounds during the summer" of 1922. The first boxwoods were planted in the terrace to the north of the Rotunda during the 1930s.[62]

In a history of the landscape north of the Rotunda, Jennifer Steen made the following observations on the development of the area during the first three decades of the twentieth century and the lasting effect that those changes have had on the University:

> The monumental stairs and terraces became a Forecourt, a processional space, and a formal entry to the University. When Madison Hall was built in 1905, the axis begun by Stanford White's monumental terraces was completed and strengthened. Today it is so strong that it is difficult to imagine how recently it was created. The new axis effectively split the grove in two, although it took about twenty years for the result to become evident in the mindscape. While the west side remained much the same, the east began to become more open, incorporating more exotic trees and blending into the lawn to the east of Brooks Hall. The Beaux Arts design substantially altered the older patterns of circulation, so that while certain paths which retain their heavy traffic (the Long Walk and the Carr's Hill entrance) have been preserved, the patterns of the area as a whole bear little resemblance to those of the earlier University. In most cases, as paths have fallen out of use, the trees which lined them have been left standing, so that the apparently random plantings which characterize the area at present in fact reflect the traffic patterns of 150 years.[63]

Edwin Betts and Sylvester O'Grince's report on the history of the University's trees and grounds indicates that in the 1960s the only remaining indigenous trees in the area immediately surrounding the Rotunda that predated establishment of the University were "two white oaks, to the east and north front of the Rotunda, near the wall running parallel with University Avenue."[64] The one remaining large white oak was destroyed during a summer storm in 2005.[65]

## REPAIR AND REDESIGN, 1957–1974

In late November 1957 a section of the high, rusticated stone wall along the east edge of the terrace behind the Rotunda collapsed due to heavy rains. University President Colgate W. Darden Jr. discussed improvements to area at a December 1957 meeting of the Board of Visitors and indicated that plans had been worked out by T. K. Fitz Patrick, dean of the University's School of Architecture and a member of the University's

Architectural Advisory Committee. The plans had been approved by the Virginia Fine Arts Commission, and landscape architect Alden Hopkins, of the Williamsburg restoration, advised on the overgrown American boxwood and other shrubbery in the area.[66]

By December 5, 1957, workmen had already begun removing the east and west portions of the stone wall on the north side of the Rotunda. President Darden maintained that an earth terrace wall, rather than the stone wall, was "more in keeping with Jefferson's ideas of landscaping."[67] Elevations and plans dating from between December 1957 and September 1958 show proposed changes to the north approach to the Rotunda, as well the lines of the old stone wall and the proposed new terrace. Brick paving in alternating basket-weave and herringbone patterns was to be installed in the wide walkway connecting the Rotunda's north steps to a rebuilt stairway descending to the new brick terrace. The plans also included new plantings, including holly bushes.[68]

In April 1959 President Darden submitted to the Board of Visitors a proposal for making changes to the north approach to the Rotunda between University Avenue and the newly constructed terraces. The Buildings and Grounds Committee approved the proposed plans for the north approach, but the $9,700 estimate for the work was thought to be too high in light of other needs at the University. If the University were to make changes to the north entrance of the Rotunda, it would have to find a private source of funding.[69]

Funding was quickly secured, and construction of the extension of the brick terrace on the north side of the Rotunda began in mid-July 1959. The *Charlottesville Daily Progress* published the following report on the project:

> The new terrace will reach the low, gray stone wall which runs parallel to Main Street. It will be bisected by a walk, bordered by two large planter beds. Stone benches will be placed on the terrace.
>
> The street opening in the stone wall will be widened to more than 50 feet. Sections of the wall taken down to enlarge the opening will be placed along the edge of the new terrace.
>
> No provisions for parking have been made, but the sidewalk which parallels Main Street will be widened in front of the new terrace to serve as a loading platform.
>
> The terrace will be constructed so as not to injure the large sycamore trees standing between the older terrace and the street.[70]

Plans were made in early 1960 for the installation of a rectangular 15-by-9-foot fountain, which was designed by T. K. Fitz Patrick to honor former President Colgate W. Darden, to be placed in the courtyard east of the Rotunda. The plans called for the interior of the fountain's pool to be paved with mosaic tile and for the edges to be of marble, surrounding a small tazza-form-urn-shaped fountain. Construction of the fountain began in early October 1960. Marble was substituted for the mosaic work. The fountain was completed and dedicated within the year.[71]

## 1975 TO PRESENT

On May 30, 1975, Rector Joseph H. McConnell appointed a special committee to study the feasibility and cost of placing a fountain in the Rotunda's west courtyard, similar to the fountain located in the east courtyard. A second fountain, however, was never installed; instead, in 1978 a brick-paved terrace was added to the courtyard, and magnolia trees were planted. The University faculty dedicated this garden to Edgar F. Shannon, president of the University from 1959 to 1974.[72]

As part of its bicentennial gift to the university, the Garden Club of Virginia created a new garden, called the rotunda forecourt, to the north of the Rotunda in the low area near University Avenue. The design was generated by the Office of University Planning for the garden club. The work included demolishing four rectangular beds with hedges and groundcover, laying new brick paving, installing concrete benches, and planting Japanese holly, Delaware Valley white azaleas, and English ivy in curvilinear beds around the paving.[73] The care of this area is detailed in a memorandum understanding between the University and the Garden Club.[74] In 1981 a sidewalk on the east side of the Rotunda was widened in order to improve access for food-service trucks provisioning large events held in the dome room.[75]

In May 1985 the Buildings and Grounds Committee discussed the long-range plan for the central grounds and hired EDAW, Inc., landscape consultants, for the project.[76] About a year later EDAW prepared a historic central grounds landscape study, which stated that the landscape surrounding the Academical Village had not been administered using the same "thoughtful, comprehensive planning" that had been applied to conserving the University's architectural resources and that "sporadic, ad hoc decisions and the natural processes of growth and decline" had resulted in a gradually deteriorating landscape.[77]

The study recommended that the "overgrown, misshapen magnolias" in the Rotunda's courtyards be replaced with "small deciduous trees" and that the University consider redesigning the Darden memorial fountain "in a manner appropriate with the style and elegance of the Rotunda." Furthermore, the study recommended the removal of the "discordant understory shrubs" on the north side of the Rotunda, as well as the shrubs around the north terraces and the overgrown American boxwood on the "crest of the upper terrace to restore views of the Rotunda from University Avenue." The report noted that it was important to research the history of the north court "to ascertain the significance of the existing earth terrace and condition of the stone retaining walls covered in the 1950s."[78]

On December 9, 1986, the Jeffersonian Restoration Advisory Board wrote to the Board of Visitors, commenting on the landscape study. The advisory board supported the "idea of either removing or redesigning the Darden fountain" but recommended that more study was needed before removing or replacing the magnolia trees,[79] The advisory board felt "strongly that the entire area between the Rotunda and University Avenue" was "in serious need of redesign," arguing that the site offered "inestimable potential as a site of important archaeological evidence" and recommending that a consultant be hired at the earliest opportunity to study the area and make recommendations, addressing all these issues in detail."[80]

During the 1990s several changes were made to the area north of the Rotunda. Grass on the embankment was replaced with mondo-grass groundcover after a lawnmower overturned on the steep banks. Overgrown American boxwood was replaced with dwarf English box, and liriope was planted as groundcover in the courtyards. The long walk was widened once more to accommodate catering trucks. By 1999 the hillside northwest of the Rotunda was very worn from being used as a shortcut by pedestrians between the colonnade on the west side of the Rotunda and the brick walk leading to University Avenue. The Buildings and Grounds Committee therefore proposed that steps and a ramp be built in place of the worn earthen path. The Buildings and Grounds Committee approved this change on June 15, 1999.[81]

## NOTES

***Abbreviations used in notes***

| | |
|---|---|
| AG | Alexander Garrett |
| ASB | Arthur Spicer Brockenbrough |
| JRAB | Jeffersonian Restoration Advisory Board |
| SW | Stanford White |
| TJ | Thomas Jefferson |

1. TJ to Benjamin H. Latrobe, 12 June 1817. Edwin M. Betts and Sylvester H. O'Grince, "Historical Sketch of the Trees and Grounds of the University of Virginia," unpublished manuscript, c, 1961, 24, Univ. of Virginia, Special Collections,. According to Betts and O'Grince, Jefferson purchased one hundred locust trees in 1823, and there were, reportedly in 1830, "double rows of young locust trees, which had been planted on each side of the

lawn." Most views of the University made in the 1830s, 1840s, and 1850s do not show trees on the Lawn, with the exception of one steel engraving showing a view looking north dating from 1856, known as the "double row of trees" print. Another steel engraving from the same year, made of the grounds from the east, also shows the Lawn full of trees, though it is not known if this was just a romanticized view. For a collection of views of the University see William B. O'Neal, ed., *The American Association of Architectural Bibliographers, Papers,* vol. 6 (Charlottesville: Univ. of Virginia Press, 1969).

2. Philip Alexander Bruce cited in Betts and O'Grince, p. 15.
3. Betts and O'Grince, 28.
4. TJ to ASB, 1 Nov. 1825., Jennifer Steen, "The North Rotunda Grove," 4, copy at Office of the Architect, Univ. of Virginia, 1997).
5. Edmund Bacon to Hamilton W. Pierson, as cited in *Jefferson at Monticello* (New York: Scribner's, 1862), 20. Kitty Jones, "an old negro woman" who lived behind the Barringer home, quoted by Dr. Paul Barringer and cited in Betts and O'Grince, 13, 15. Both of these sources are cited in Steen, , 5. Catherine Zipf, "1895 –1904: Stanford White Rebuilds the University," University of Virginia Cultural Landscape Study (Office of the Architect, University of Virginia, 1997), n.p.
6. BV, Minutes, 5 Oct. 1825, cited in Betts and O'Grince, 25.
7. Steen, 5.
8. BV, Minutes, 18 July 1827, cited in Betts and O'Grince, 28.
9. E-mail, Mary Hughes to Mount Ida Press, 19 Feb. 2007. It is worth noting the discrepancy between the documents indicating the presence of trees and the early views of the Lawn, which do not show trees.
10. Betts and O'Grince, 28.
11. Betts and O'Grince, 28.
12. BV, Minutes, 15 July 1831.
13. TJ to ASB, 1 Nov. 1825. K. Edward Lay, "Charlottesville's Architectural Legacy," *Magazine of Albemarle County History*, 46, (May 1988): 29-95. "Dinsmore's corner" is a reference to master carpenter James Dinsmore, who had lived and worked at Monticello, James Madison's Montpelier, and the Upper Bremo plantation until ca. 1818, when he moved to Charlottesville and became the principal master carpenter for Pavilions III, V, and VIII; fourteen dormitories; and, together with John Neilson, the Rotunda and anatomical theatre.
14. E-mail, Margaret M. O'Bryant, librarian, Albemarle Charlottesville Historical Society, to Mount Ida Press, 26 Jan. 2007.
15. Steen, 5. In this report Steen includes the following information about the history of the Long Walk: "The first reference to the walk in student publications appears to come in 1858, when it is called the 'plank sidewalk'; in 1858, however, it was already in disrepair, suggesting the walk was planked by 1850. An 1860 source calls it 'the side-walk from Charlottesville to the university,' and rejoices in its recent repairs. The name 'Long Walk' was in use by 1906, and was probably coined much earlier."
16. University of Virginia from the east, [1851 ?], unsigned lithograph, University of Virginia Collection, in William B. O'Neal, 104.

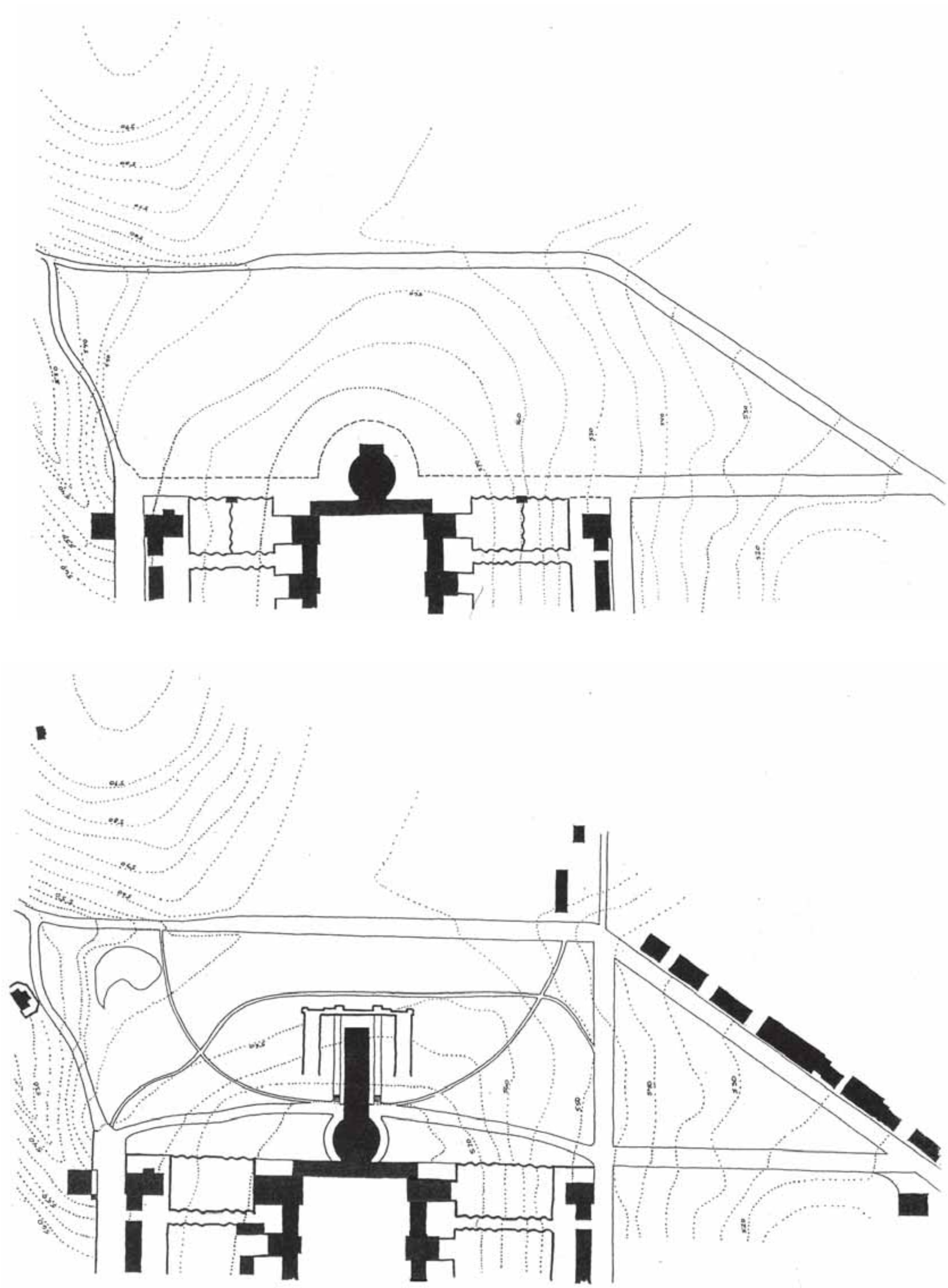
17. University of Virginia from the east, 1853–1856, wood engraving by Porte Crayon, Edwin M. Betts Collection. University of Virginia from the east, 1856, steel engraving printed by H. Weber, Edwin M. Betts Collection. Copies of both engravings appear in William B. O'Neal, 110, 112.
18. *Report of the Rector and Visitors of the University of Virginia, to the President and Directors of the Literary Fund, for the Year Ending June 30, 1845*, 12.
19. *Report of the Rector and Visitors of the University of Virginia, 1858*, 11
20. Betts and O'Grince, 33.
21. Betts and O'Grince, 33.
22. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 4 (New York: MacMillan Co., 1920-22), 23.
23. BV, Minutes, 29 June 1854.
24. *Report of the Rector and Visitors of the University of Virginia, July 1, 1855*, 53.
25. Betts and O'Grince, 35.
26. Betts and O'Grince, 30, 33. According to Betts and O'Grince, "between 1840 and 1847 there was no record of the condition of the grounds."
27. *Report of the Rector and Visitors of the University of Virginia, 1881–82*, 6. In this annual reportthen-proctor and superintendent of buildings and grounds Green Peyton described Ellet's water-supply system, which had been completed twenty-four years earlier.. Peyton noted that Ellet's system was in use from 1858 until 1869, when Peyton "obtained a sanction of the Board" and disconnected the tanks because the Rotunda's walls were being "seriously damaged by this system, and the annual expense was very great." In spite of the threat to the Rotunda but because of the ever-increasing need for more water, Peyton recommended in his 1881–82 report that "new connections" be made with the "disused rotunda tanks, and in refitting the steam-pump, thus keeping the old system as a supplement to the new." The new system included a reservoir that was constructed under Peyton's direction sometime after 1869 "in the mountain at an elevation sufficient to distribute water over our buildings by gravity alone, which was connected with the distributing system by a 4-inch pipe." The steam-pump was refit and the tanks back in use sometime during 1881–82 at a cost of $397.94.
28. Stephen M. Thompson, "A Rain-Fed Cistern in the Poe Alley Courtyard," Rivanna Archaeological Services, 2006, 20, 22.
29. Thompson, 16. Thompson cites Frank Edward Grizzard Jr., "Documentary History of the Construction of the Buildings at the University of Virginia, 1817–1825" (PhD diss., Univ. of Virginia, Aug. 1996), ch. 11, note 793. In this note, Grizzard states that "John Smith made a cistern for the chemical laboratory earlier this year [1827], as evidenced by a receipt for $2.50 that Reuben Maury signed for Smith on 27 February 1827, which is in the loose receipts for 1827 in ViU:PP."
30. University of Virginia from the east, 1853–1856, wood engraving by Porte Crayon, Edwin M. Betts Collection; University of Virginia from the east, 1856, steel engraving printed by H. Weber, Edwin M. Betts Collection; University of Virginia from the east, 1856, steel engraving by J. Serz, University of Virginia Collection; University of Virginia from the west, 1856, lithograph, E. Sachse and Co., in William B. O'Neal, 110, 112, 114, 116.

31. Betts and O'Grince, 33, 35.
32. Betts and O'Grince, 36. E-mail, Mary Hughes to JGWAA, 9 April 2007.
33. Betts and O'Grince, 37.
34. Yetter, 11. Betts and O'Grince, 39–40.
35. Plan of University, Cleared Land, 1858, Mss. 4527, neg. no. 35-7-G. Univ. of Virginia, Special Collections,
36. Thompson, 3, 25.
37. Betts and O'Grince, 48. "University of Virginia Historic Preservation Framework Plan," 2006, p. 5, http://www.virginia.edu/architectoffice/pdf/UVA_HPFP_2006_WEB.pdf (accessed 3 Jan. 2007).
38. E-mail, Mary Hughes to JGWAA, 9 April 2007.
39. Betts and O'Grince, 30–53.
40. Betts and O'Grince, 52.
41. Betts and O'Grince, 53.
42. Plat of the University of Virginia, 1870, Univ. of Virginia, Special Collections.
43. Charlottesville Land Company, map, 29 Nov. 1890, Mss. 5660, Univ. of Virginia, Special Collections.
44. Betts and O'Grince, 58.
45. *Report of the Rector and Visitors of the University of Virginia, 1879*, pp. 23-24.
46. Sanborn Map Co., *Insurance Maps of Charlottesville, Va.*, July 1891 and Dec. 1896.
47. "The Work of the Restoration,"*Alumni Bulletin* (Feb. 1896): 135–36.
48. Skinner to White, 17 Oct. 1896, Box 172, File 2, MMW, N-YHS. Stanford White, "The Buildings of the University of Virginia," *Corks and Curls* 11 (1898): 128. BV, Minutes, 15 June 1897. Significant grading was done in order to carry out White's plans for the new buildings at the southern end of the Lawn: "The green drops down to its present finish, and to the eye the new line of buildings is of but slightly more importance in height and character than the old buildings surrounding the old Lawn. This has been accomplished by grading and by a tremendous fill of earth — nearly thirty feet in height — at the end of the Lawn." By June 15, 1897, $6,883.74 had been spent on grading the "New Lawn."
49. McKim, Mead and White, Plan of the Rotunda and Garden, University of Virginia, 7 April 1896, Univ. of Virginia, Special Collections.
50. McKim, Mead and White, Revised Drawing of the Garden Rear of the Rotunda, 1898, Univ. of Virginia, Office of the Landscape Architect, Binder 3, Rotunda and Lawn. Timeline History of Rotunda Courtyards, from Mary Hughes, Office of the Architect, Univ. of Virginia.
51. Yetter, 82.
52. From University of Virginia, *Manual of Information* (Roanoke: 1899), quoted in Paul B. Barringer, *University of Virginia: Its History, Influence, Equipment and Characteristics* (New York: Lewis Publishing Co., 1904), 112. In early February 1897 Theodore Skinner, who was McKim, Mead and White's on-site project manager, requested that the New York office send prints of the "new north garden steps and fountains" to contractor Ross F. Tucker of the Manhattan Concrete Company so that he could give an estimate for the work. By July

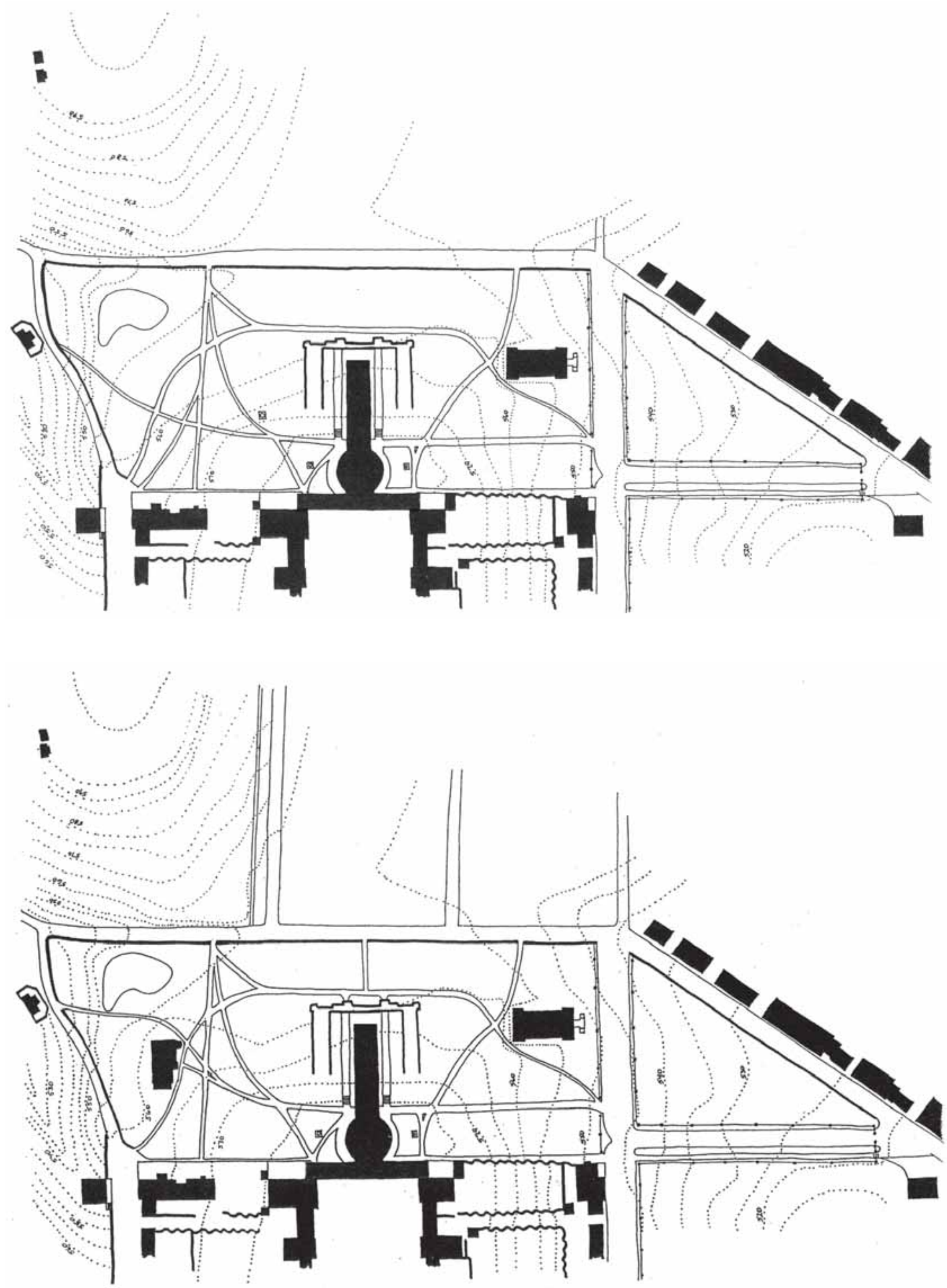
1897 the new specifications had been drawn up, and the "garden steps" at the Rotunda were removed from the plan, allowing a reduction of $526. By October 1, 1897, $475.15 had been spent on the "Rotunda Garden." Skinner to Haase, 8 Feb. 1897, Box 172, File 2, MMW, N-YHS. Ross F. Tucker to McKim, Mead and White, 8 July 1897, Box 171, File 2, MMW, N-YHS. A Classified Statement of the Expenditures of the Building Committee from the 16th Day of November, 1895 to 1st October 1897, RG 5/5, Box 1, Folder 1897–A-H, Univ. of Virginia, Special Collections.

53. Yetter, 82.
54. Betts and O'Grince, 58. E-mail, Mary Hughes to Mount Ida Press, 19 Feb. 2007.
55. Timeline History of Rotunda Courtyards.
56. BV, Minutes, 1905, quoted in Catherine Zipf, , n.p.
57. Betts and O'Grince, 58.
58. Betts and O'Grince, 62–63. Though William Lambeth's hand could be seen throughout the grounds, he focused his efforts in particular on the landscape in and around the East and West ranges and on the grounds around Madison Hall.
59. Philip Alexander Bruce, *History of the University of Virginia 1819-1919*, vol. 5 (New York: MacMillan Co. 1920-22), 320.
60. Mary C. Myers, "Ezekeil's Statue of Jefferson," *Alumni Bulletin* 3 (Aug. 1910), 361-362. Ellen Kathleen Daugherty, unpublished study of history statuary at the University of Virginia commissioned by the Public Art Committee, 2001, entry for Moses Jacob Ezekiel; copy provided by Mary Hughes.
61. *Alumni Bulletin* (July 1913): 384.
62. Henry Bacon to Edwin A. Alderman, 17 April 1915, Univ. of Virginia, Office of the Landscape Architect, Binder 3, Rotunda and Lawn. Thompson, 29.
63. *College Topics*, 14 Sept. 1977, p. 7 and *Alumni News*, Sept. 1922, p. 34, cited in Thompson, 30. E-mail, Mary Hughes to JGWAA, 4 April 2007.
64. Steen, 14. BV, Minutes, 12 Nov. 1948. "Restored West Pavilion Gardens Turn 50," Inside UVa Online, Aug. 19–25, 2002, http://www.virginia.edu/insideuva/2002/14/gardens.html (accessed 31 October 2006). In November 1948 the Garden Club of Virginia pledged to donate the funds collected from its Garden Club Week to the University for the "restoration of the walls and gardens set forth in the plan shown on the engraving done for Mr. Jefferson by Mr. Maverick in 1822 and 1825." Landscape architect Alden Hopkins, of Historic Williamsburg, was selected in 1948 by the club to restore the University's gardens. He oversaw the work until his death in 1960, and the work was completed by his assistant, Donald Parker. It does not appear that any of this work was related to the Rotunda, but rather focused on the range gardens and repair to the serpentine walls.
65. Betts and O'Grince, 12.
66. E-mail, Mary Hughes to Mount Ida Press, 19 Feb. 2007.
67. BV, Minutes, 14 Dec. 1957. "Changes in Landscaping Are Started at University," *Richmond Times-Dispatch*, 5 Dec. 1957.
68. "Changes in Landscaping Are Started at University," *Richmond Times-Dispatch*, 5 Dec. 1957.

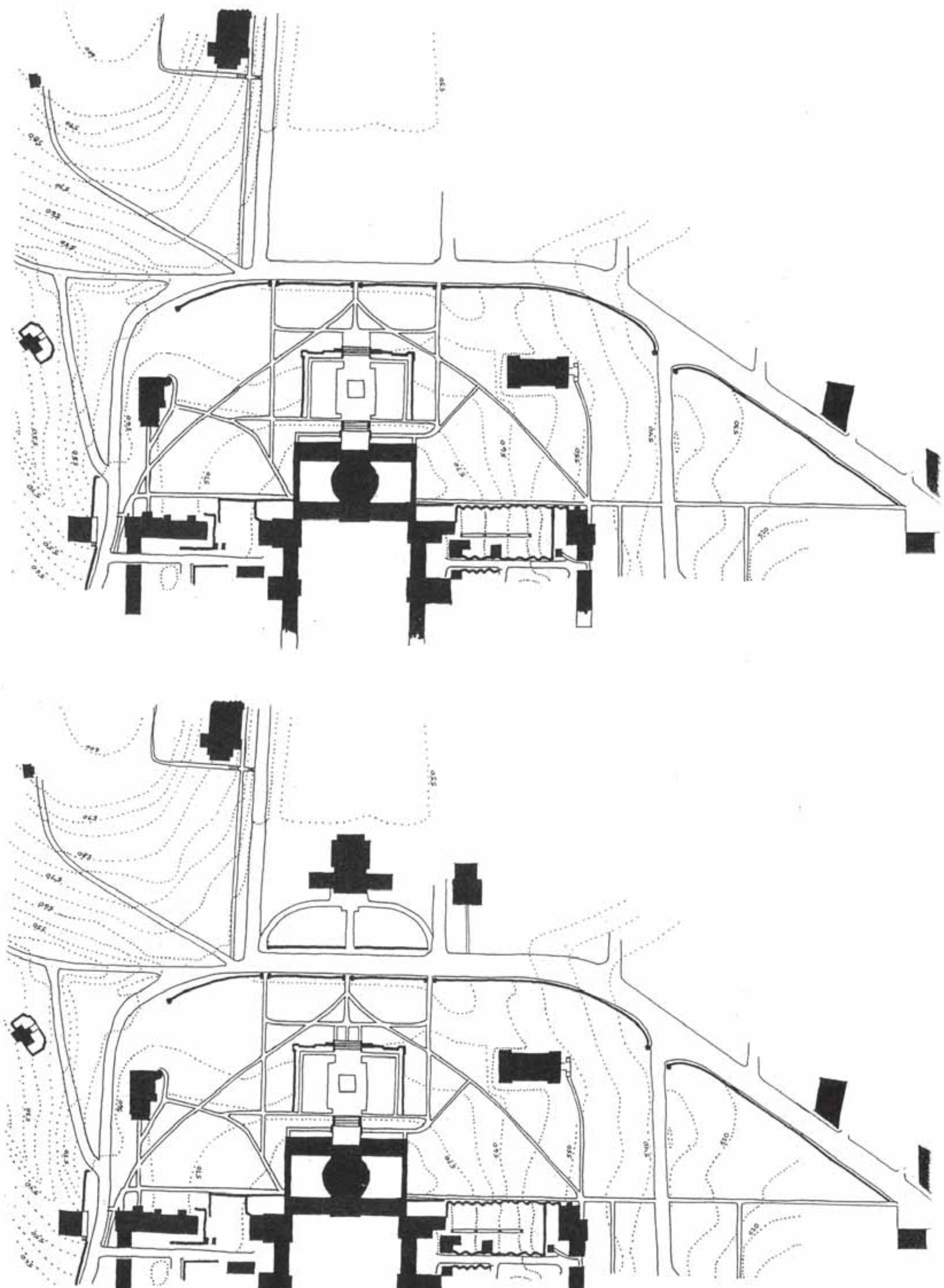
69. Proposed Changes, North Approach Rotunda, Dec. 30, 1957, and Jan. 20, 1958, Univ. of Virginia, Office of the Landscape Architect, Binder 3, Rotunda and Lawn. Brick Terrace, North Approach Rotunda, Sept. 2, 1958, no. 21992, Univ. of Virginia Special Collections.
70. BV, Minutes, 11 April 1959; 13 June 1959; 7 Oct. 1959.
71. "Rotunda Terrace to Be Extended," *Charlottesville Daily Progress*, 11 July 1959.
72. Benjamin P. Ford, "Archaeological Mitigation Adjacent to the Cryptoporticus, University of Virginia, Rotunda Access Project," Rivanna Archaeological Consulting,2001, p. 10. "Foundation Construction Begins," *Charlottesville Daily Progress*, 4 Oct. 1960.
73. BV, Minutes, 30 May 1975, http:// etext.virginia.edu/minutes/bov (accessed 2 Aug. 2006). The committee was composed of Visitors Lawrence Lewis Jr., C. Waller Barrett, and George C. Palmer II. Ford, p. 10.
74. Office of University Planning for Garden Club of Virginia, Plans of Rotunda Forecourt, July-Oct. 1976, Univ. of Virginia, Facilities Management Resource Center.
75. E-mail, Mary Hughes to Mount Ida Press, 19 Feb. 2007. Conversation with Mary Hughes, 11 July 2007.
76. Report of the Buildings and Grounds Committee, 8 Oct. 1981, p. 3, RG-1/1/3, Box 12, Folder Oct. 1981–June 1982, Buildings and Grounds Committee Minutes, Univ. of Virginia, Special Collections.
77. Report of the Buildings and Grounds Committee, 8 Oct. 1981, p. 3, RG-1/1/3, Box 12, Folder Oct. 1981–June 1982, Buildings and Grounds Committee Minutes, Univ. of Virginia, Special Collections.
78. Report of the Buildings and Grounds Committee, 31 May 1985, p. 3, RG-1/1/3, Box 12, Folder 1984–1985, Buildings and Grounds Committee Minutes.
79. Report of the Buildings and Grounds Committee, 31 May 1985, p. 3, RG-1/1/3, Box 12, Folder 1984–1985, Buildings and Grounds Committee Minutes.
80. EDAW, Inc., University of Virginia Historic Central Grounds Landscape Study, c. 1986, i.
81. EDAW, University of Virginia Historic Central Grounds Landscape Study, ii.
82. JRAB to the Board of Visitors, 9 Dec. 1986, RG-1/1/3, Box 13, Folder 1988–1989, Buildings and Grounds Committee Correspondence, Univ. of Virginia, Special Collections.
83. JRAB to the Board of Visitors, 9 Dec. 1986, RG-1/1/3, Box 13, Folder 1988–1989, Buildings and Grounds Committee Correspondence, Univ. of Virginia, Special Collections.
84. E-mail, Mary Hughes to JGWAA, 4 April 2007. Report of the Buildings and Grounds Committee, 15 June 1999, RG-1/1/3, Box 16, Folder 1997–2000, Buildings and Grounds Committee Minutes, Univ. of Virginia, Special Collections.



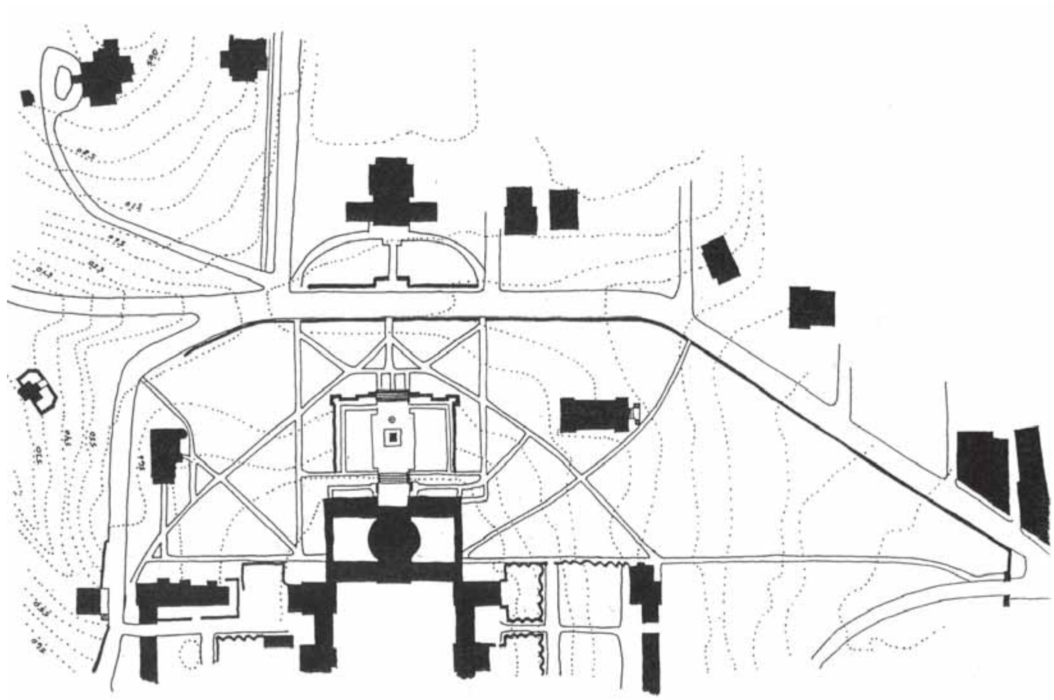
*Site plans, 1826 (top) and 1856 (bottom). Sketches by Jennifer Steen, 1997; revised by JGWA, 2007. [Office of the University Landscape Architect, UVA]*

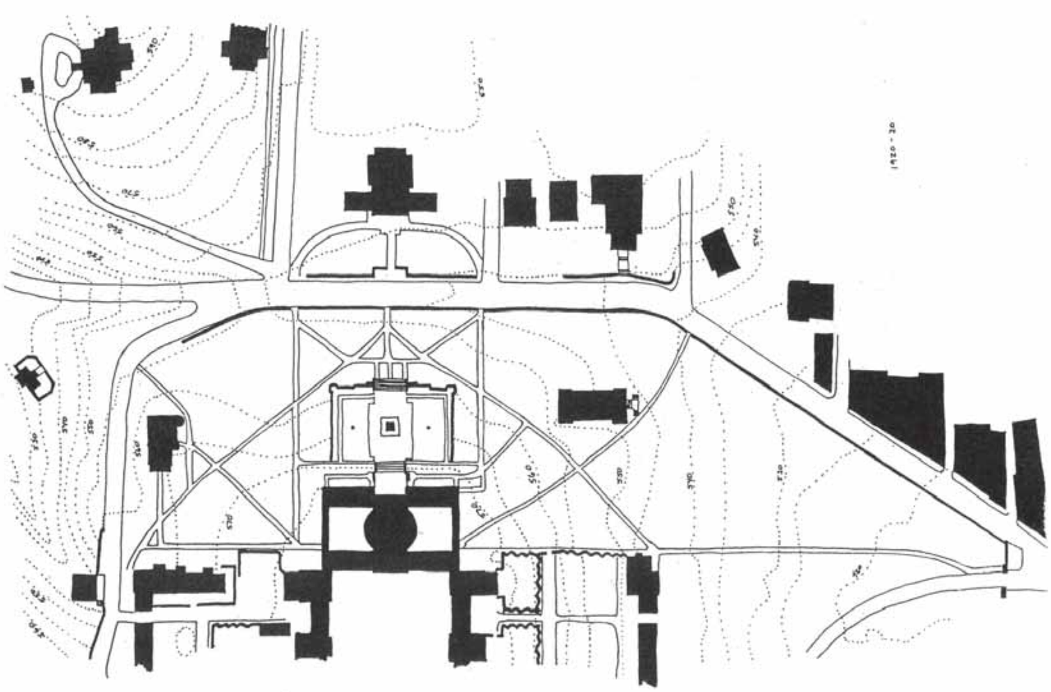


*Site plans, 1876 (top) and 1889 (bottom). Sketches by Jennifer Steen, 1997; revised by JGWA, 2007. [Office of the University Landscape Architect, UVA]*

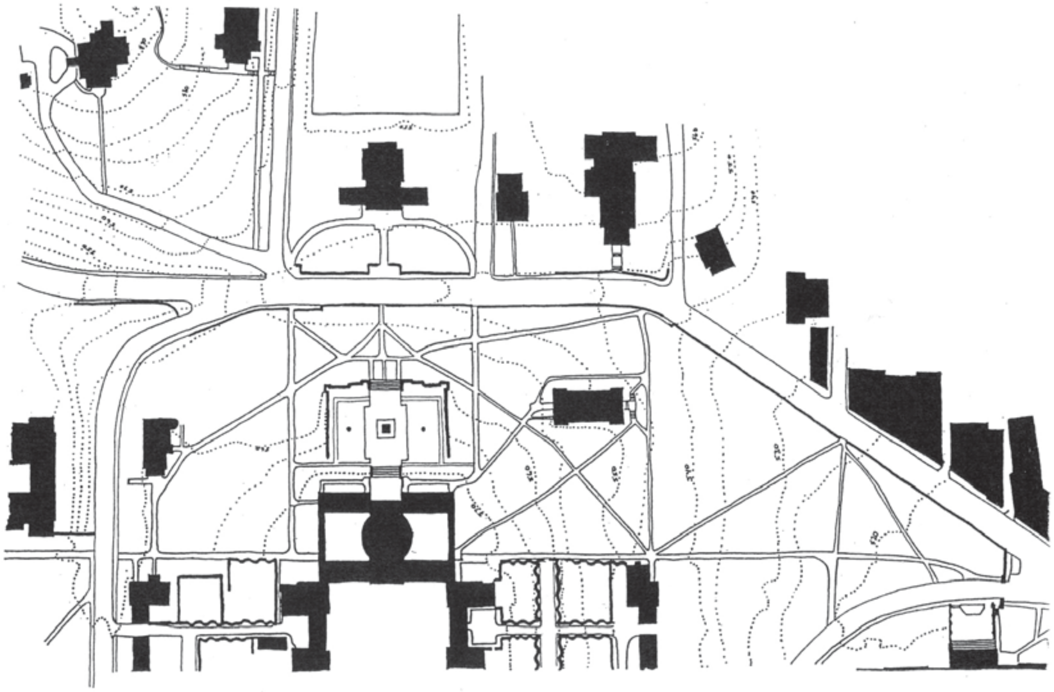


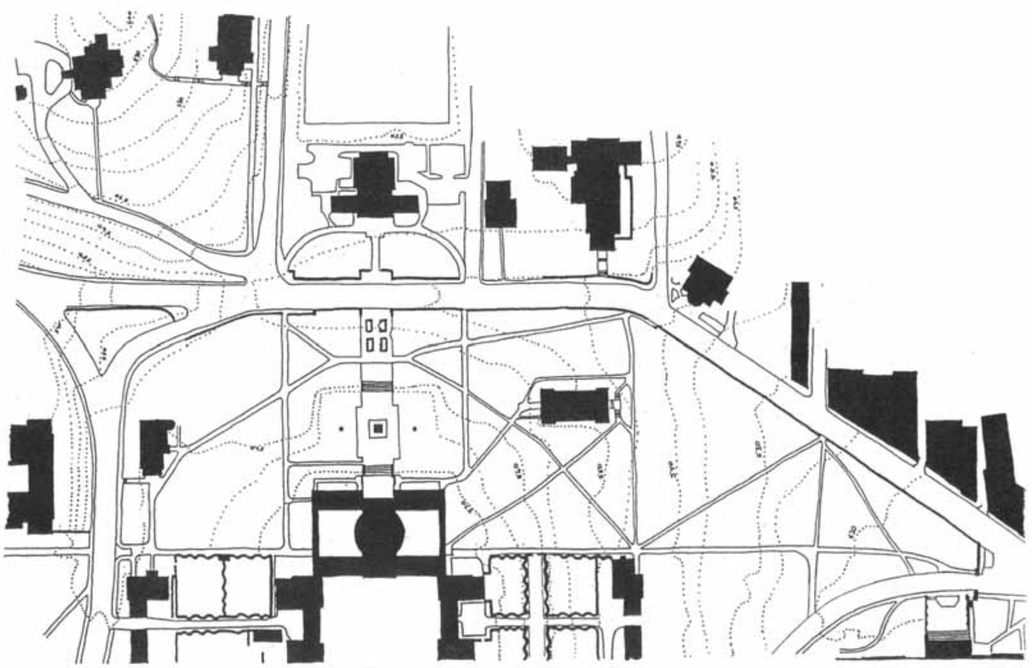
*Site plans, 1898 (top) and 1905 (bottom). Sketches by Jennifer Steen, 1997. [Office of the University Landscape Architect, UVA]*



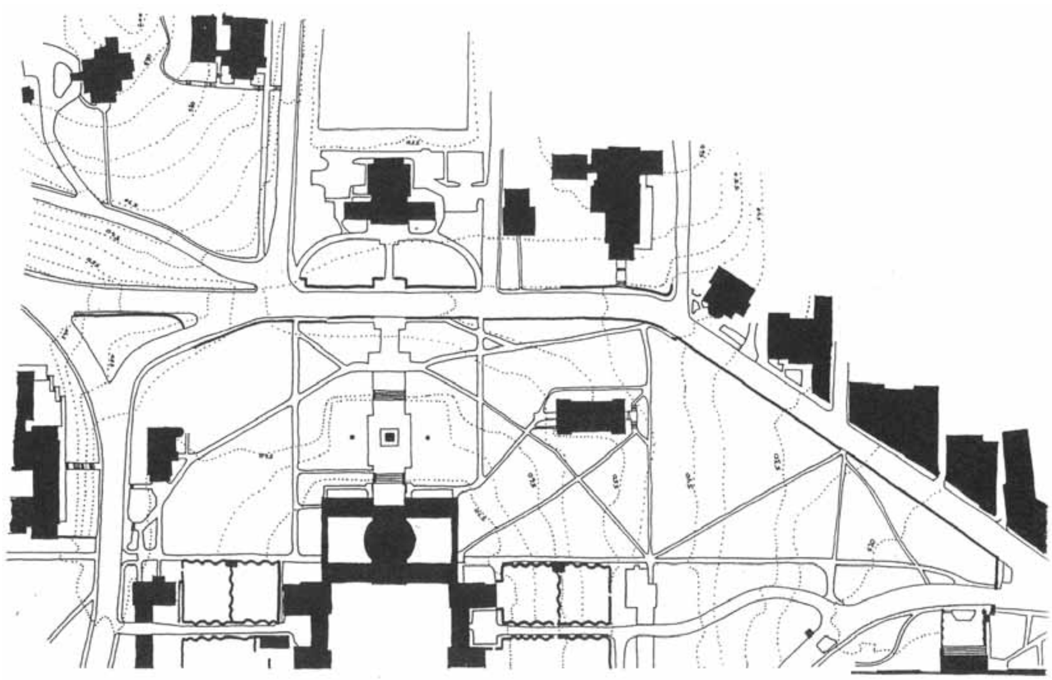


*Site plans, 1910-1920 (top) and 1920-1930 (bottom). Sketches by Jennifer Steen, 1997. [Office of the University Landscape Architect, UVA]*





*Site plans, 1930-1940 (top) and 1957-1960 (bottom). Sketches by Jennifer Steen, 1997. [Office of the University Landscape Architect, UVA]*



*Site plan, 1976-1996. Sketch by Jennifer Steen, 1997. [Office of the University Landscape Architect, UVA]*

THE ROTUNDA

# ROTUNDA/LANDSCAPE CHRONOLOGY

The following chronology is a summary of the Rotunda and landscape histories. In comparing the two narratives, it appears that work on the landscape around the Rotunda has only correlated with work on the Rotunda during major building campaigns: the stone rampart was constructed with the Annex; the Annex was torn down and the north portico and terraces constructed after the 1895 fire; and the Garden Club of Virginia extended the north terraces to University Avenue in 1976, at the same time as the reconstruction of the Rotunda interior.

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| May 1817 | Board of Visitors approves purchase of land for the college and adopts Jefferson's layout. | |
| July 1817 | Latrobe sends Jefferson a sketch for the Rotunda and Lawn. | |
| January 1819 | The Virginia House of Delegates and then the Senate pass legislation stipulating that Central College be the site of the new university. | |
| 1819??-1821 | Jefferson prepares floorplans, elevations, etc. for Rotunda. | |
| 1823 | Shell of Rotunda completed; walls to settle in preparation for dome. | |
| March 1824 | Brockenbrough wrote Jefferson that Dinsmore and Neilson had "proceeded to purchase scantling and have framed the upper gallery floor of the library." | |
| March 7 1825 | University opens. | |

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| October 1825 | | Board of Visitors agree to a faculty vegetable garden laid out in area extending from north side of Rotunda to the Corner. |
| November 1, 1825 | | Jefferson writes Brockenbrough. Letter states that Jefferson plans to erect fence in open field north of Rotunda, directing all traffic through south end of the grounds;Jefferson prefers grass to the North of the Rotunda, as trees would obscure the buildings. |
| July 4 1826 | Jefferson dies | |
| 1826-1827 | Rotunda opens as library; interior completed. | |
| 1827-1828 | Clock and bell arrive and are installed. | |
| 1827 | Iron railing installed at east and west ends of south portico to prevent access to the south wing roofs. | Board of Visitors request planting of ornamental trees "to the north of the buildings and the public road." |
| 1828 | Faculty recommends that heating stoves be installed in lecture rooms. | A section of grounds north of the Rotunda enclosed by a post and rail fence. |
| 1829 | Fireplace in chemical laboratory to be modified to improve the draught. | |
| 1832 | South portico steps constructed | |
| 1837 | Board of Visitors direct that marble pavement to be laid in south portico. | |
| October, November 1838 | New bookcases installed in library. | |
| 1840 | Glass and tin lantern installed over the skylight. | |
| 1841-42 | South wings enclosed and new lecture rooms created. New hipped roofs installed over wings. | |

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| July 1851-1854 | Construction of Robert Mills' Annex. | Stone rampart constructed. |
| 1853-1854 | Rotunda steps repaired and reset. | |
| 1854 | Water tanks installed in northwest and northeast corners of Rotunda. | |
| 1855 | | Artificial pond northwest of the Rotunda may have been created at this time to act as a reservoir as part new water system. |
| 1858 | Cisterns constructed "on either side of the Rotunda." | William A. Pratt becomes University's first superintendent of buildings and grounds. Plans made for two large parks east and west of ranges. Stables and professors' gardens between Rotunda and the Corner to be removed.<br><br>1858 Pratt map shows a semi-circular walkway extending from Staunton Pike (University Avenue) up to the arcade between the Rotunda and the Annex and then back down to the pike. Two cisterns behind the east and west terrace wings of the Rotunda, and a third cistern in the field northwest of Rotunda, also shown. |
| 1857 | William Pratt suggests that two wings be added to the Annex. | |
| 1858-1860 | | Norway spruce and European beech planted north of the Rotunda, and trees planted in east and southwest areas of grounds (some of which survive). |
| 1860 | Lantern removed from oculus of dome. | |
| April 1861 | Confederate flag raised over Rotunda. | |
| 1861-1865 | Rotunda and other University buildings conscripted for use as hospital space. | |

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| 1870 | Sections of Decayed cornice replaced. | 1870 map shows areas east, west, and north of the Rotunda planted with many trees and criss-crossed with walks. |
| 1873 | Pipes installed on roof to prevent overflow of water tanks. | |
| 1874 | Gas pipes laid in Dome Room | |
| 1880 | | Photograph shows two gas lantern fixtures on posts at foot of south steps. |
| 1882 | Tanks above Rotunda refilled and new connections made; affiliated steam-pump refitted. | |
| 1884-1885 | Sewers and new water supply constructed, included reservoir. | |
| 1888 | Electric lights installed on the University grounds and in its public buildings and dormitories. | |
| July 1891 | | Sanborn map shows a well northwest of the Rotunda (the well does not appear on the December 1896 Sanborn map). |
| October 27, 1895 | Rotunda and Annex destroyed by fire. | With Annex demolished, area north of Rotunda again an open space. |
| 1896 | McDonald Brothers prepare documents for reconstruction of the Rotunda; reconstruction of southeast and southwest wings begins. | |
| 1896 | McKim Mead & White hired to reconstruct Rotunda and to design buildings at south end of Lawn. | McKim Mead and White propose a series of terraces, a parterre, and octagonal paths for the area north of the Rotunda. Symmetrical formal paths proposed for the east and west courtyards. |
| May 1896-June 1898 | Reconstruction of Rotunda | Construction of the new north terrace wings and the colonnades creates garden courts on the east and west sides of the Rotunda; no formal landscaping completed in the courtyards. Rampart wall retained and filled in. Simplified plan for |

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| | | area north of the lawn results in steps leading from north portico to a north terrace. |
| October 1896 | Section of northeast wing collapsed | |
| 1902 | | 1902 photograph of the west courtyard shows only a grassy area and no plantings. |
| 1905 | | Granolithic walk had been laid from Rotunda to post office. |
| 1906 (circa) | | Two flagpoles (one for the US flag, and one for Virginia flag) donated and erected on north lawn. |
| 1910 | | Moses Ezekiel statue of Jefferson placed on north terrace. |
| 1913 | | Sun-dial and two stone benches donated by class of 1910 and placed on north lawn. |
| 1916-1922 | | "Alleys and drives between the West Lawn and West Range" paved with "concrete and brick." |
| 1918 | | 1918 photograph of the west courtyard shows that gravel path around perimeter surrounding a privet hedge defining a grass center. Three magnolia trees are shown as well as what appears to be a locust tree. |
| 1921-1922 | Heating system installed in Rotunda | |
| 1930s | | First boxwoods planted in the terrace to the north of the Rotunda. |
| 1938 | Library collection moved to Alderman Library | |

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| 1938 | University applies for federal Public Works Administration grant for improvements to the Rotunda; architect Stanislaw Makielski prepares plans of the northwest, northeast, and southwest wings. | |
| 1938-1939 | Marble steps and paving in north and south porticos replaced; wing balustrades replaced with | |
| January 13, 1955 | Professor Frederick D. Nichols meets with Buildings and Grounds Committee of the Board of Visitors, proposing restoration of Rotunda to Jefferson's design. | |
| November-December 1957 | | Stone rampart wall dismantled. |
| 1959 | | Brick terrace to north of Rotunda extended to sidewalk near Main Street. |
| 1960 | | Fountain installed in east courtyard to honor Colgate W. Darden. |
| September 25, 1965 | Rotunda Restoration Committee appointed. | |
| December 20, 1965 | Rotunda designated as a National Historic Landmark. | |
| December 29, 1970 | The University enters into contract with Ballou and Justice. | |
| 1971 | Ballou and Justice prepare full set of drawings for restoration of Rotunda. | |
| 1973 | McKim, Mead & White interior demolished. | |
| 1976 | Restoration of the Rotunda completed. Dedication held on April 13, 1976, Thomas Jefferson's 23rd birthday. | The Garden Club of Virginia donates the Rotunda "forecourt," extending north terraces to University Avenue. Work includes demolishing four rectangular beds with hedges and groundcover, laying new brick paving, installing concrete benches, and planting Japanese holly, |

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| | | Delaware Valley white azaleas, and English ivy in curvilinear beds around the paving. |
| 1977 | Glass doors installed in ground floor and main floor south entrances. | |
| 1978 | | West courtyard paved with brick and dedicated to Edgar F. Shannon. |
| 1981 | | Sidewalk east of Rotunda widened for food-service trucks. |
| 1984 | Terraces above wings rebuilt. | |
| December 1987 | University of Virginia, together with Monticello, added to World Heritage List. | |
| 1990s | | Grass on embankment north of the Rotunda replaced with mondo-grass groundcover; American boxwood replaced with dwarf English box. Lariape planted as groundcover in east and west courtyards. Long Walk widened again to accommodate catering trucks. |
| 1992 | Office of Architect of the University officially established. | |
| 1998 | Three access ramps installed: one at the southwest corner, one on the south side between Pavilion I and the south steps of the Rotunda, and one at the southeast corner. | |
| Spring 1998 | Stone paving of terraces above southwest wing replaced. Steel-and-brass guardrails installed at each side of the main stair leading from the Rotunda deck to the Lawn level. | |

| | ROTUNDA | LANDSCAPE |
|---|---|---|
| 1999 | | Steps and ramp to be built in place of worn earthen path on hillside northwest of Rotunda. |
| 2000 | Plinth beneath southwest pilaster in south portico removed and replaced; and 1865 two-cent piece and 1879 one-cent piece found beneath plinth. | |
| 2000-2003 | Improvement of Rotunda decking. | |
| 2005 | Improvement of Rotunda decking. | Only remaining indigenous tree in the area (large white oak) destroyed during storm. |
| 2006-2007 | Historic Structure Report prepared. | |

THE ROTUNDA

# HISTORIC IMAGES

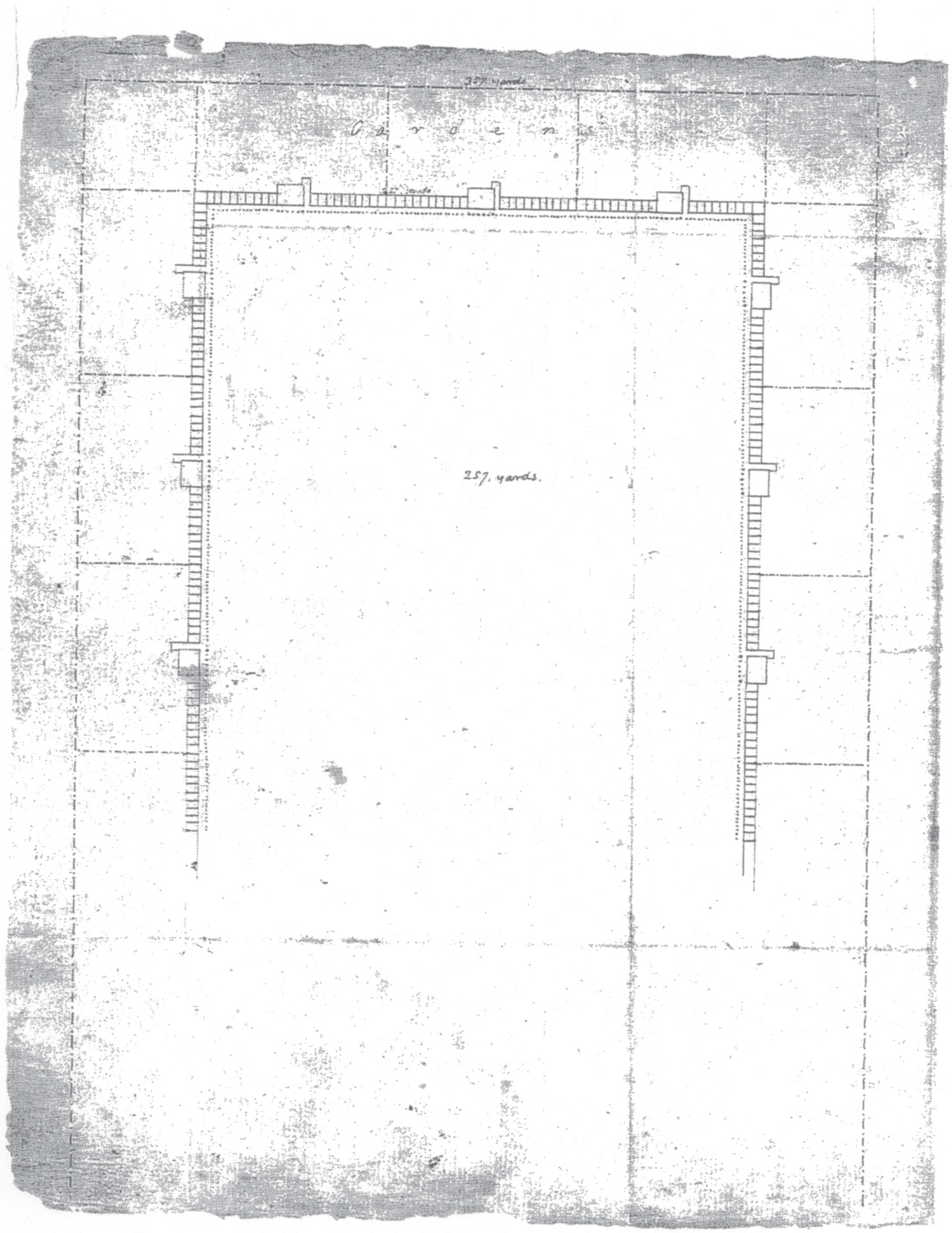



*Figure 1. Jefferson drawing showing his idea for the Academical Village, August 1814. [Jefferson Papers]*

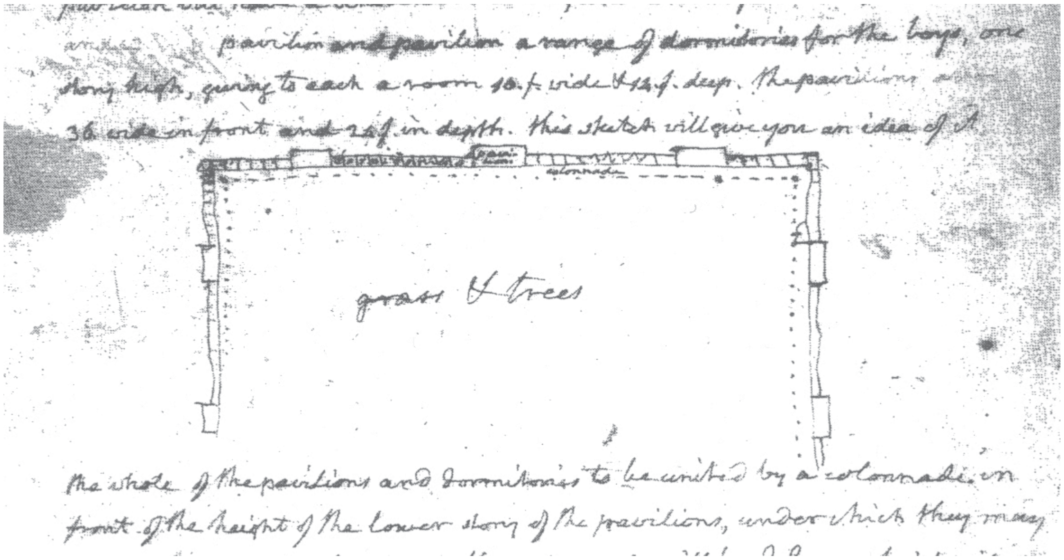



*Figure 2. Jefferson sketch of the Lawn, May 9, 1817, in a letter sent to William Thornton. [Jefferson Papers]*

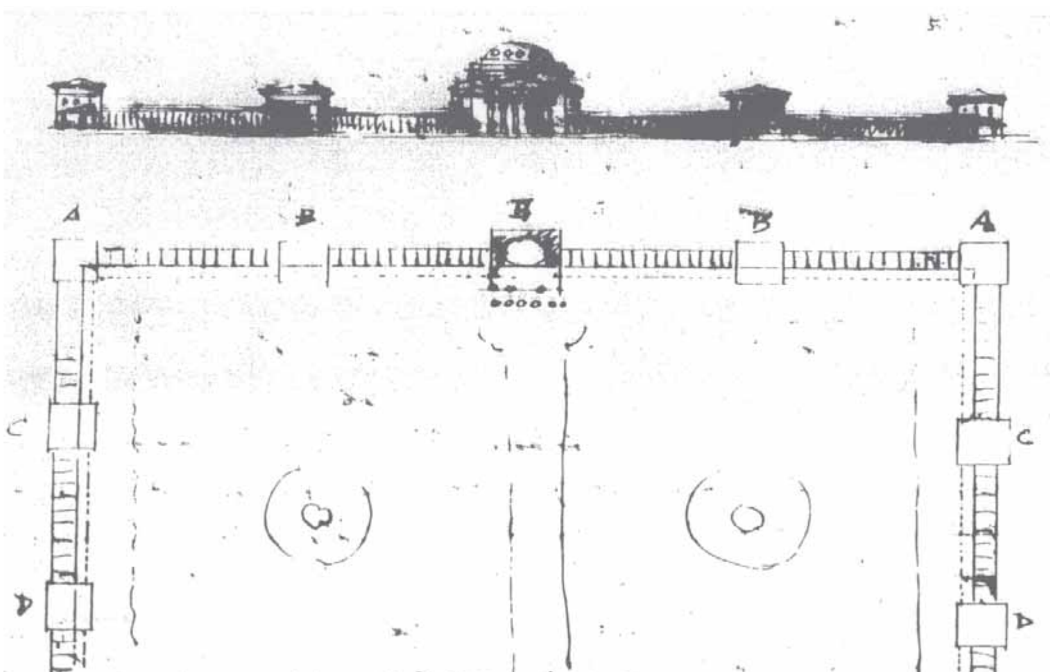



*Figure 3. Benjamin Henry Latrobe's sketch proposing a Rotunda at the center of the Academical Village, July 24, 1817. [Jefferson Papers]*

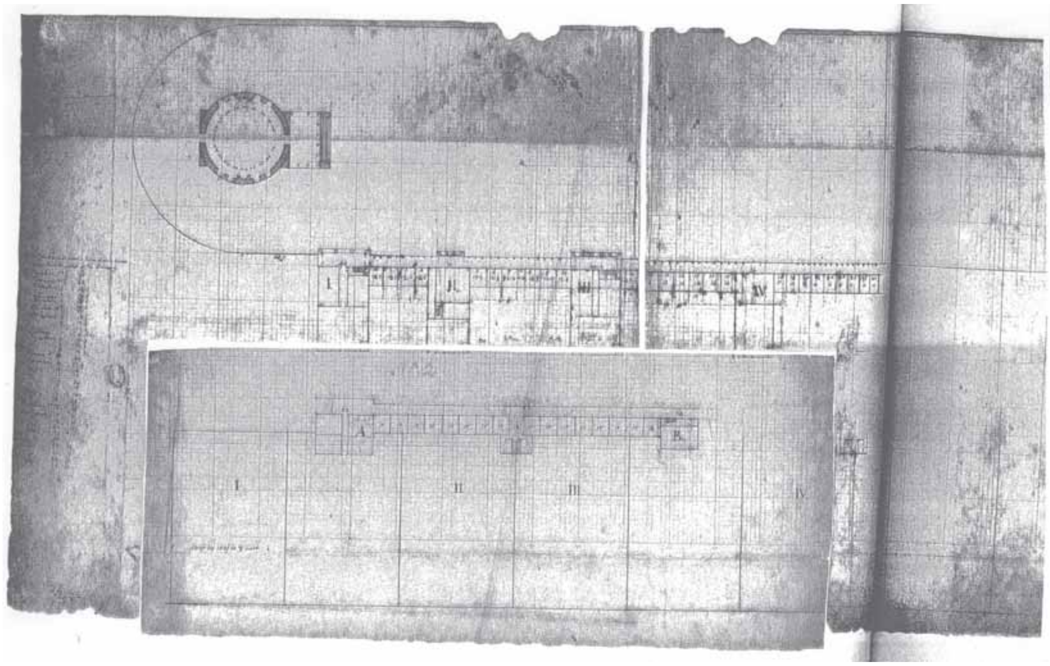


*Figure 4. Jefferson's study for the Lawn with the Pavilions and the Rotunda, 1818-1819. [Jefferson Papers]*

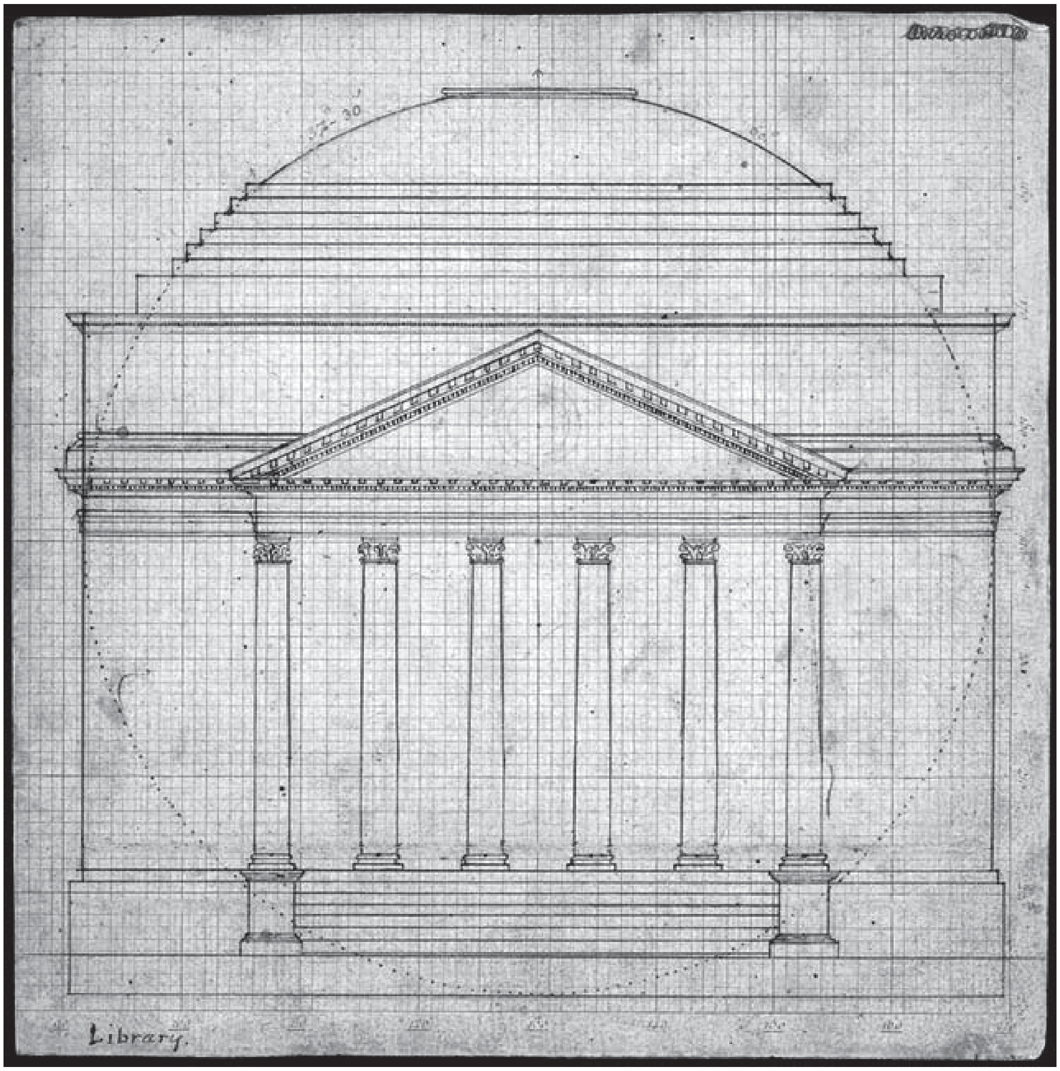



*Figure 5. Jefferson's south elevation of the Rotunda, begun 1818, completed by March 29, 1819. [Jefferson Papers]*

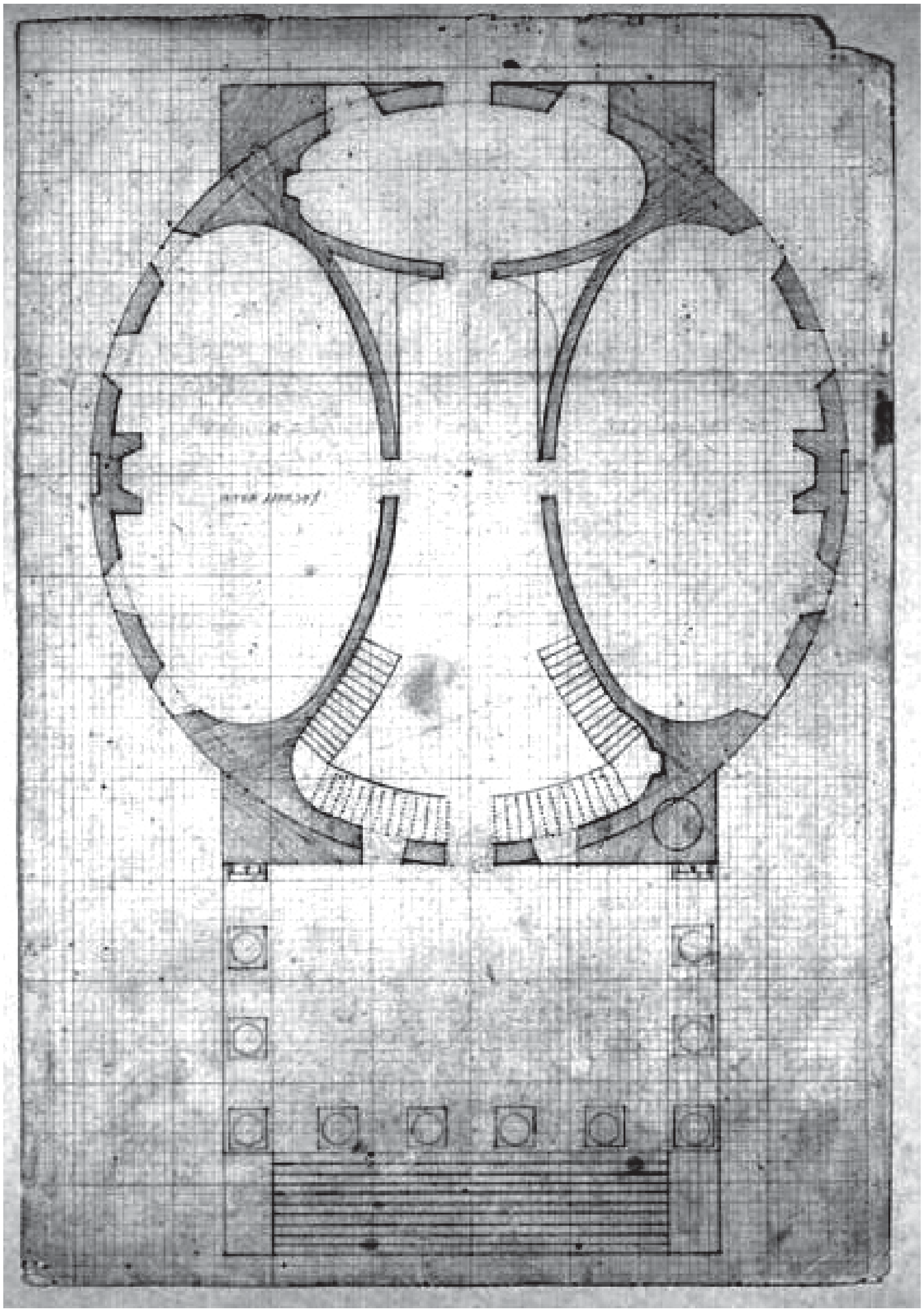


*Figure 6. Jefferson's main floor plan of the Rotunda, begun 1818, completed by March 29, 1819. [Jefferson Papers]*

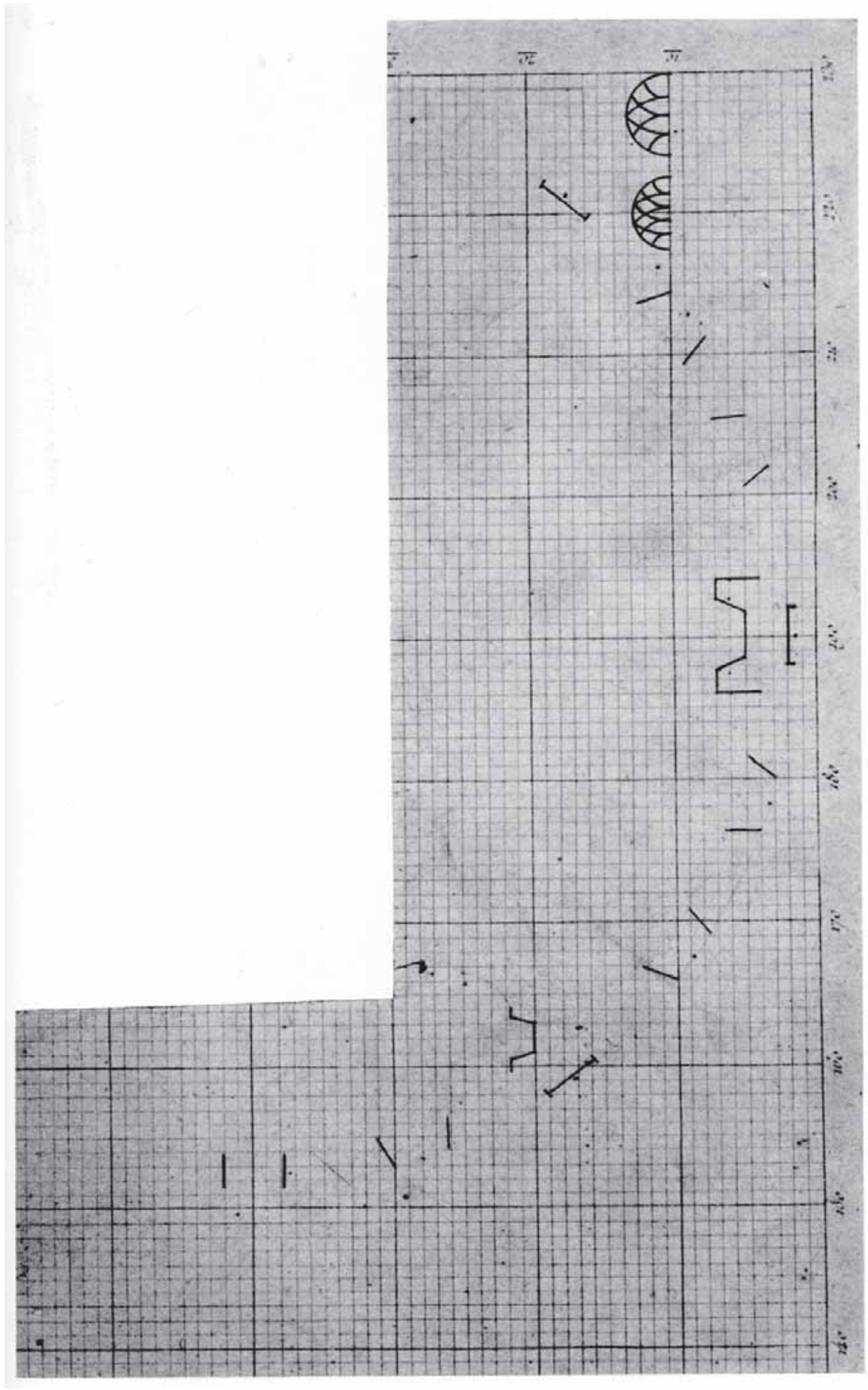


*Figure 7. Jefferson's Study of Rotunda Plan. [Jefferson Papers]*

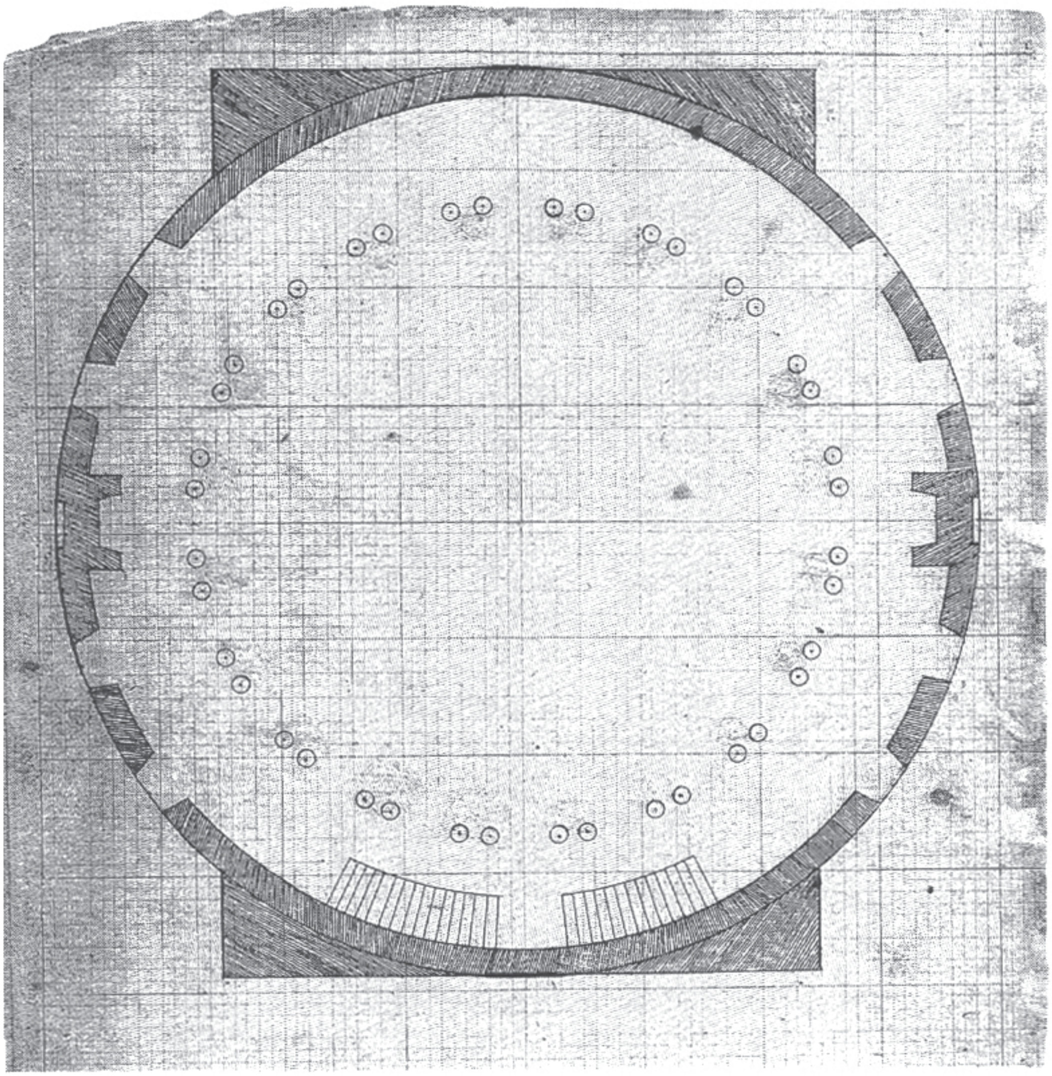


*Figure 8. Jefferson's plan for the Dome Room of the Rotunda, begun 1818, completed by March 29, 1819. Note absence of openings in the north and south walls. [Jefferson Papers]*

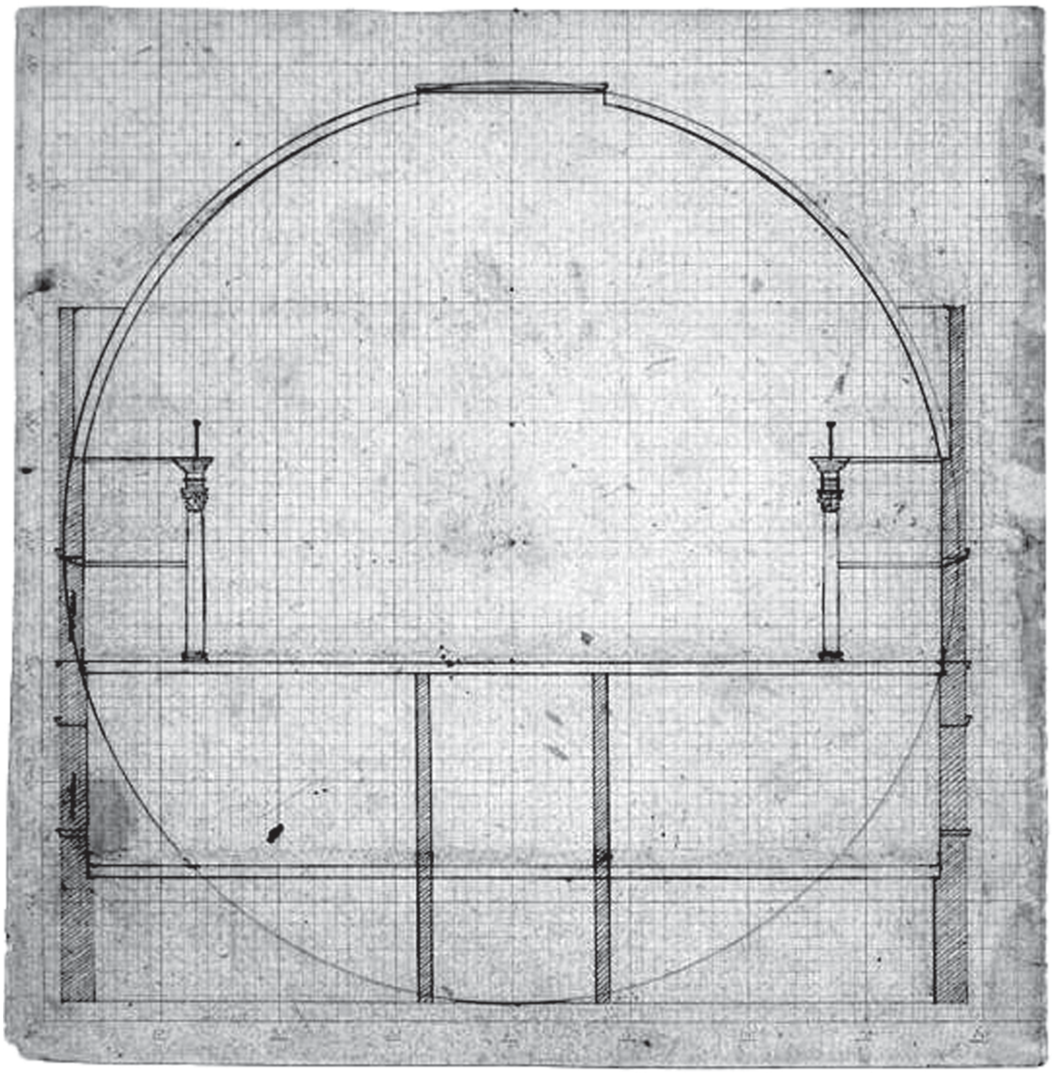


*Figure 9. Jefferson's section of the Rotunda, begun 1818, completed by March 29, 1819. [Jefferson Papers]*

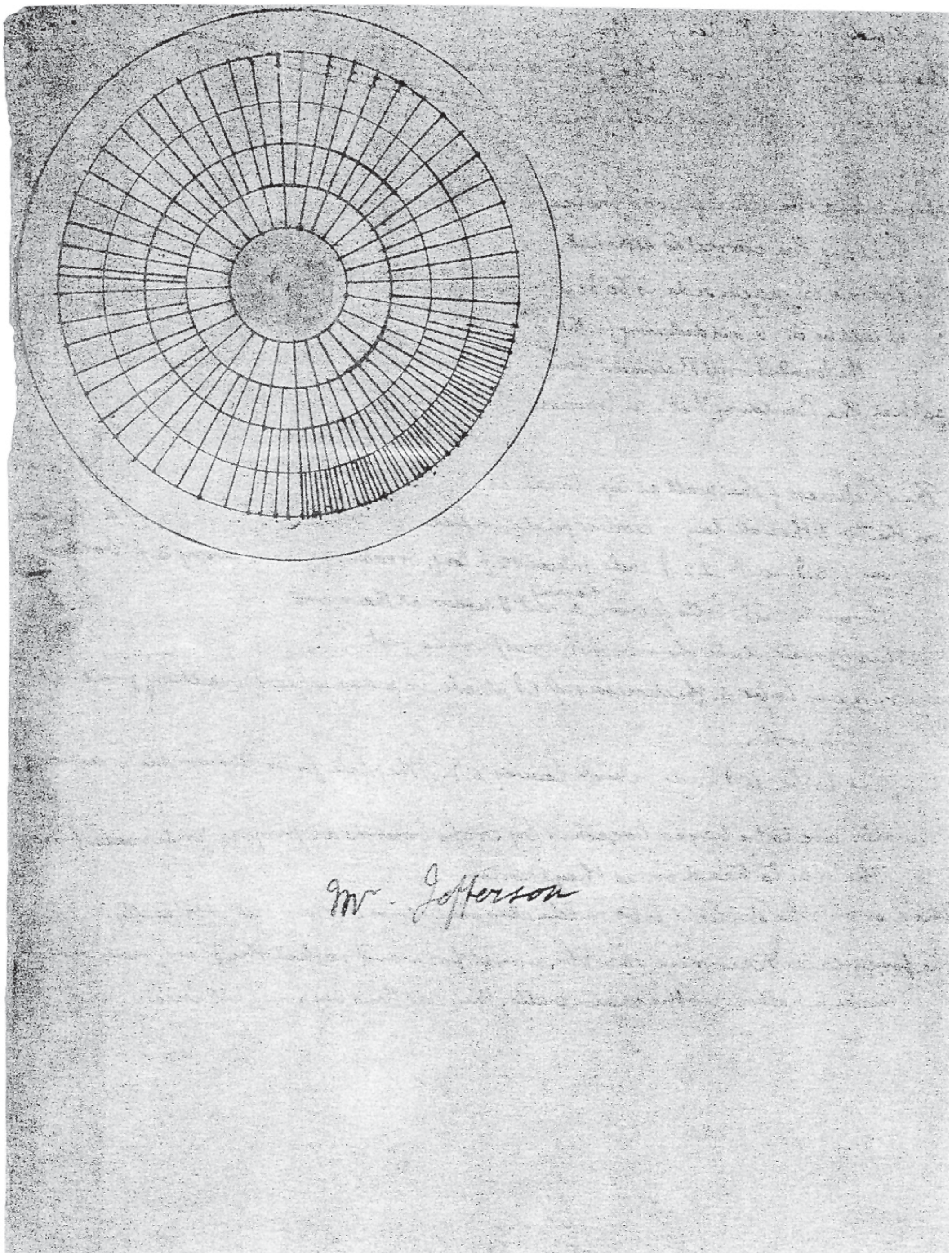
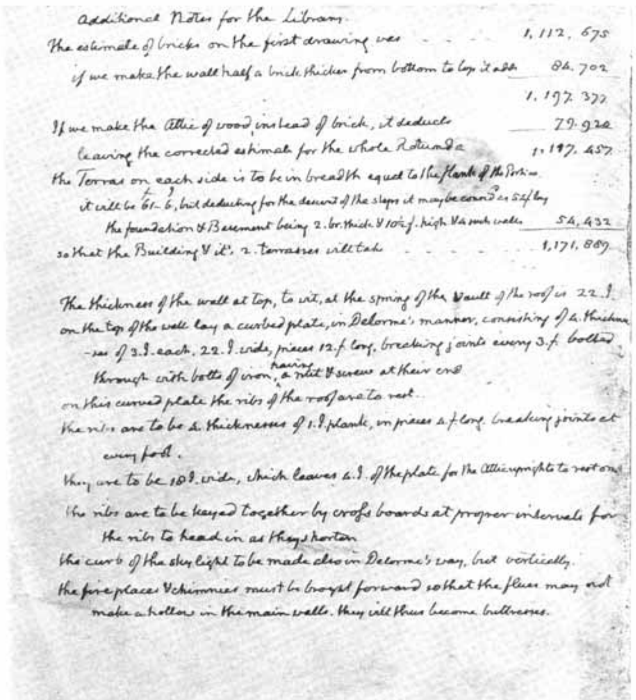



*Figure 10. Jefferson's drawing of the framing plan for the Rotunda Dome. [Jefferson Papers]*


Additional Notes for the Library.
The estimate of bricks on the first drawing was - - - - 1,112,675
if we make the wall half a brick thicker from bottom to top it adds 84,702
1,197,377
If we make the Attic of wood, instead of brick, it deducts 79,920
leaving the corrected estimate for the whole Rotunda 1,117,457
the Terras on each side is to be in breadth equal to the flank of the Portico
it will be 61 f. - 6 I., but deducting for the descent of the steps it may be counted as 54 f. long
the foundation & Basement being 2. br. thick & 10½ f. high & a such walls 54,432
so that the Building & it's 2. terrasses will take - - - - - 1,171,889

The thickness of the wall at top, to wit, at the spring of the vault of the roof is 22. I.
on the top of the wall lay a curbed plate, in Delorme's manner, consisting of 4. thickness
-ses of 3. I. each. 22. I. wide, pieces 12. f. long, breaking joints every 3. f. bolted
through with bolts of iron, having a rivet & screw at their end
on this curved plate the ribs of the roof are to rest.
the ribs are to be 4. thicknesses of 1. I. plank, in pieces 4. f. long, breaking joints at
every foot.
they are to be 18 I. wide, which leaves 4. I. of the plate for the Attic uprights to rest on.
the ribs are to be keyed together by cross boards at proper intervals for
the ribs to head in as they shorten
the curb of the sky light to be made also in Delorme's way, but vertically.
the fireplaces & chimnies must be brought forward so that the flues may not
make a hollow in the main walls. they will thus become buttresses.

*Figure 11. Jefferson's specifications for the Rotunda framing, written on the back of the drawing of the framing plan of the Rotunda dome. [Jefferson Papers]*

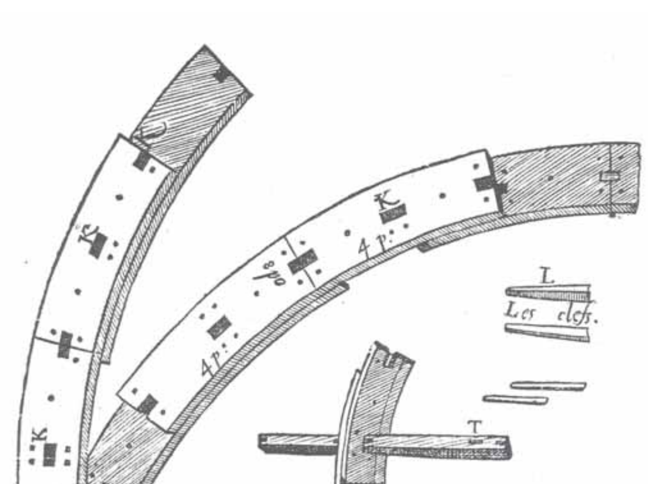



*Figure 12. Illustration of framing for Delorme dome, from Nouvelles Inventions Pour Bien Bastir et a Petits Fraiz, Trouvees, n'agueres par Philibert de L'Orme, Paris 1576.*

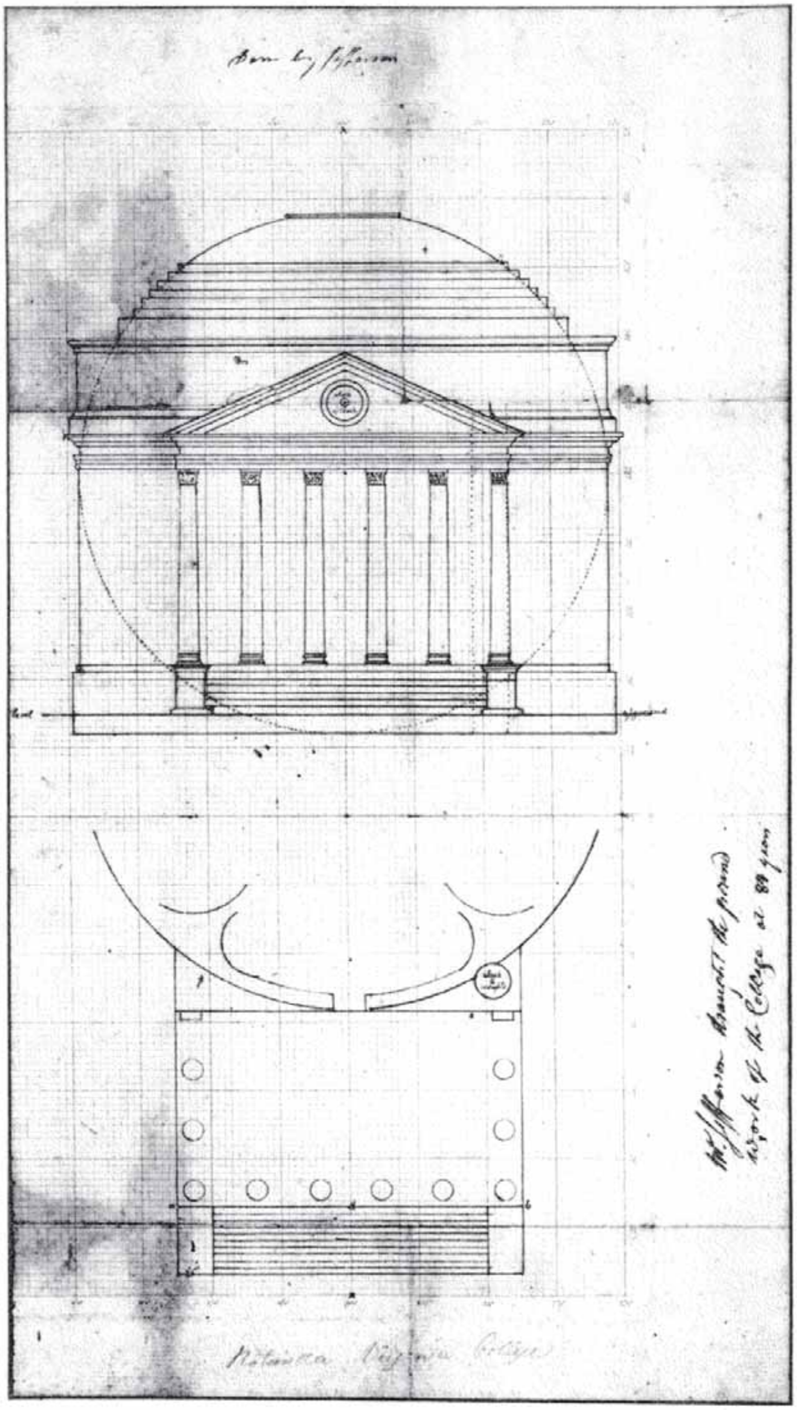


*Figure 13. Sketch by Jefferson for the pediment clock, showing the southeast shaft that would hold the clockweights. [Collection of the Willard Homestead, Grafton, Massachusetts]*

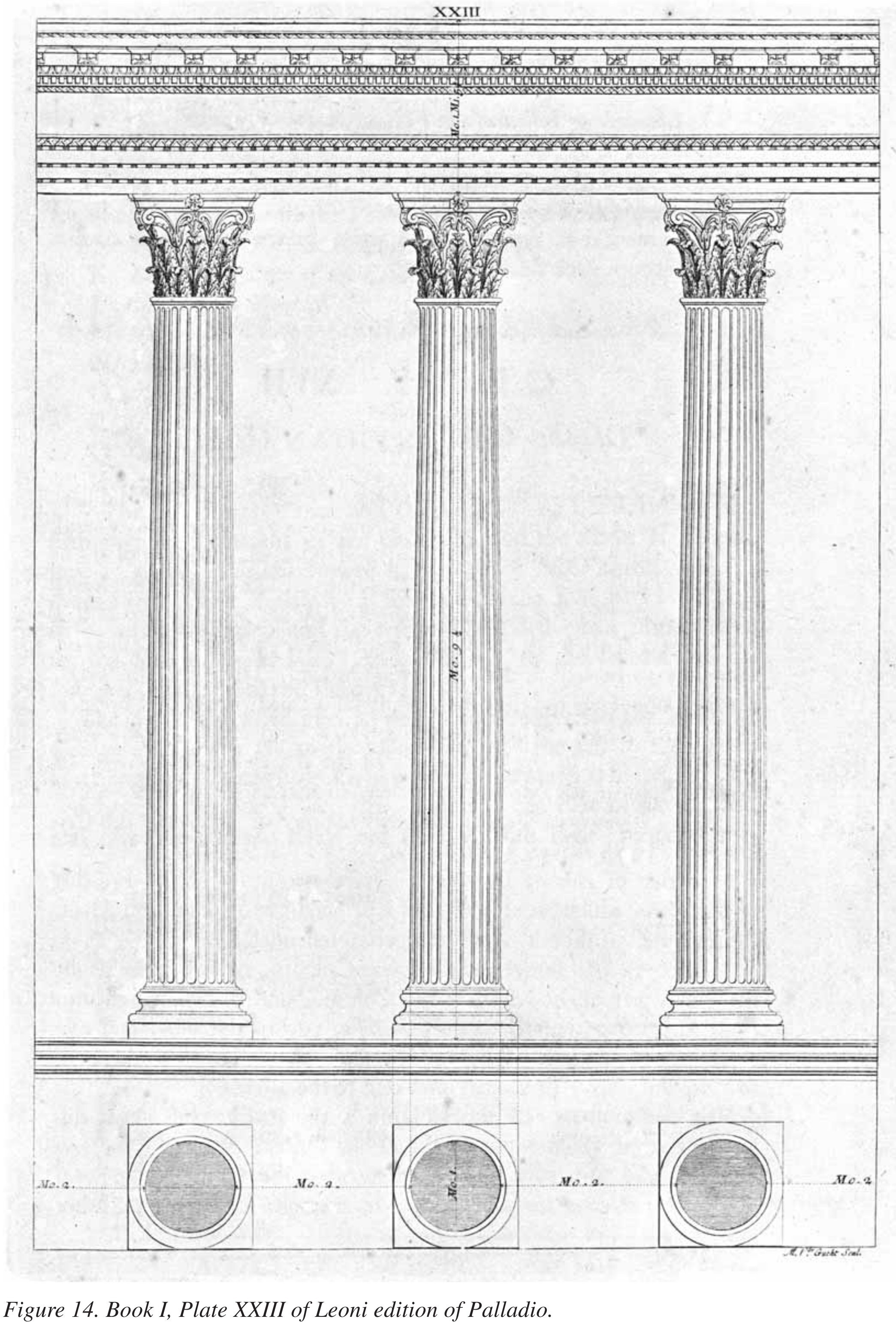



*Figure 14. Book I, Plate XXIII of Leoni edition of Palladio.*

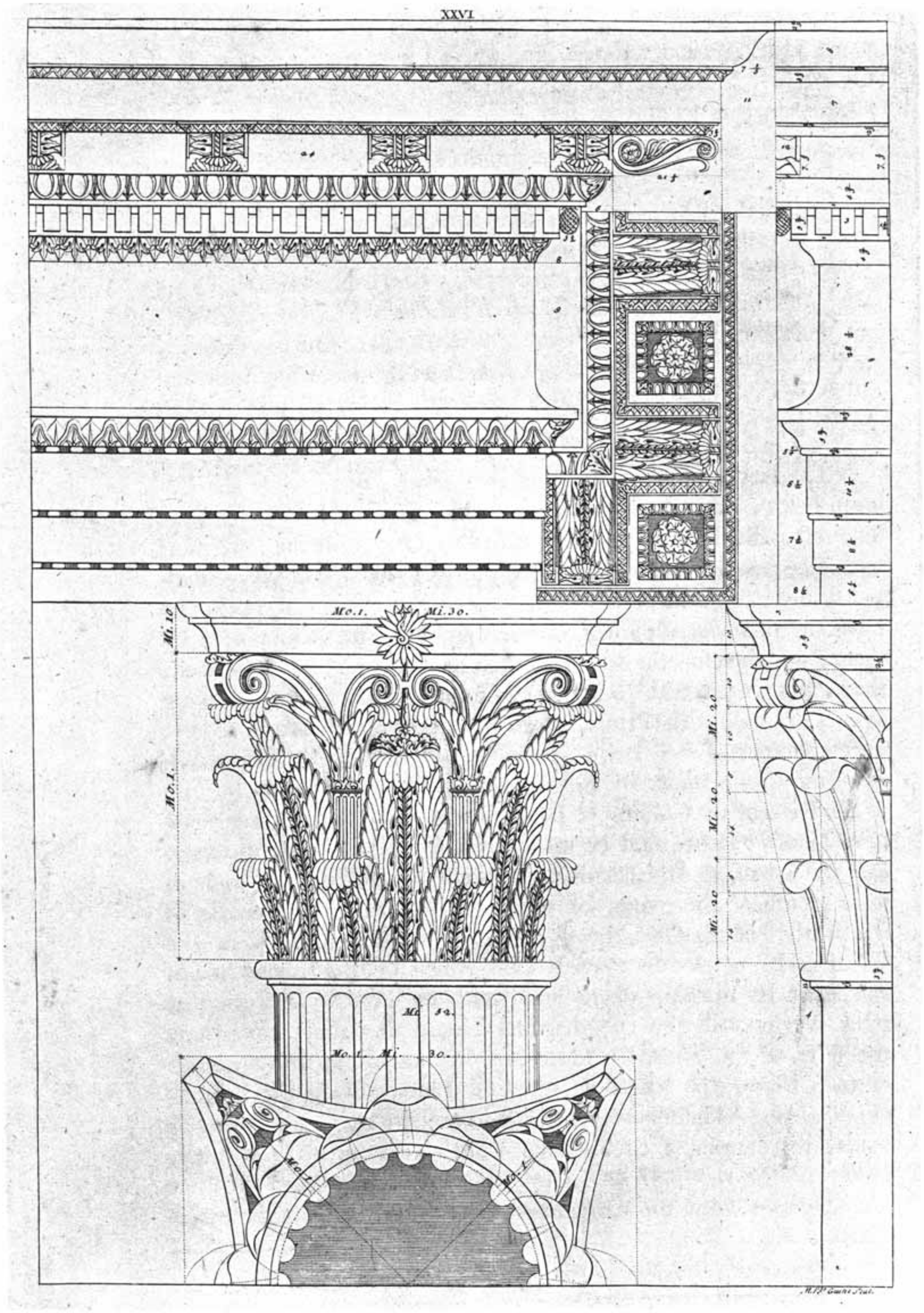



*Figure 15. Book I, Plate XXVI of Leoni edition of Palladio.*

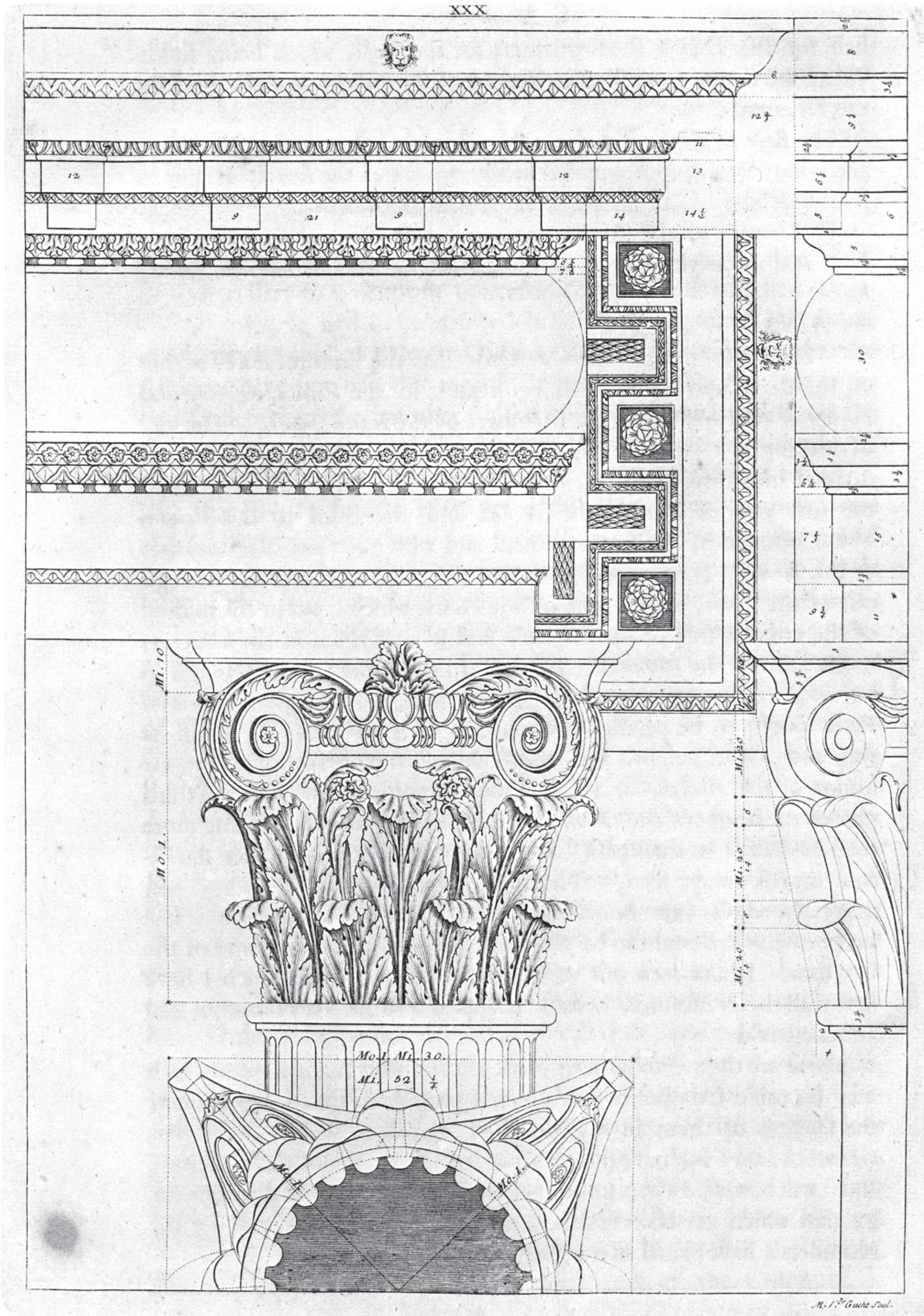


*Figure 16. Book I, Plate XXX of Leoni edition of Palladio.*

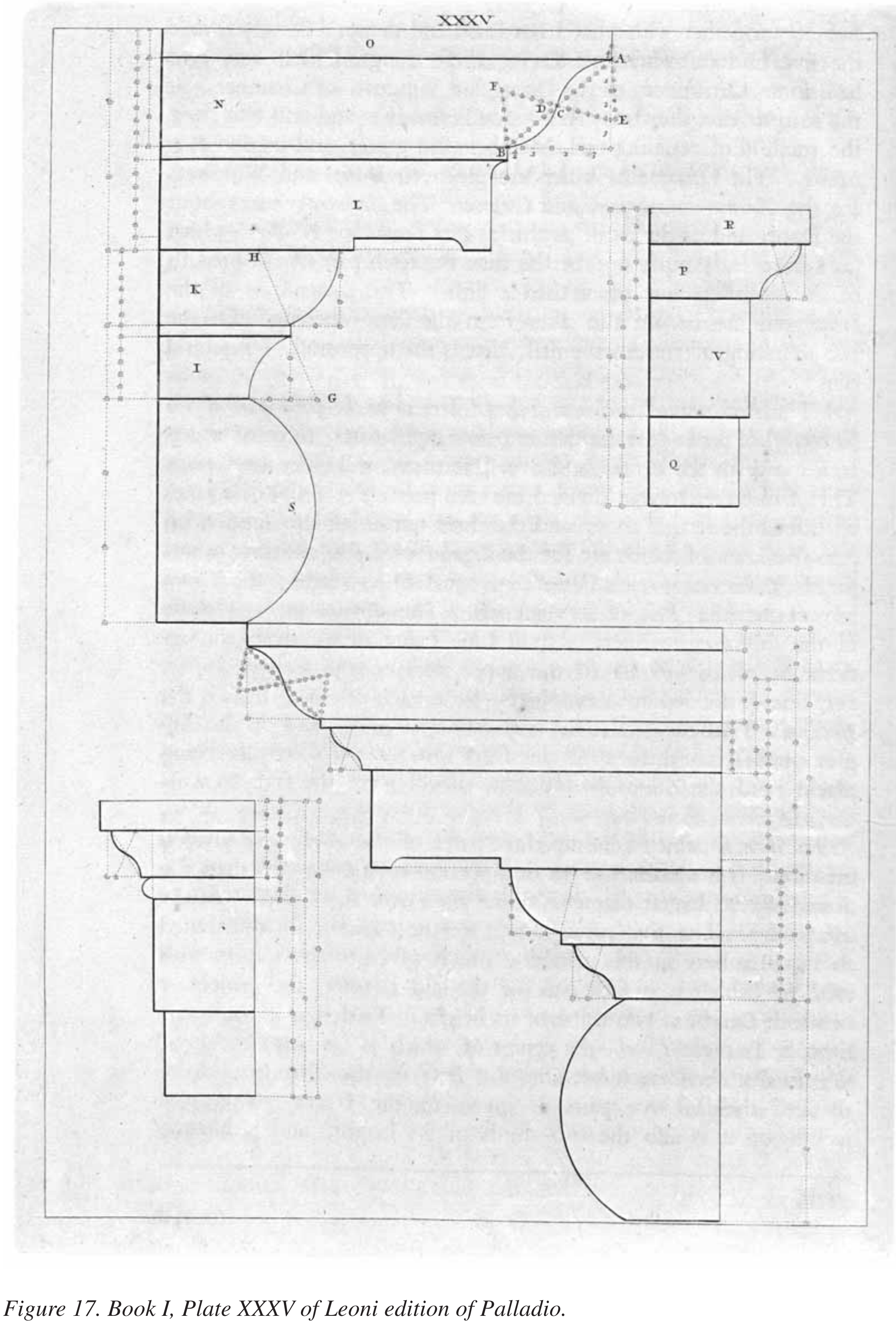



*Figure 17. Book I, Plate XXXV of Leoni edition of Palladio.*

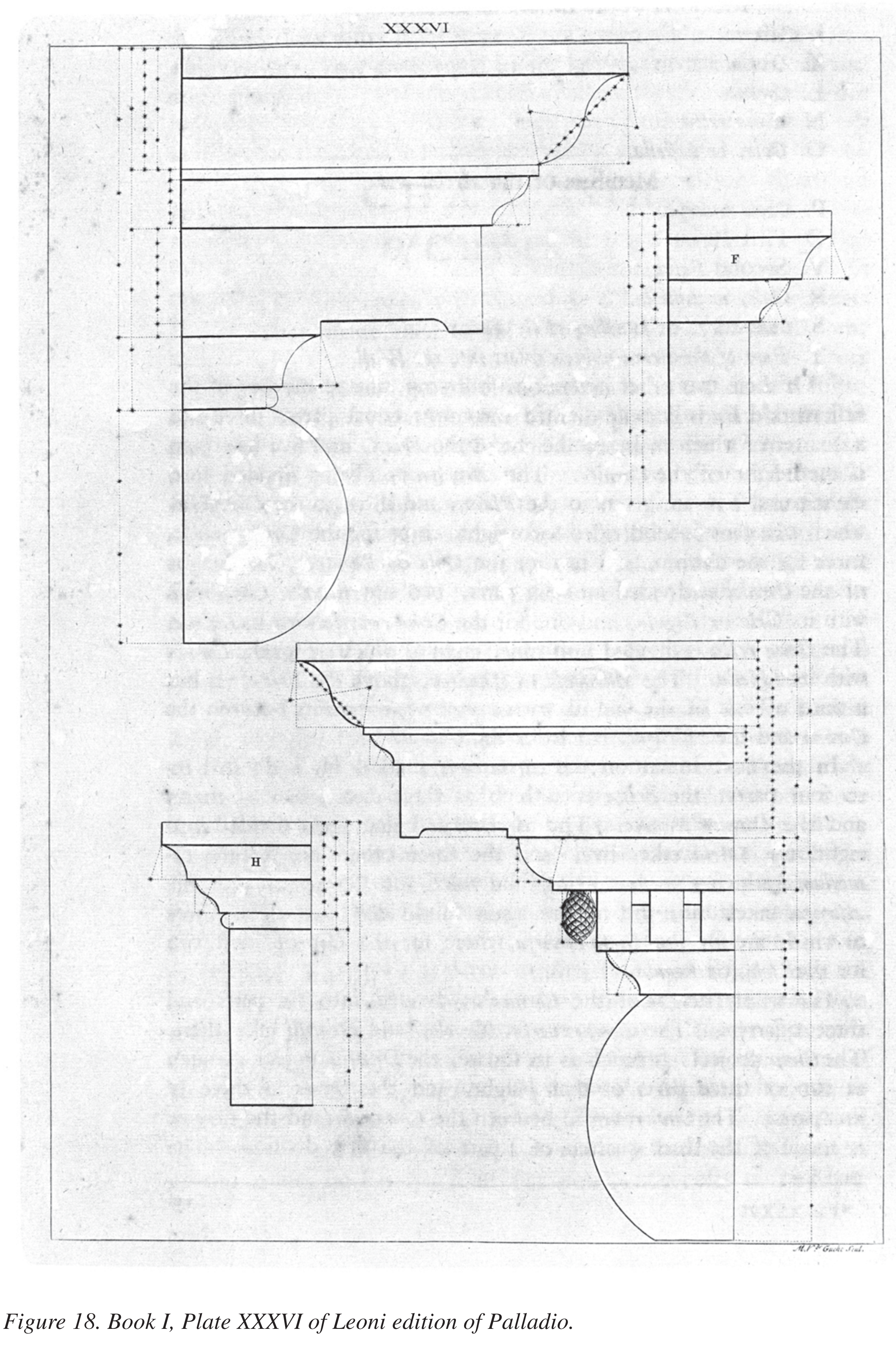



*Figure 18. Book I, Plate XXXVI of Leoni edition of Palladio.*

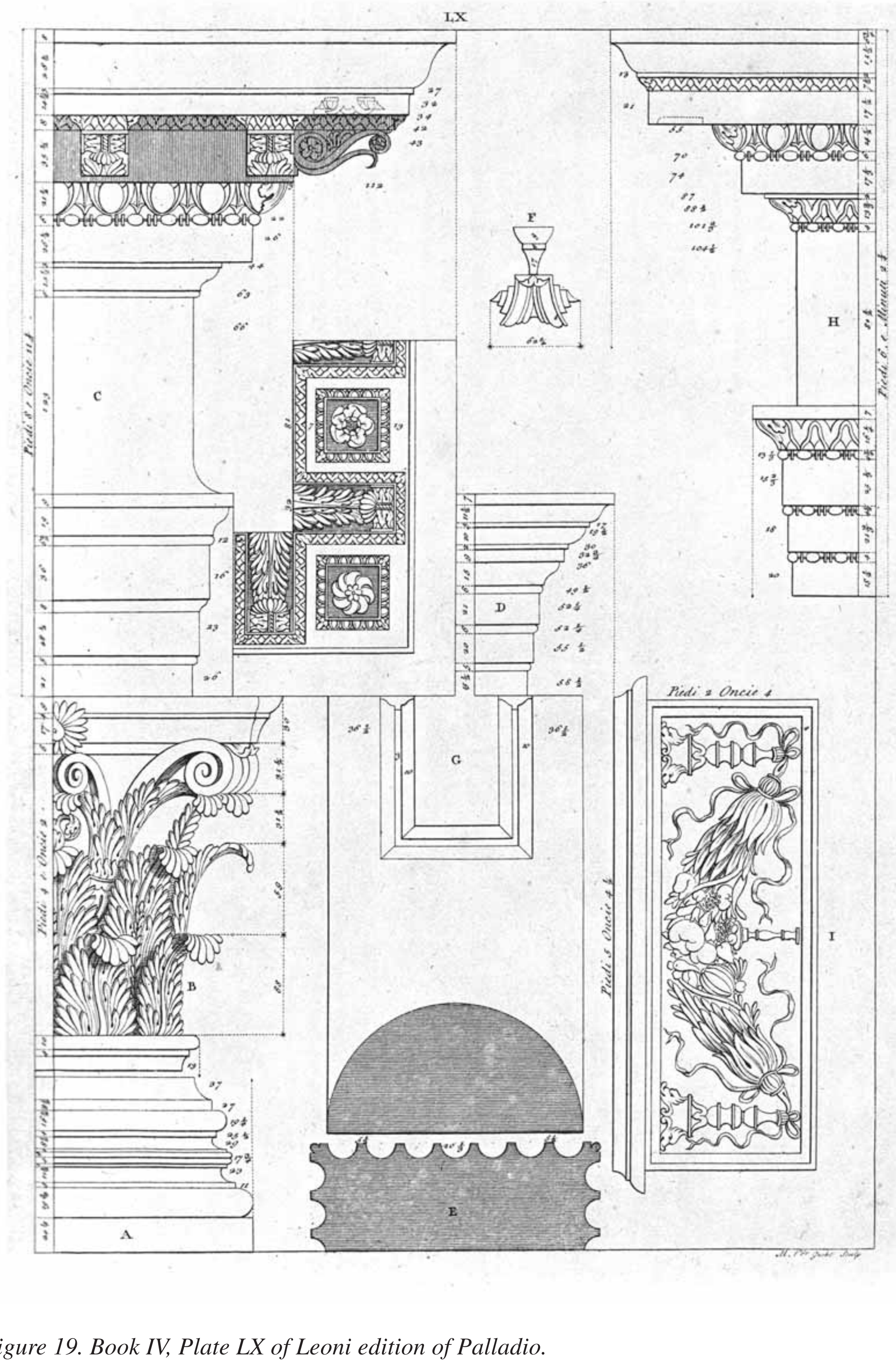


*Figure 19. Book IV, Plate LX of Leoni edition of Palladio.*

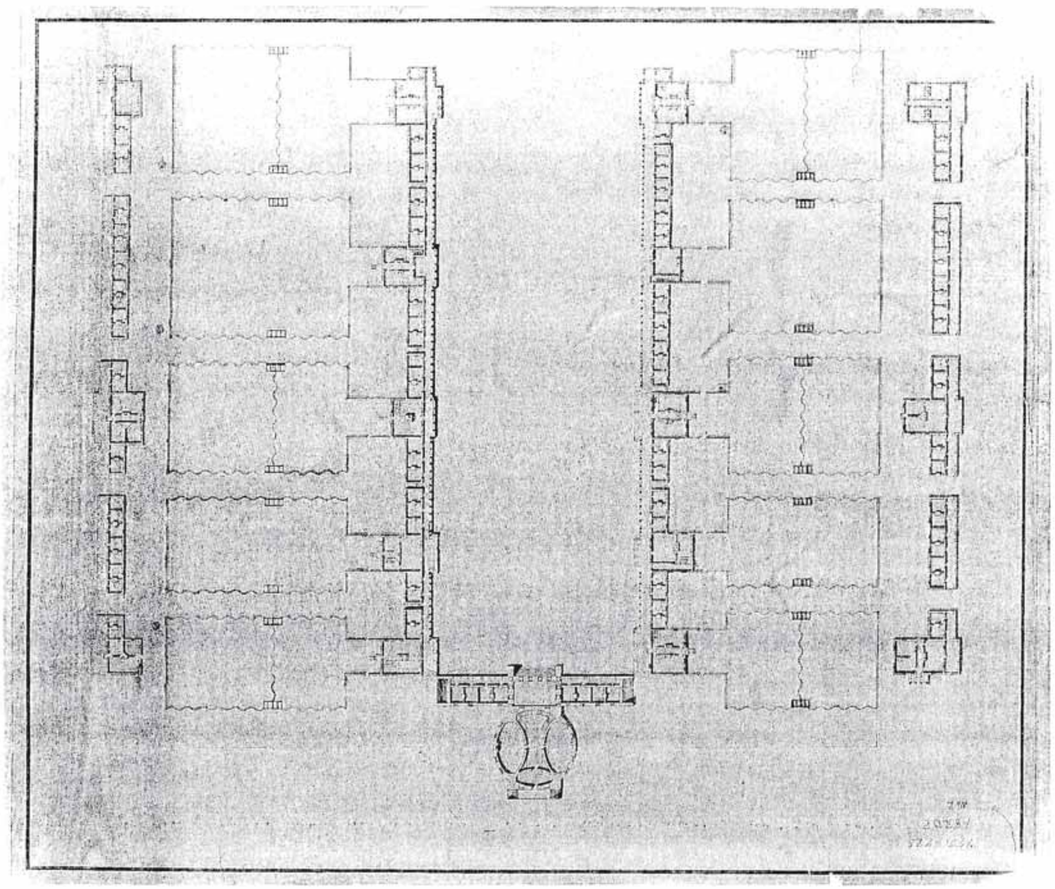
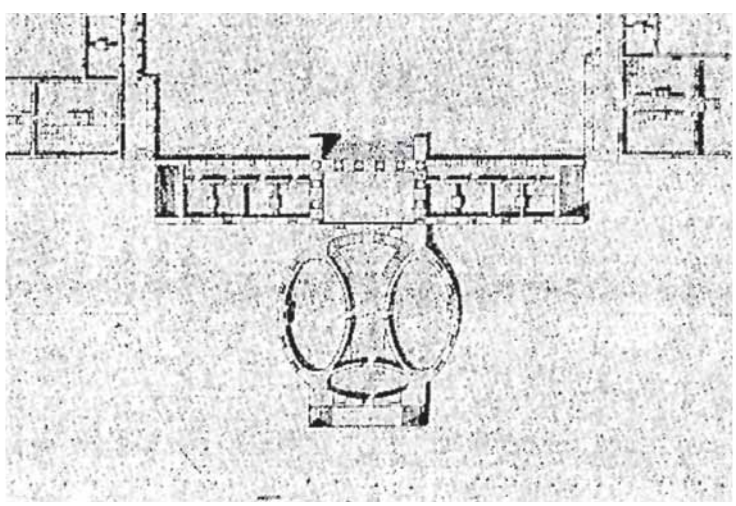


*Figure 20. John Neilson, ground level plan of the Lawn, circa March 1821 (detail of Rotunda, below). Note north porch and steps of Rotunda. [Virginia State Library and Archives]*



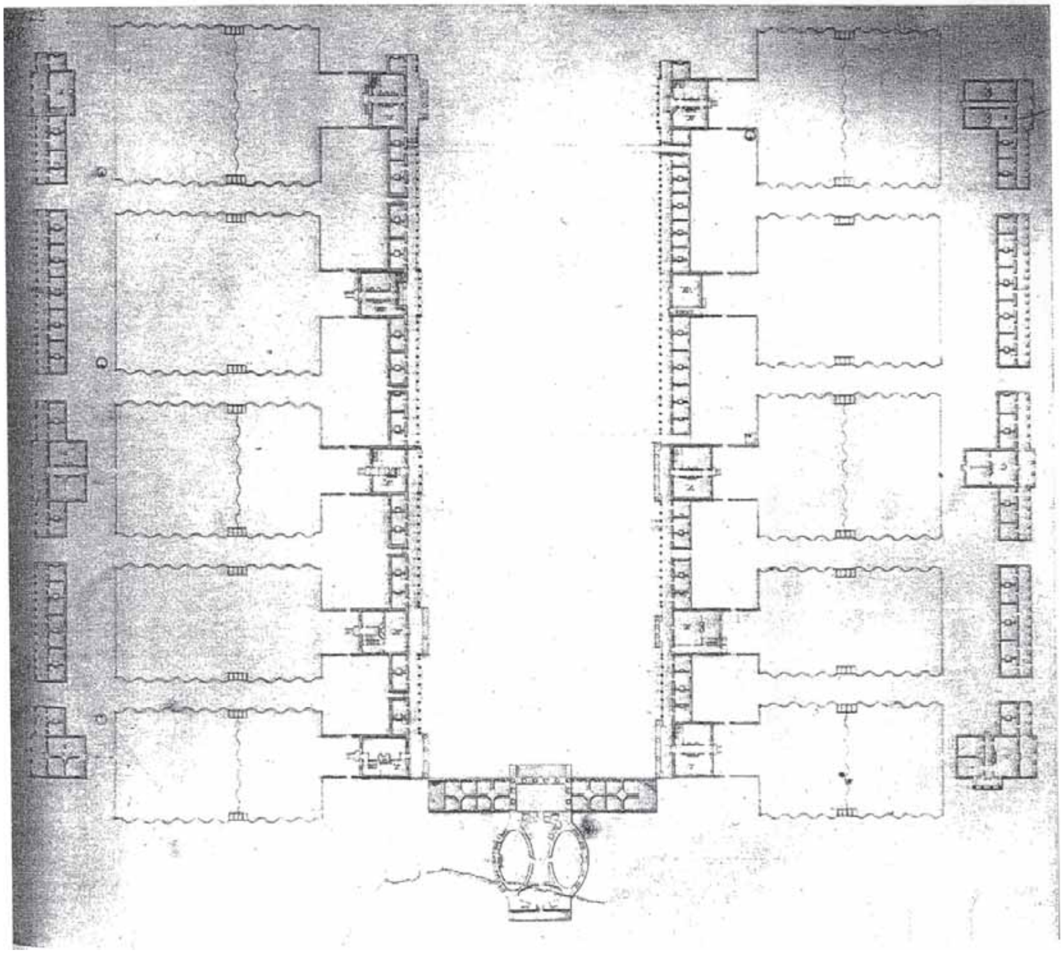
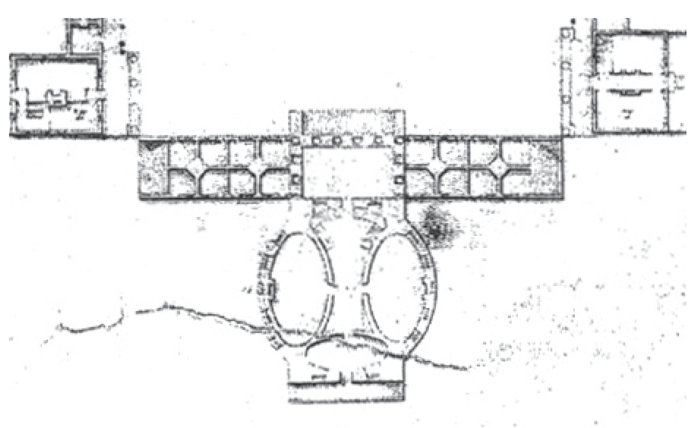


*Figure 21. Plan by John Neilson of the Lawn (first floor level), circa November 1821 (detail of Rotunda, below). Note north porch and steps of the Rotunda. [Virginia State Library]*



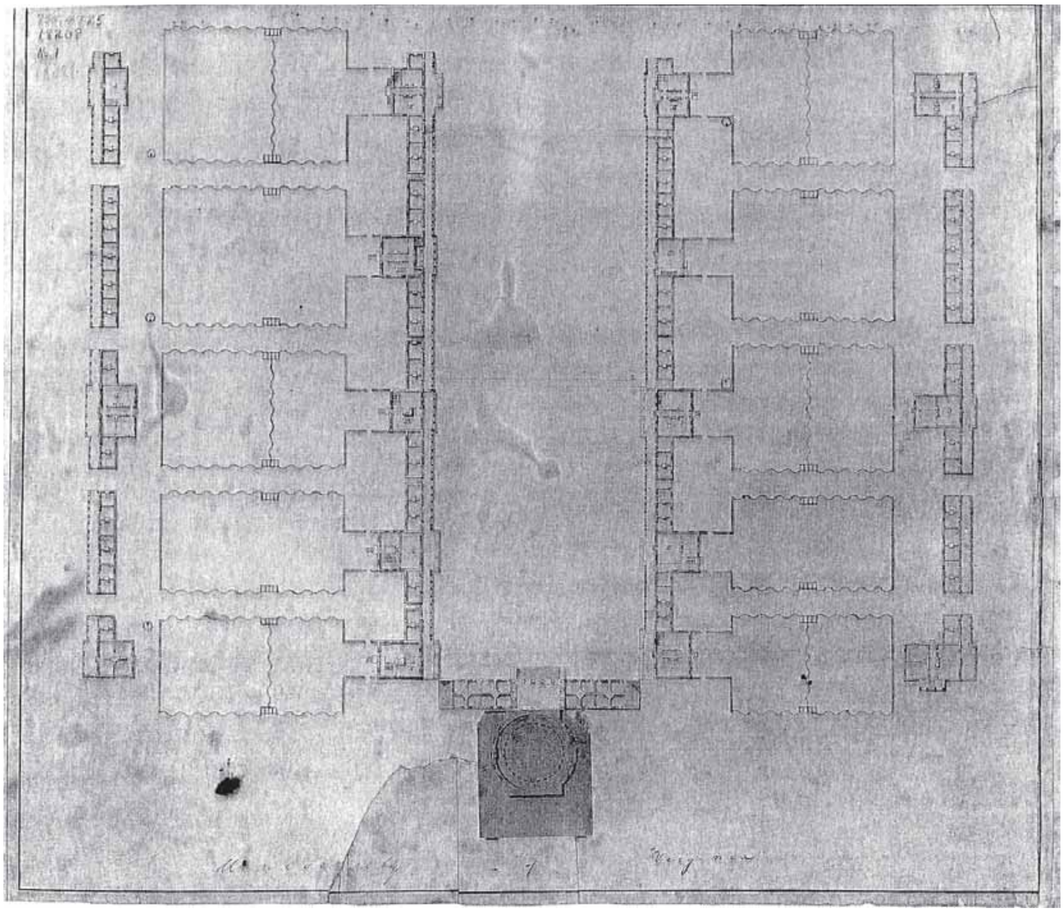
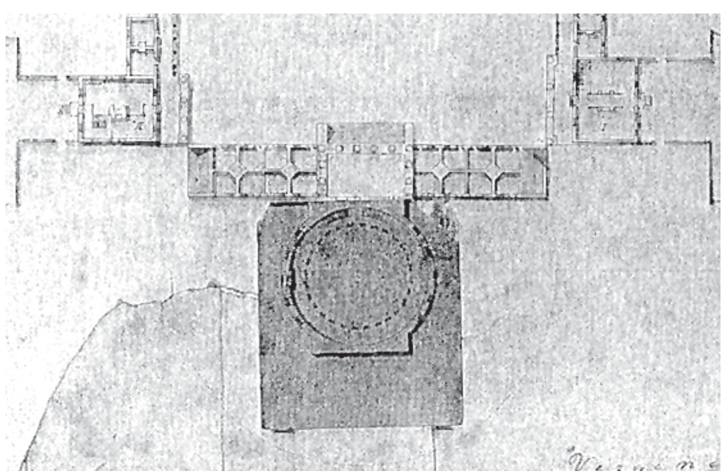


*Figure 22. John Neilson plan of the ground floor of the Lawn, with an overlay of the plan for the Dome Room, November 1821 (detail below). [Virginia State Library and Archives, Richmond]*



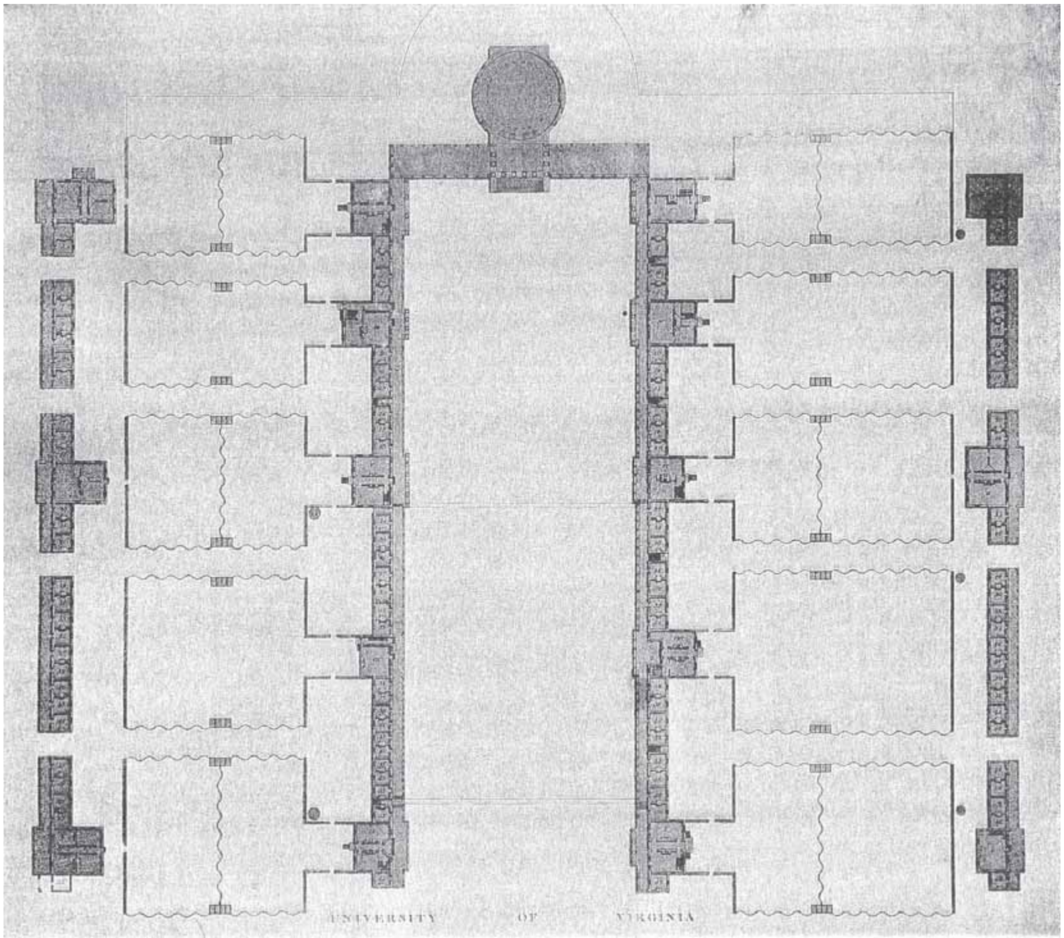
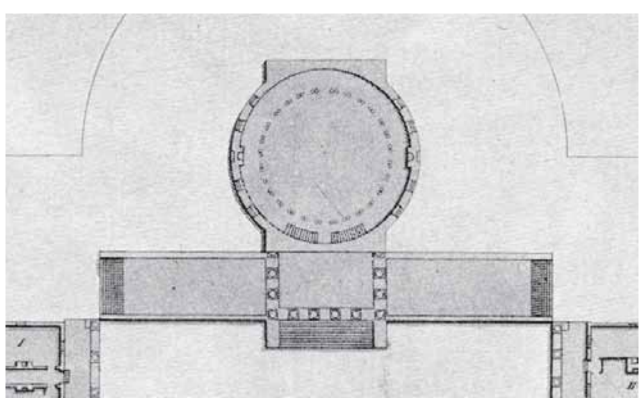



*Figure 23. Peter Maverick engraving (1825), based on John Neilson's drawings (1822), of the ground floor plan of the Lawn (detail of Rotunda, below). [N-385, Special Collections, Edwin M. Betts Collection, UVA]*



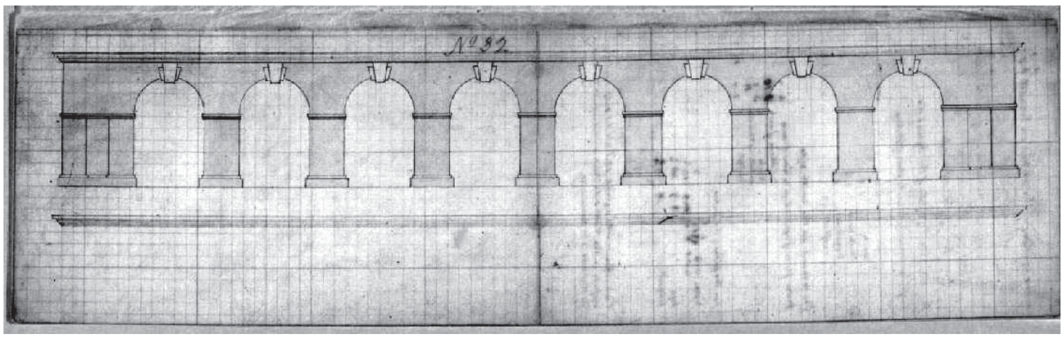



*Figure 24. Sketch attributed to John Neilson of the arcade for the north elevation of the south terraces, March 1824. (N-368)*

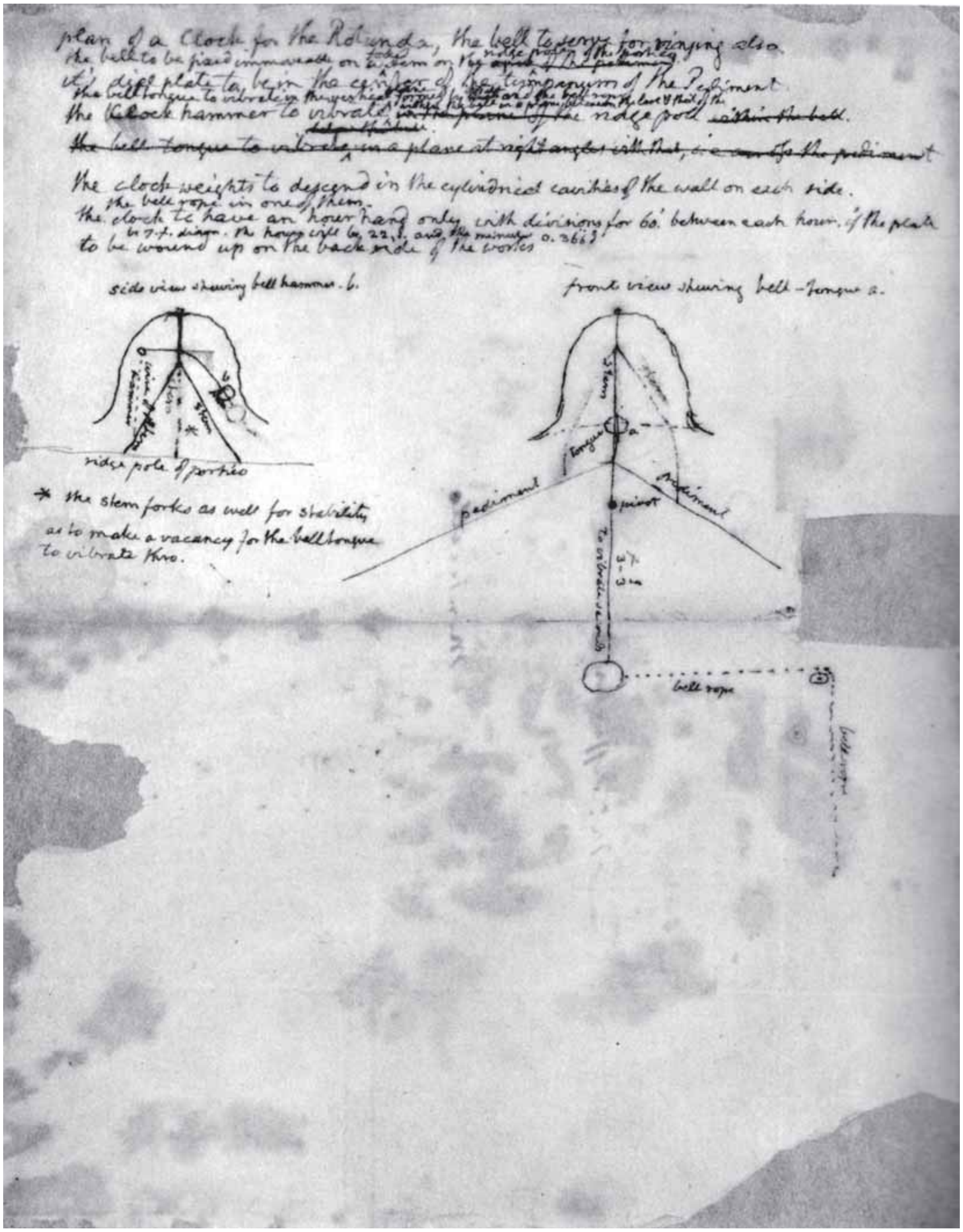



*Figure 25. Jefferson's instructions for the clock and bell. [Jefferson Papers]*

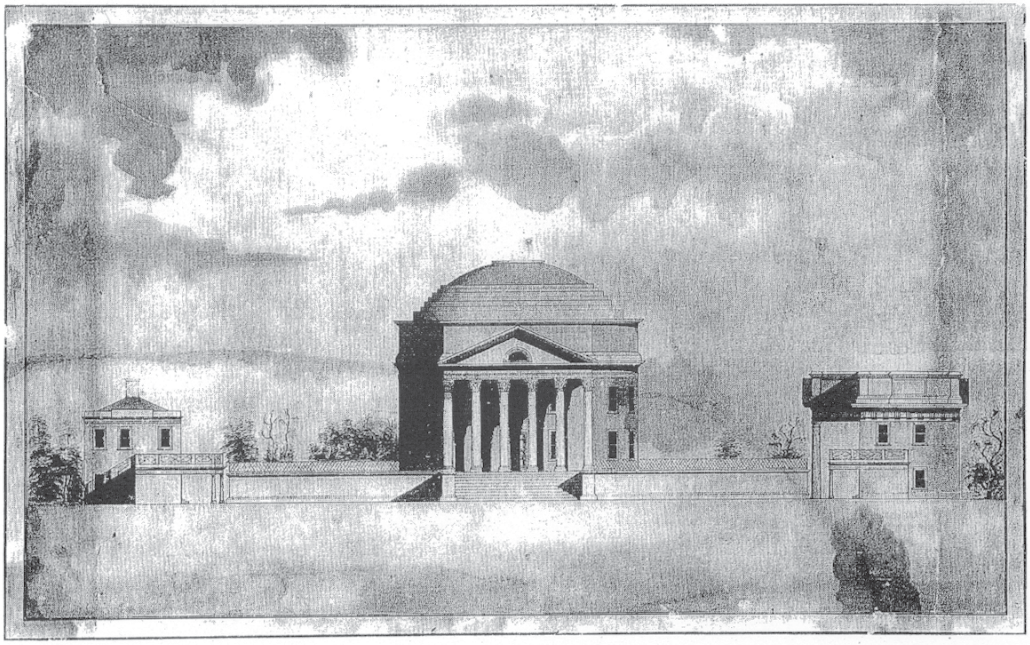


*Figure 26. Study of the Rotunda and Pavilions IX and X, February 1823. This sketch has been attributed to Cornelia Jefferson Randolph, John Neilson, and sometimes Benjamin Henry Latrobe. [Jefferson Papers]*

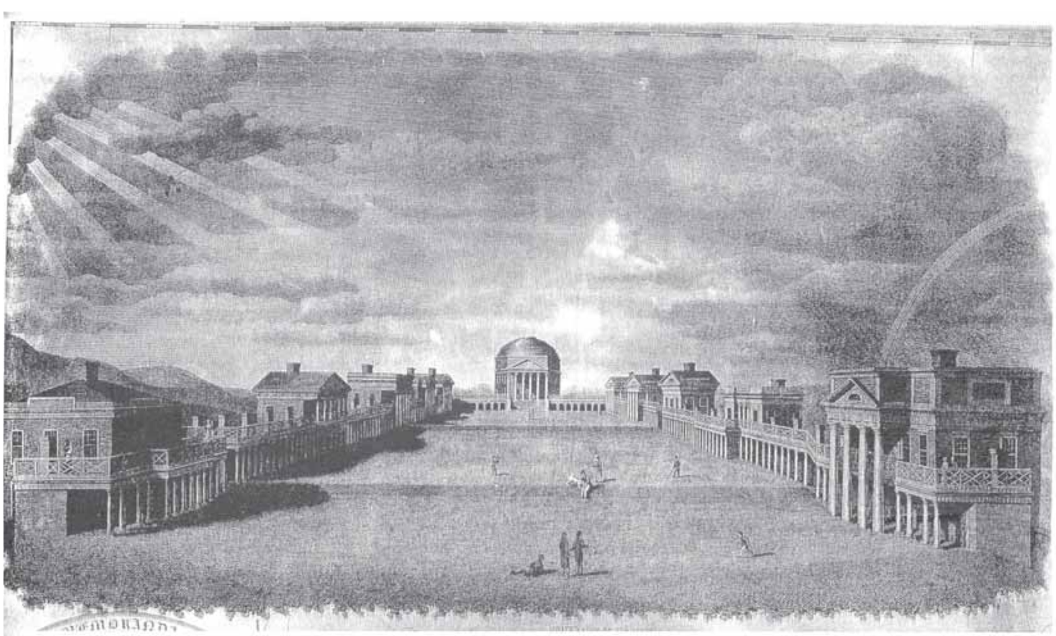


*Figure 27. Engraving of the University by Benjamin Tanner, 1826 (from an 1824 drawing). [Jefferson Papers]*

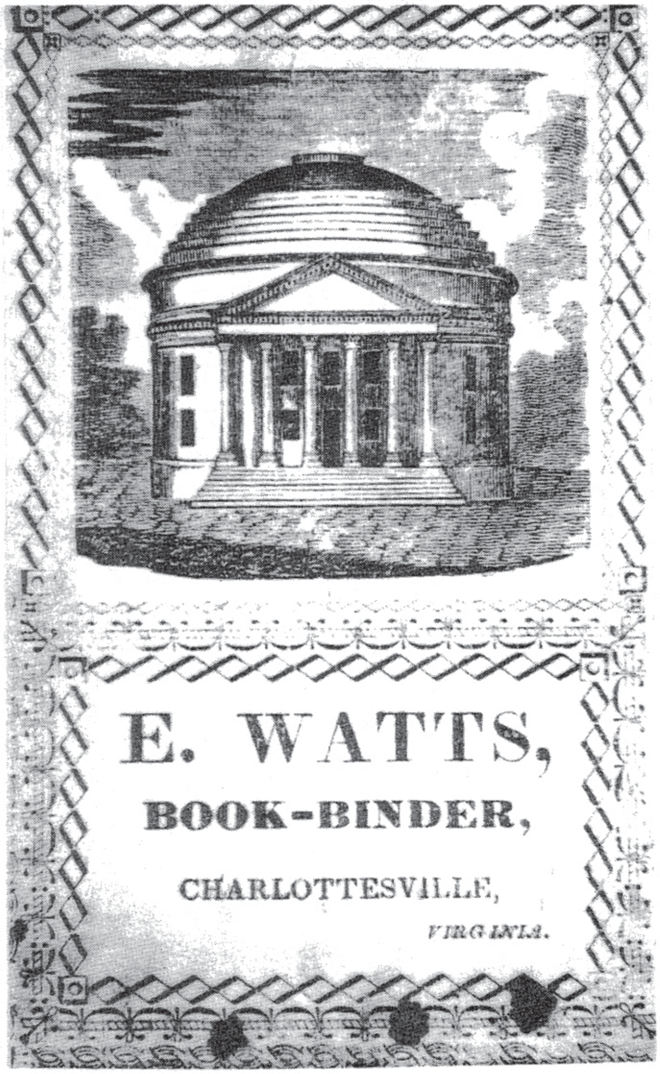



*Figure 28. Book plate, circa 1827. [Special Collections, UVA]*

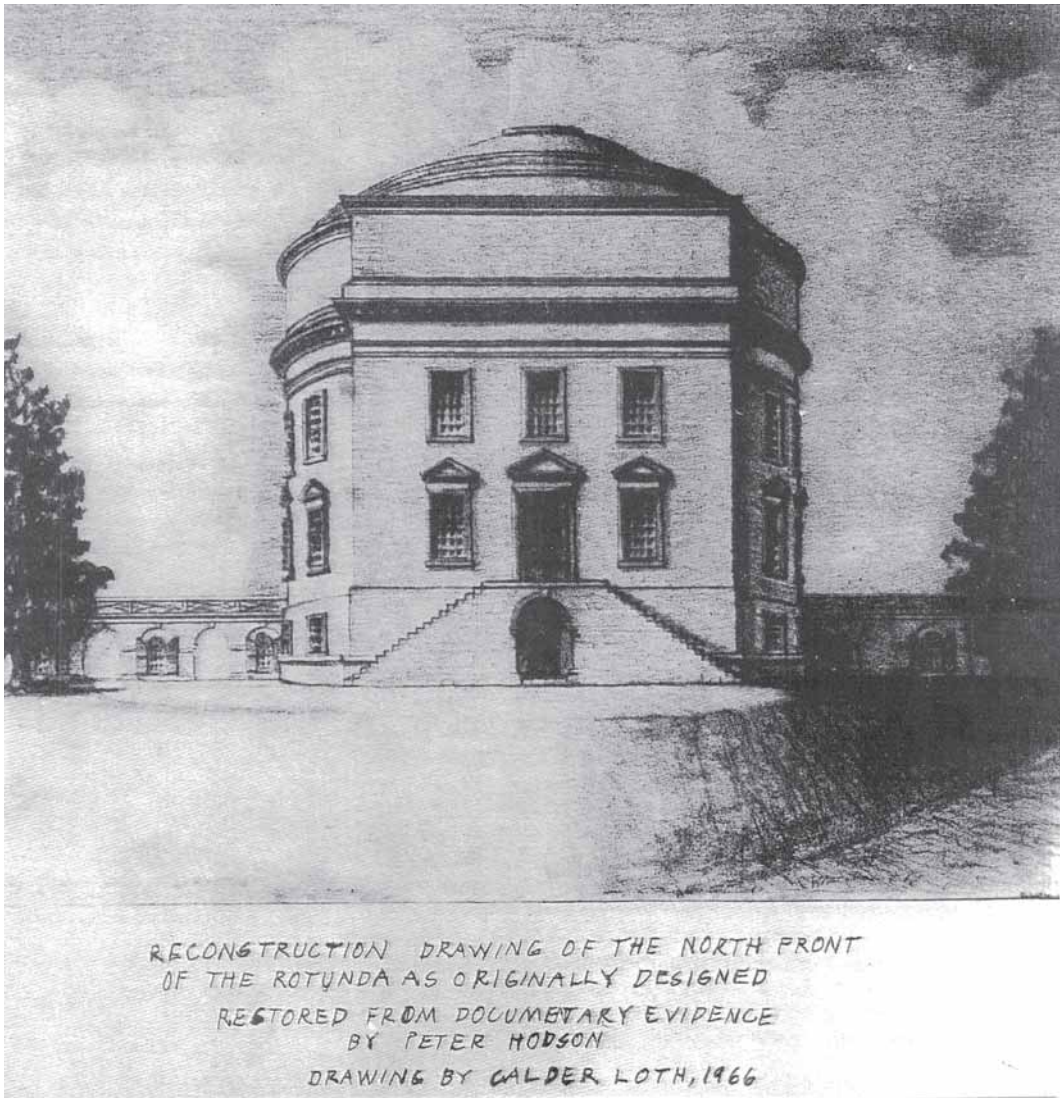



*Figure 29. Conjectural north elevation, developed by Peter Hodson and drawn by Calder Loth, 1966.*

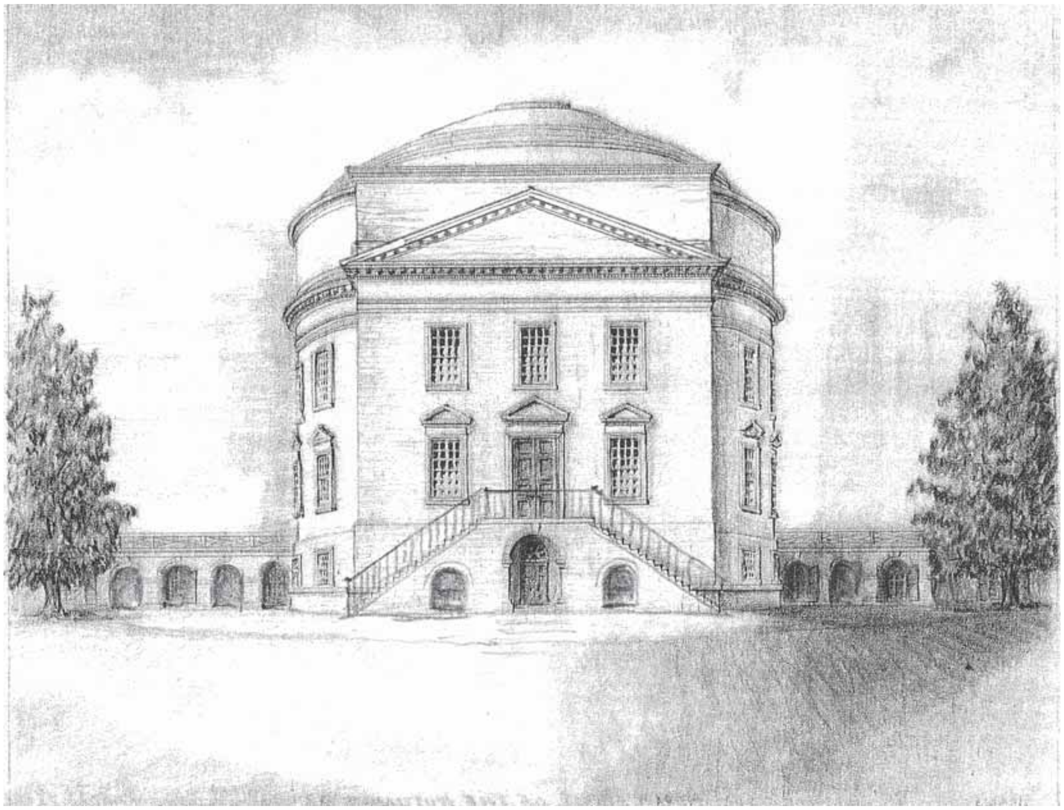


*Figure 30. Revised conjectural view of the north elevation, Douglas Bucher, JGWA, 2007. Note the pediment, the openings in the north wall of the stair platform; the stair railings; and the open arcades of the south terraces. [JGWA, 2007]*

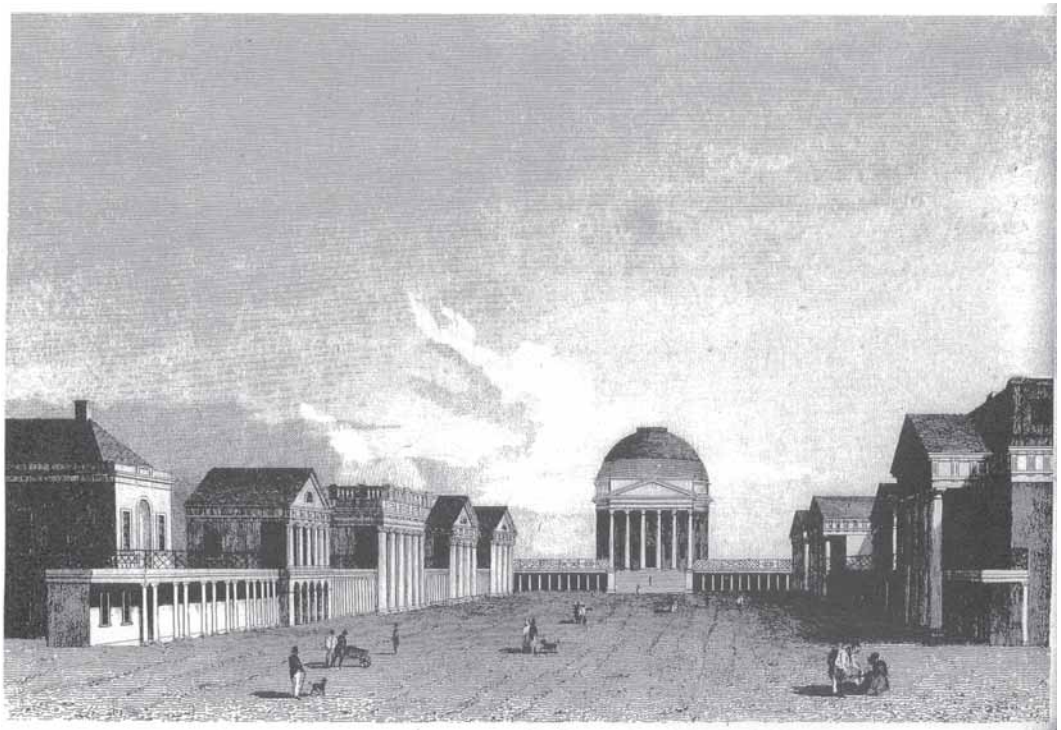


*Figure 31. Engraving of the University by William Goodacre (draughtsman) and Fenner Sears & Co. (engraver and printer), 1831. [Special Collections, Edwin M. Betts Collection, UVA]*

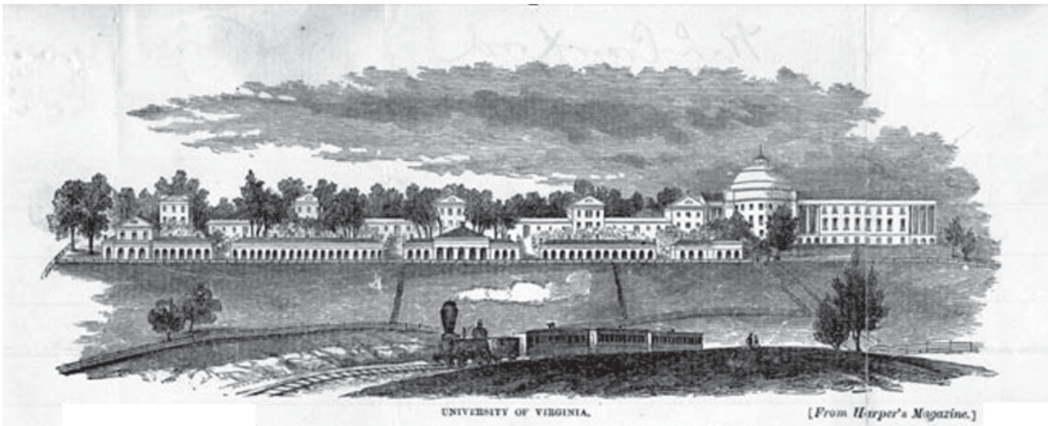



*Figure 32. Two views of the University during the 1850s. At the top, a view by Porte Crayon? that appeared in the August 1856 issue of Harper's New Monthly Magazine. The bottom view was printed by H. Weber, and published by C. Bohn, 1856. [Special Collections, UVA]*

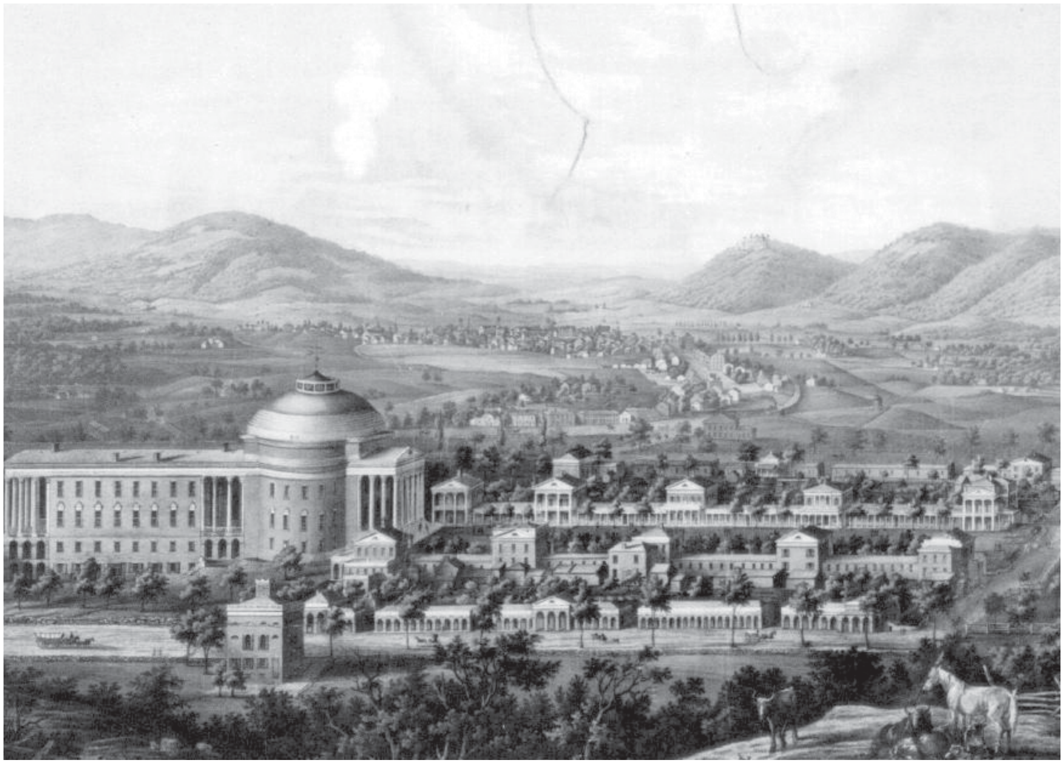


*Figure 33. Detail of the University of Virginia from Lewis Mountain, printed by F. Sachse and Co., and published by C. Bohn, 1856.*

*Figure 34. The earliest known photograph of the Lawn and Rotunda, taken in 1868. [MSS8116, Special Collections, UVA]*

*Detail of Figure 34, showing the bell centered at the base of the dome.*

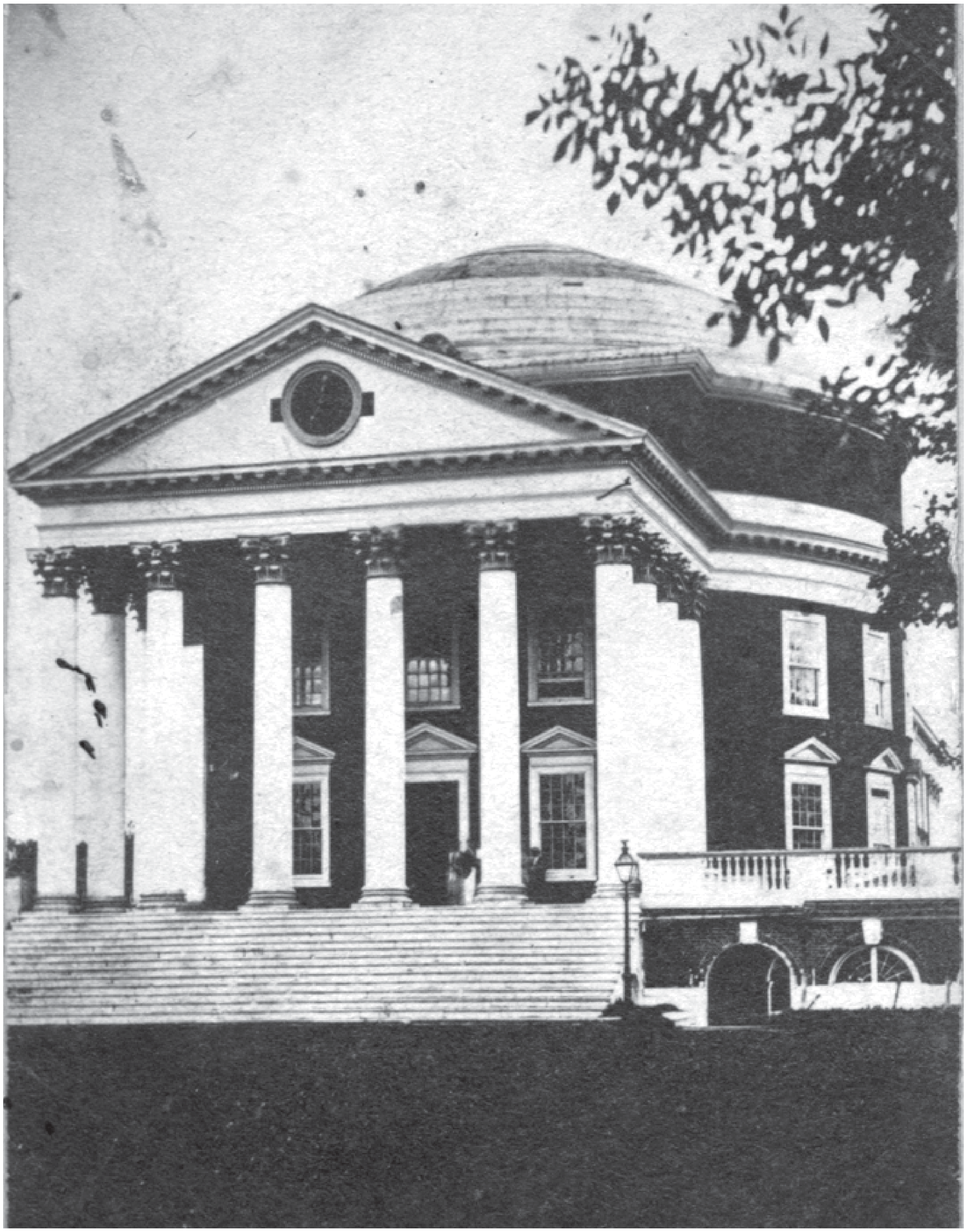


*Figure 35. View of the Rotunda from the south, in the early 1870s, showing the dome steps in place, from "A. F. Smith's Photographic Temple of Art, Lobban's Building, Main St., Charlottesville, VA." [MSS 12262, Special Collections, UVA]*

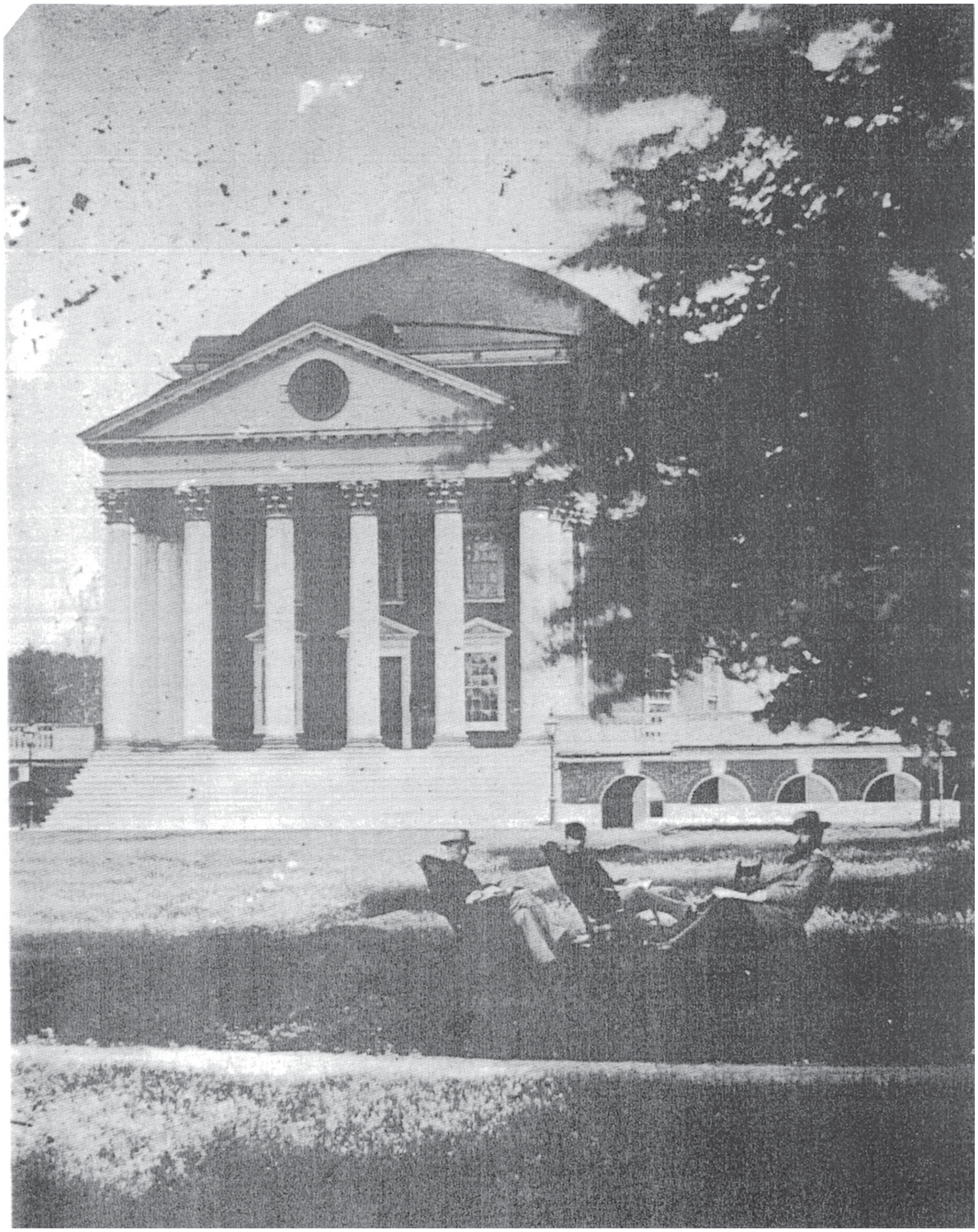


*Figure 36. The Rotunda from the south in the mid-1870s, photographed by George Huestis Cook. The dome steps are missing in this view. [Kocher, A. Lawrence and Howard Dearstyne. Shadows in Silver: A Record of Virginia, 1850-1900, In Contemporary Photographs Taken by George and Huestis Cook, With Additions from the Cook Collection. New York: Scribner, 1954.]*


*Figure 37. The Annex steps along the west side, looking toward the Rotunda, circa 1876. [MSS 1978, Special Collections, UVA]*


*Figure 38. View of Rotunda from the southeast, circa 1880, by Tyson & Perry. [MSS 798, Special Collections, UVA]*

*Figure 39. Northeast arched entrance through the rampart, looking south, circa 1891. [MSS 3750-b, Special Collections, UVA]*

*Figure 40. View of the Rotunda from the southwest, 1892 A lantern is positioned over the dome oculus. The balustrades are missing from the terrace wings. [MSS 7073, Special Collections, UVA]*

*Detail of Figure 40.*

*Figure 41. View of the south elevation of the Rotunda (top) and the Annex from the northeast (bottom), 1892. [Plates 45 and 46 from Joseph Everett Chandler, Colonial Architecture in Maryland, Pennsylvania, and Virginia]*

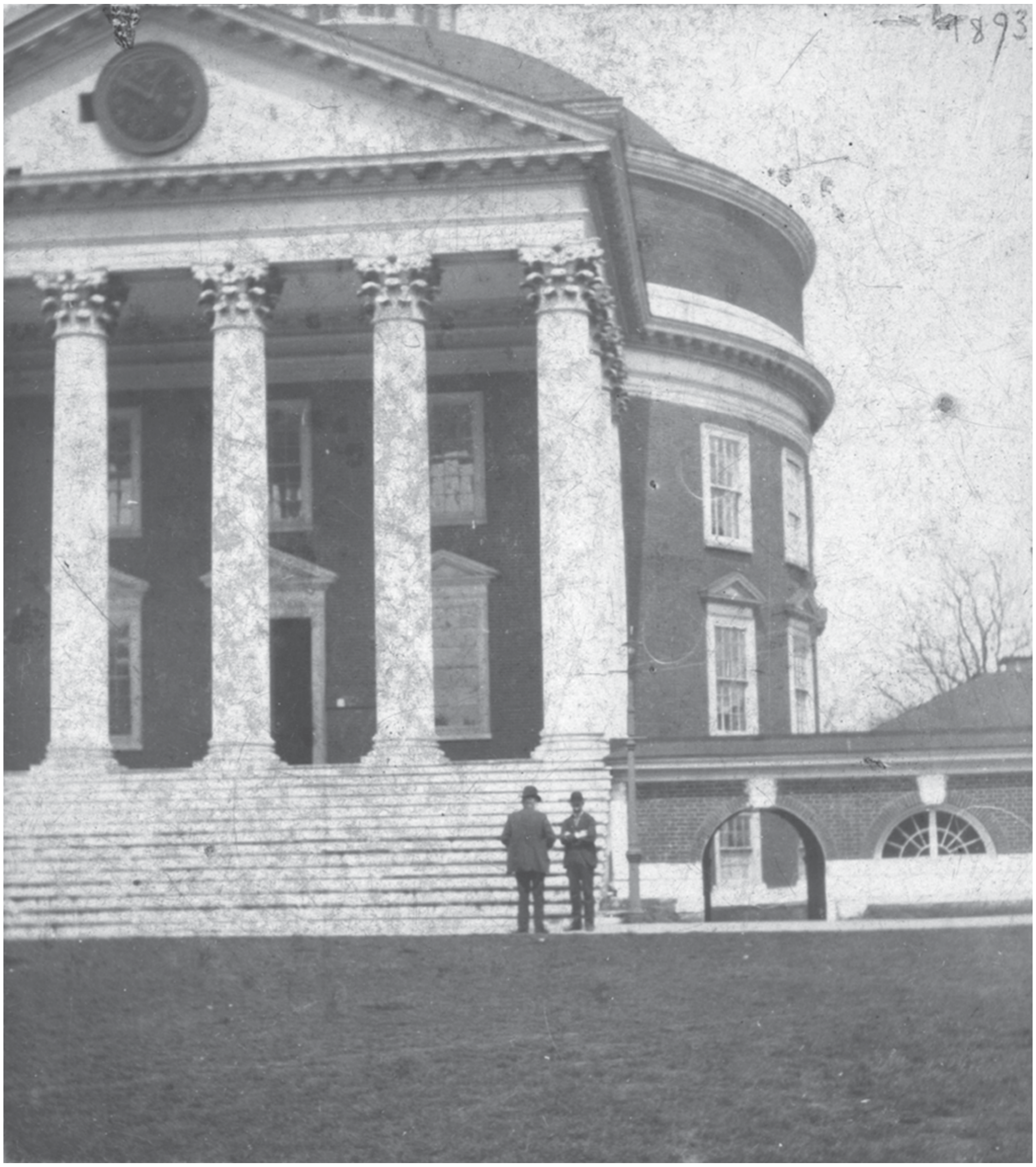



*Figure 42. View of the Rotunda and east terrace, from the south, 1893. [Special Collections, UVA]*

*Figure 43. Areaway in front of the southwest terrace, before the fire. [Special Collections, UVA]*

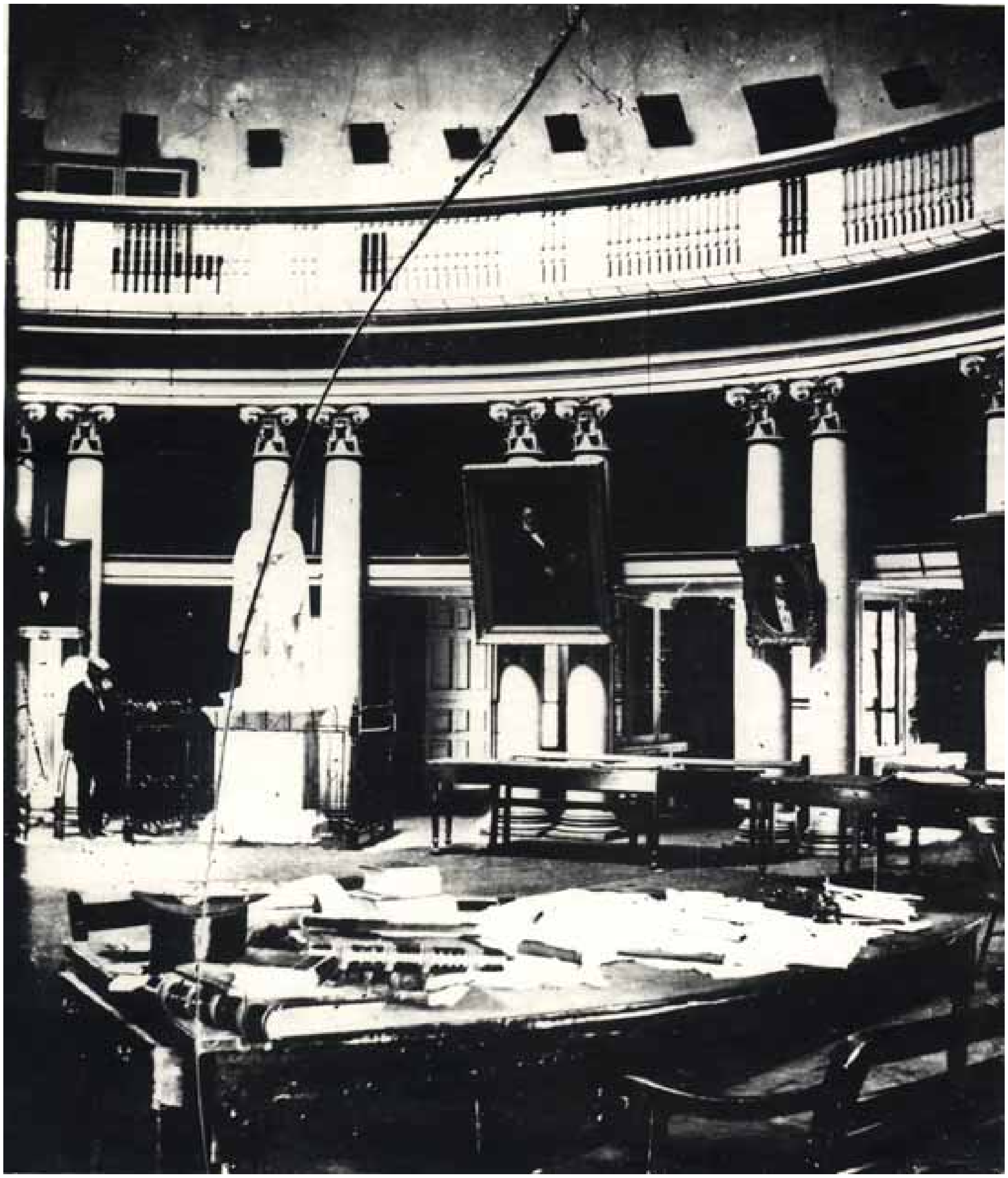


*Figure 44. Interior of the Dome Room, before the 1895 fire. This may be the earliest view of the library, since the clock is not yet in place. Note the original curved tables from 1827. [Copy from Special Collections, UVA; original negative, Valentine Museum, Richmond, VA]*

*Figure 45. The Dome Room, 1890, photographed by Kenneth Brown. This photograph, discovered during the mid-1970s work, clearly shows the floorboards laid east/west. [Special Collections, UVA]*

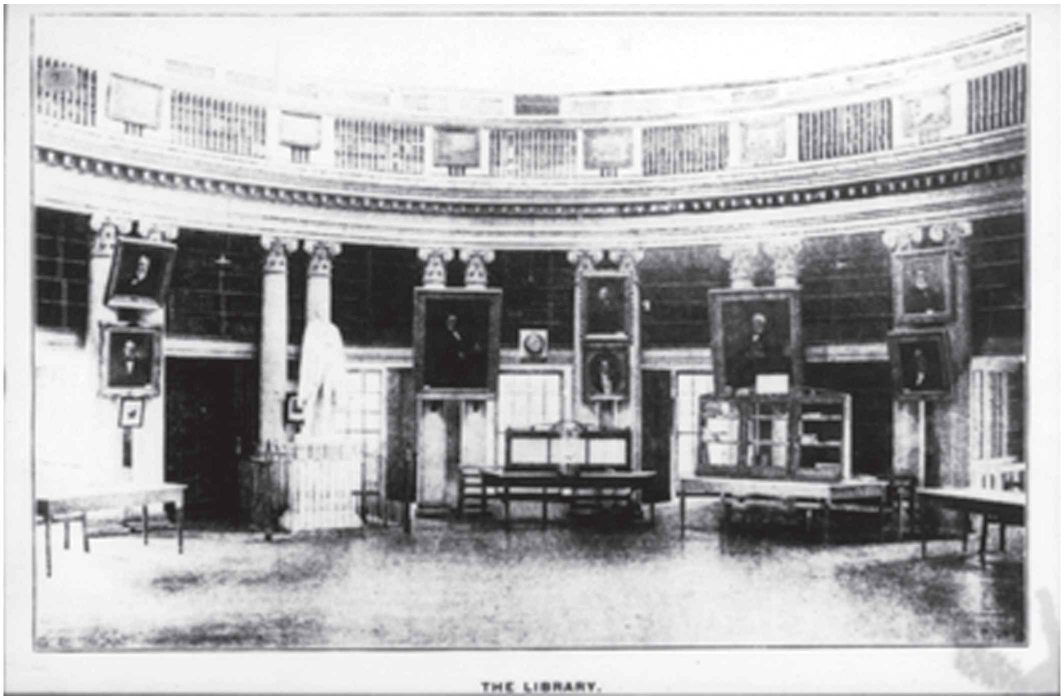



*Figure 46. The Dome Room, looking north, before the 1895 fire. [Special Collections, UVA]*

*Figure 47. View of the Galt statue in the Dome Room before the 1895 fire. [Special Collections, UVA]*

*Figure 48. Image of the Alexander Galt statue of Jefferson in the Dome Room (and one of the best images of an original bookcase), before the 1895 fire. [MSS 7327, Special Collections, UVA]*

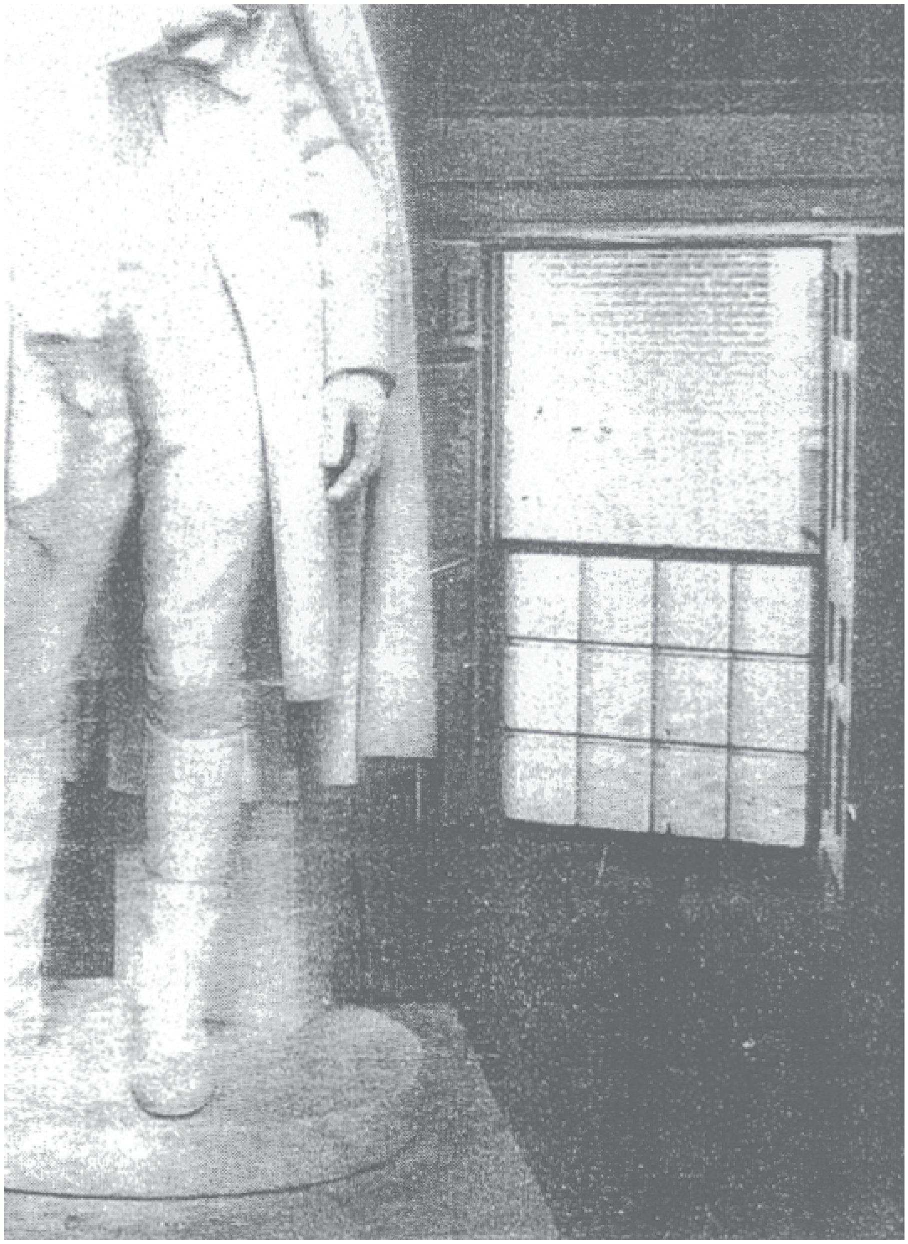


*Figure 49. View of the northwest window of the Dome Room, before the 1895 fire. The open sash looks out onto the south facade of the Mills Annex. [Special Collections, UVA]*

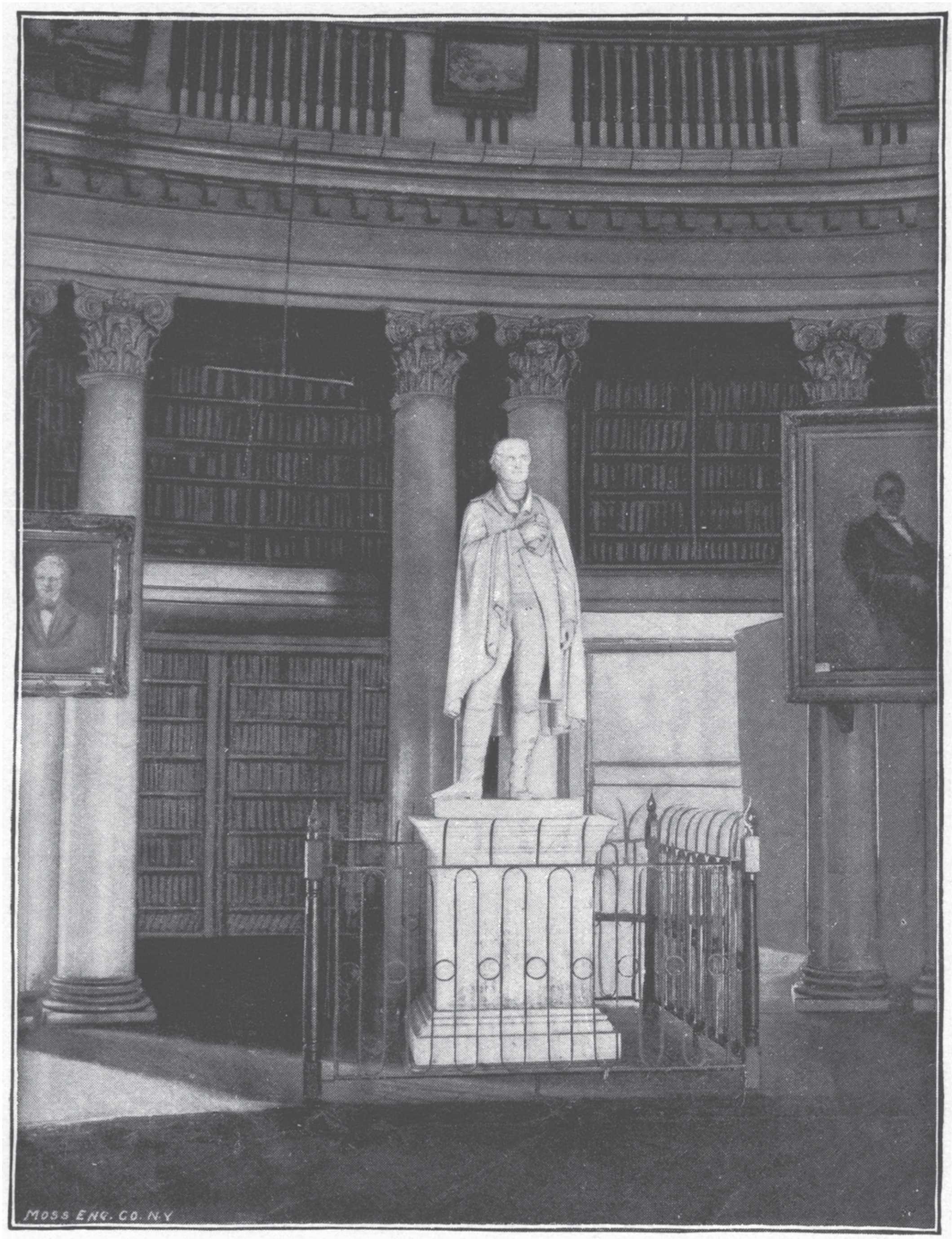



*Figure 50. Interior of the Dome Room, before the 1895 fire. Note the bookshelves against the north wall. Engraving by Moss Eng. Co., NY. [Special Collections, UVA]*

*Figure 51. Illustration of the Dome Room from the 1894 Corks & Curls , p. 193.*

*Figure 52. The Public Hall in the Annex, looking towards Balze's copy of the "School of Athens," April 13, 1867. [MSS 6436, Special Collections, UVA]*

*Figure 53. The Public Hall in the Annex, looking towards Balze's copy of the "School of Athens," before the 1895 fire. [Special Collections, UVA]*


*Figure 54. The Rotunda during the fire, 1895, photographed by Wampler. [RG-30/1/3.831 item 1, Special Collections, UVA]*

*Figure 55. The Rotunda during the fire, 1895, by Holsinger Studio (above); and a detail of the Rotunda from the photograph (below). [Holsinger Studio Collection, Special Collections, UVA]*

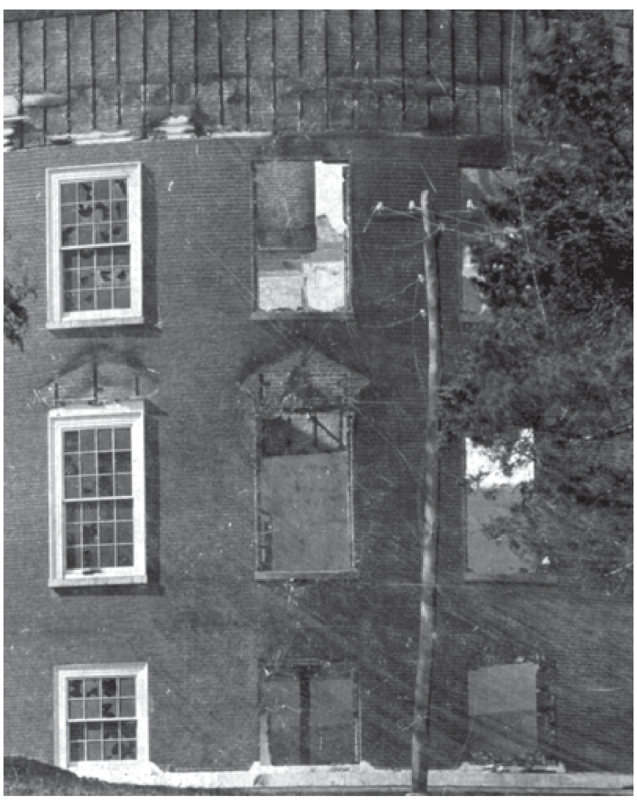
*Figure 56. The Rotunda from the east, during the fire, 1895. [MSS 8050, Special Collections, UVA]*

*Figure 57. The Rotunda immediately after the fire, Monday, October 28, 1895 (above), and a detail of the photograph (below). [Manuscripts Department, Alderman Library, UVA]*

*Figure 58. View of the Rotunda from the west, after the fire, 1895; photographed by Wampler. [RG-30/1/3.813 item 2, Special Collections, UVA]*

*Detail of Figure 58, with contrast increased to show the details of the window reveals and the round openings in the west face of the south portico.*

*Figure 59. View of the Rotunda, from the east, after the fire, 1895 (above); and detail of east facade (below). [Special Collections, UVA]*



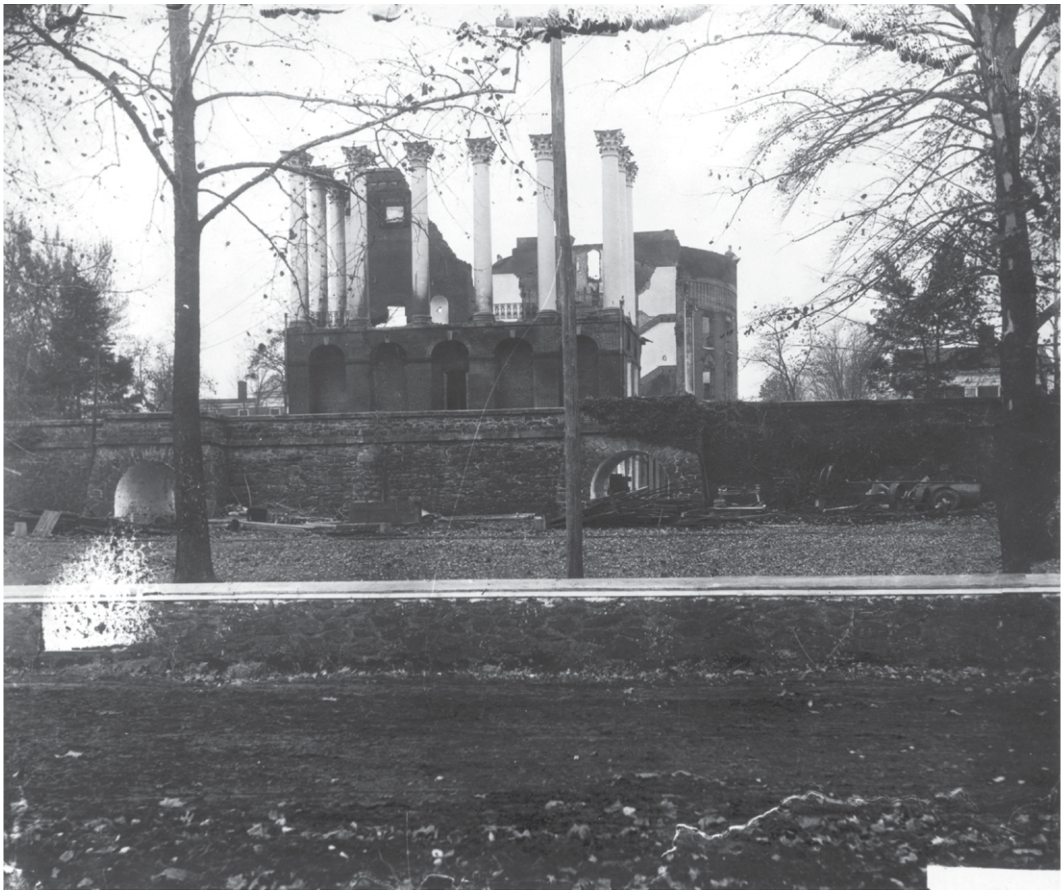


*Figure 60. View of the Annex and Rotunda from the north, after the fire, 1895. [MSS 7073, Special Collections, UVA]*

*Detail of Figure 60.*

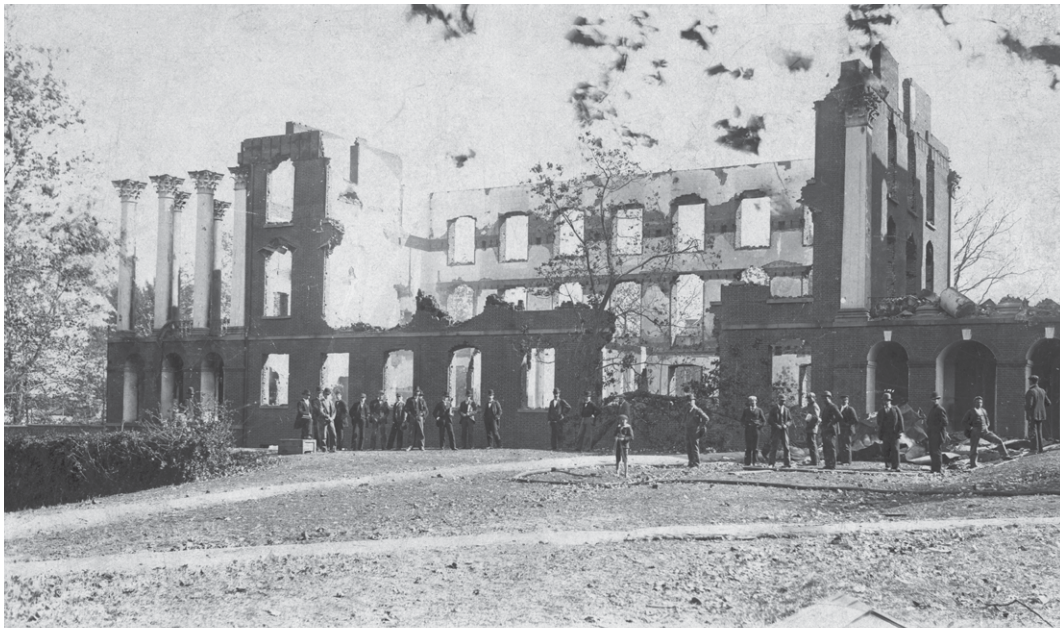
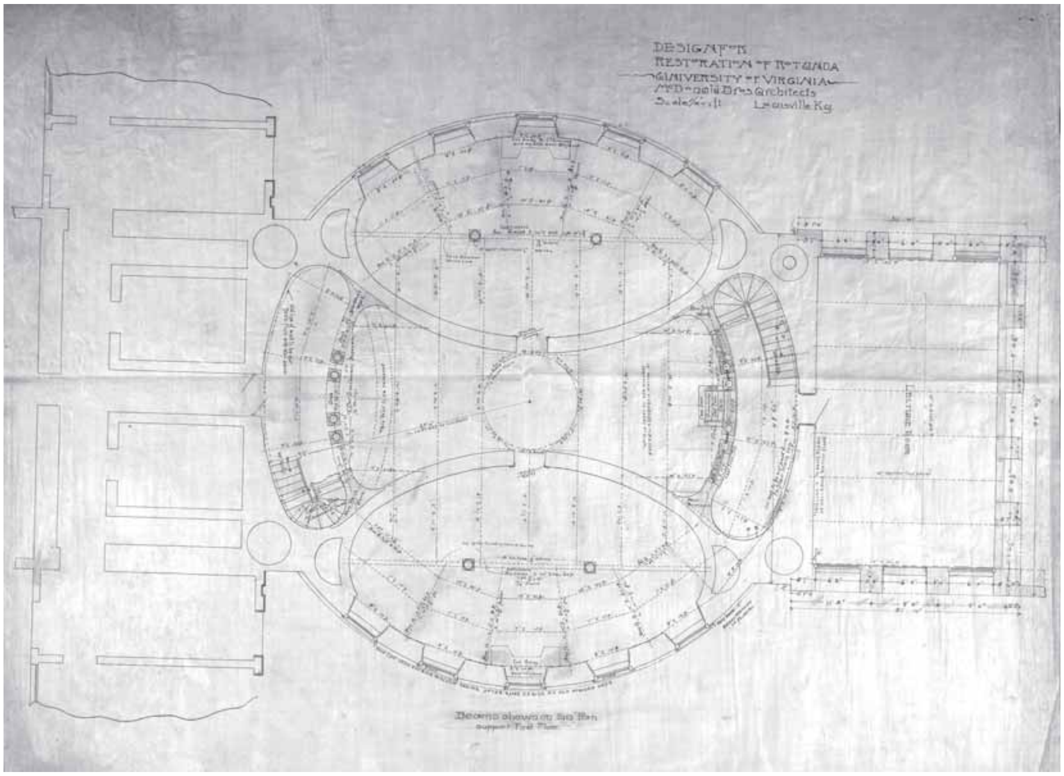


*Figure 61. The Annex after the fire, from the southwest, 1895, photographed by Rufus Holsinger. [Special Collections, UVA]*

*Figure 62. The Annex, from the southeast, after the fire, 1895. [Special Collections, UVA]*

*Figure 63. View of the Annex and Rotunda, from the northwest, October 27, 1895; photograph by Wampler. [MSS 9292-a, prints #57, item 2, Special Collections, UVA]*



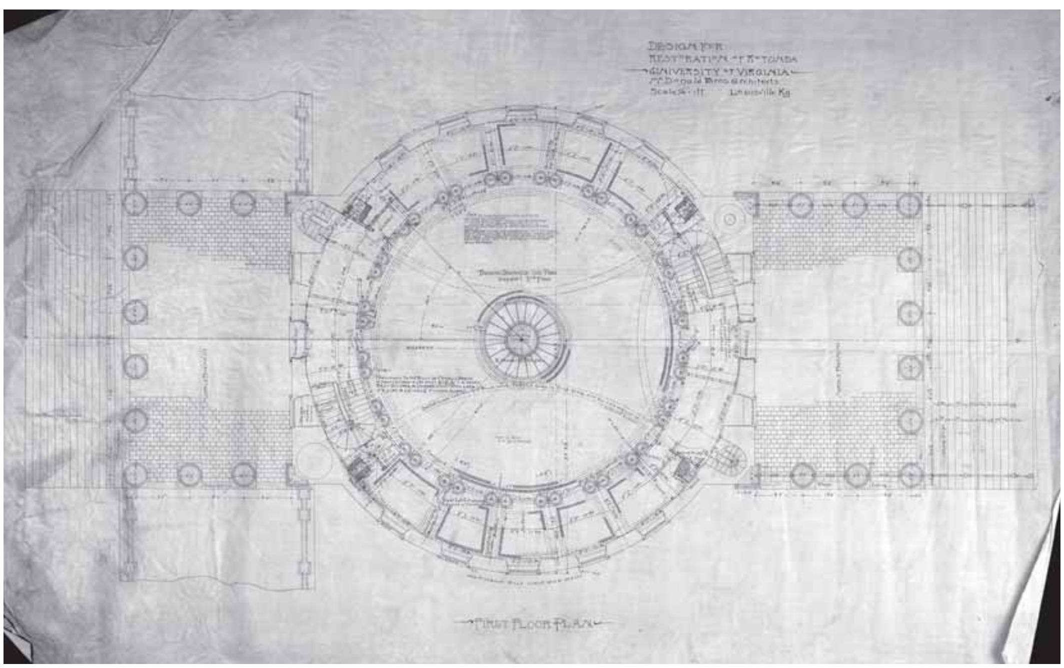




*Figure 64. McDonald Brothers ground floor plan (top) and first floor plan (bottom), circa 1895. [Special Collections, UVA]*

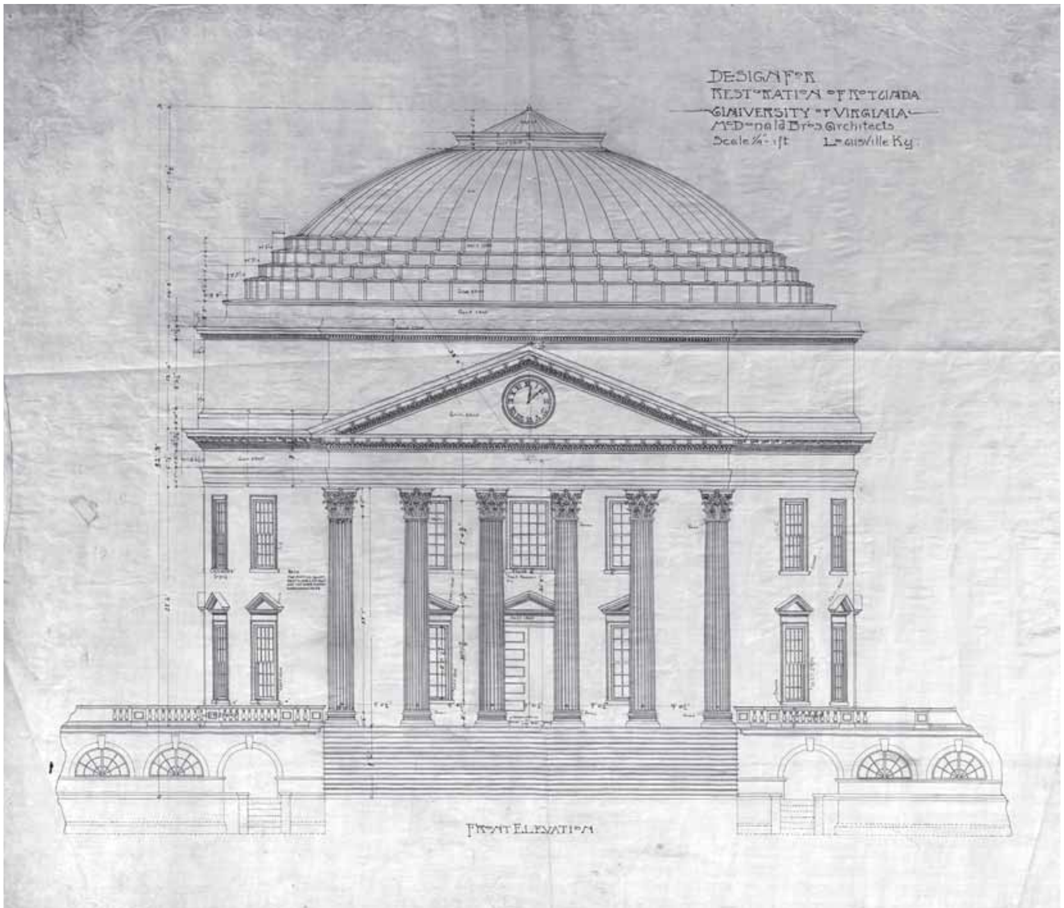



*Figure 65. McDonald Brothers drawing for the restoration of the south elevation. [Special Collections, UVA]*

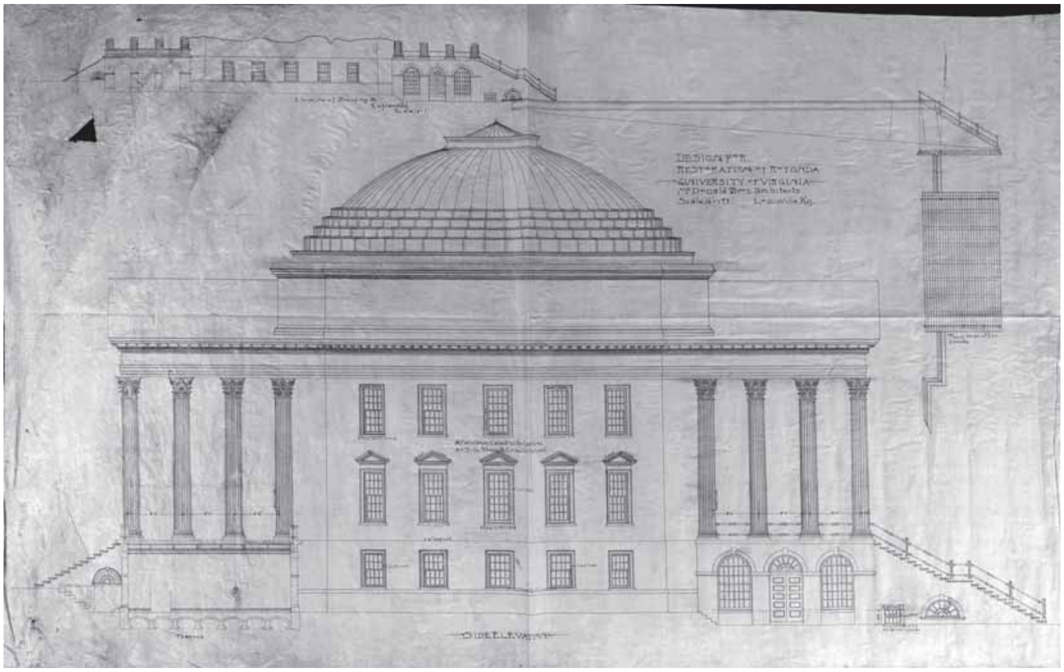


*Figure 66. McDonald Brothers drawing for the restoration of the east elevation. McDonald Brothers recommended that the rear (north) elevation receive a portico  that mirrored the south portico.[Special Collections, UVA]*

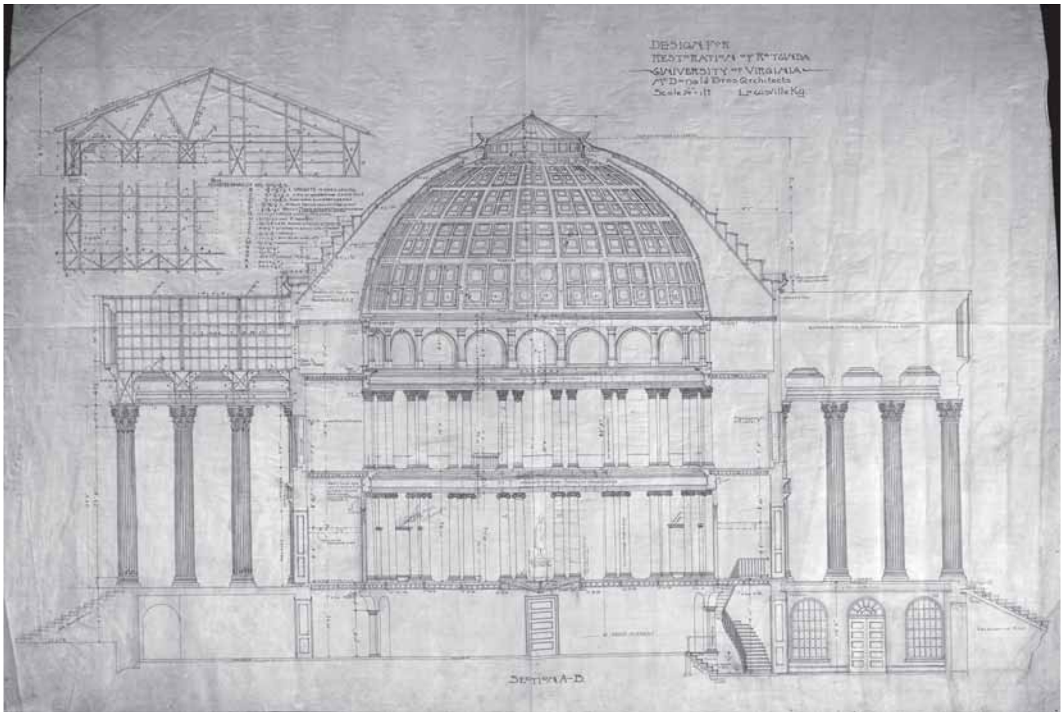



*Figure 67. McDonald Brothers section, looking west through the building. [Special Collections, UVA]*

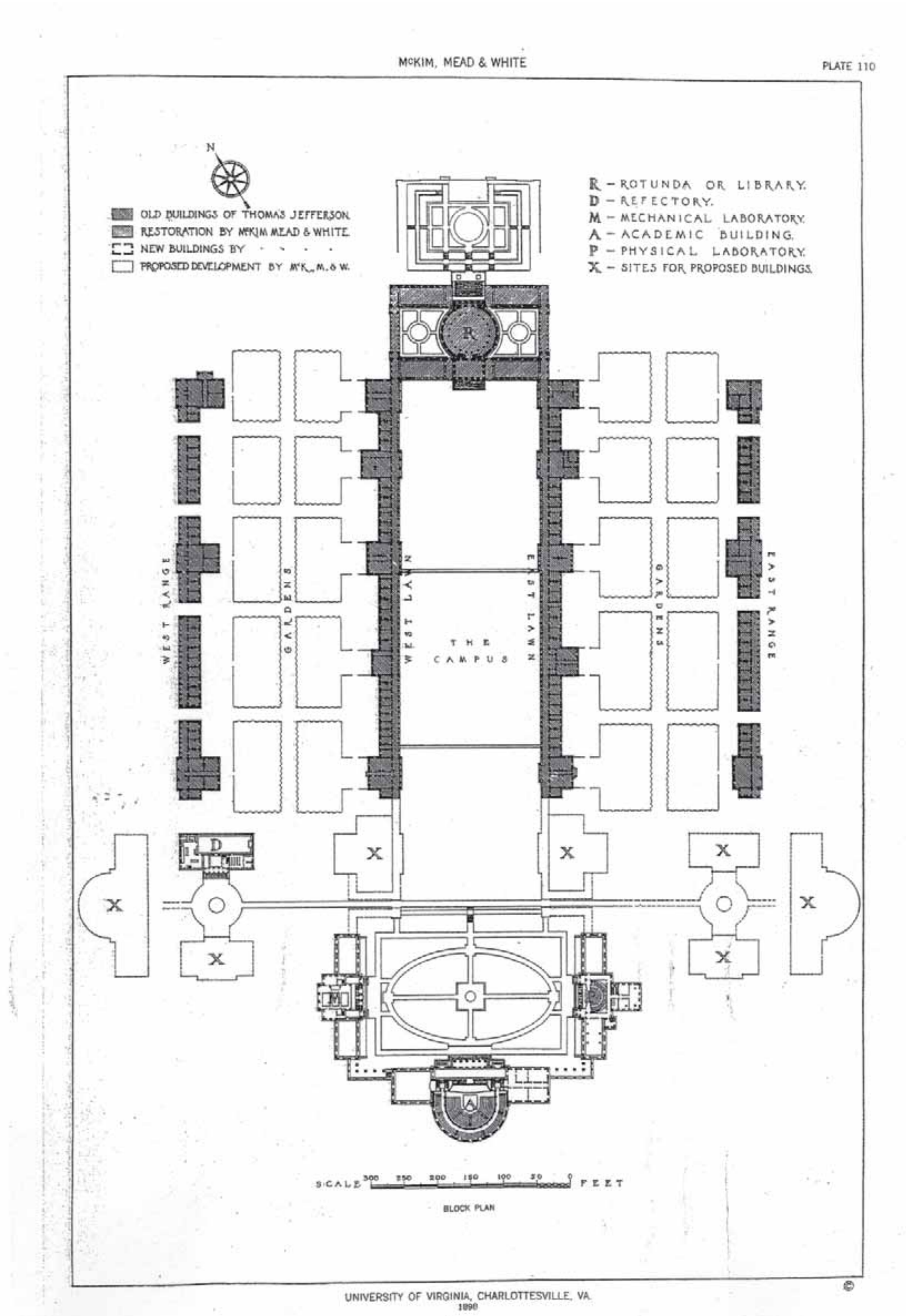



*Figure 68. McKim Mead & White plan for the Lawn, including Cabell, Cocke, and Rouss Halls in 1898.*

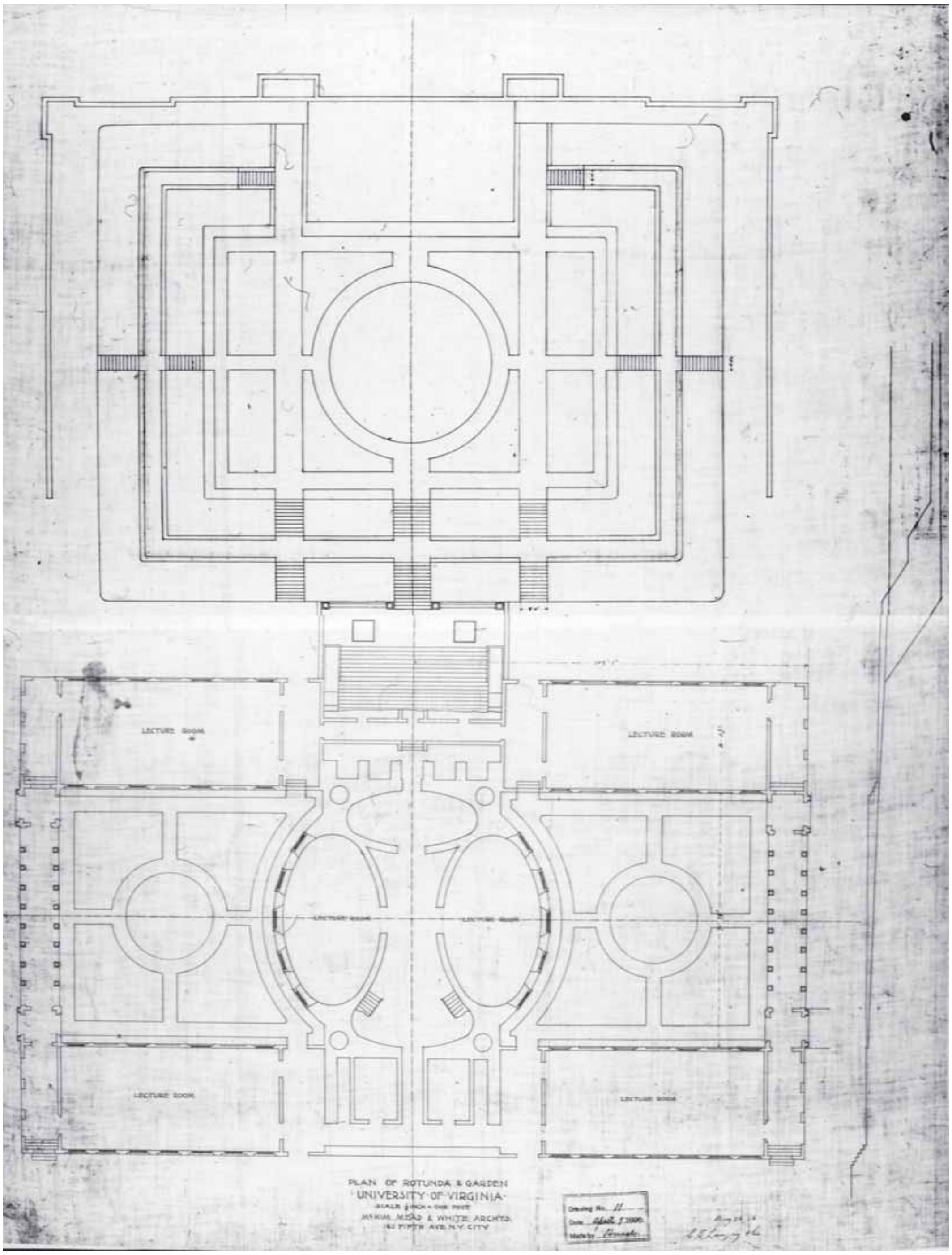



*Figure 69. McKim Mead & White site plan for the Rotunda. [Special Collections, UVA]*

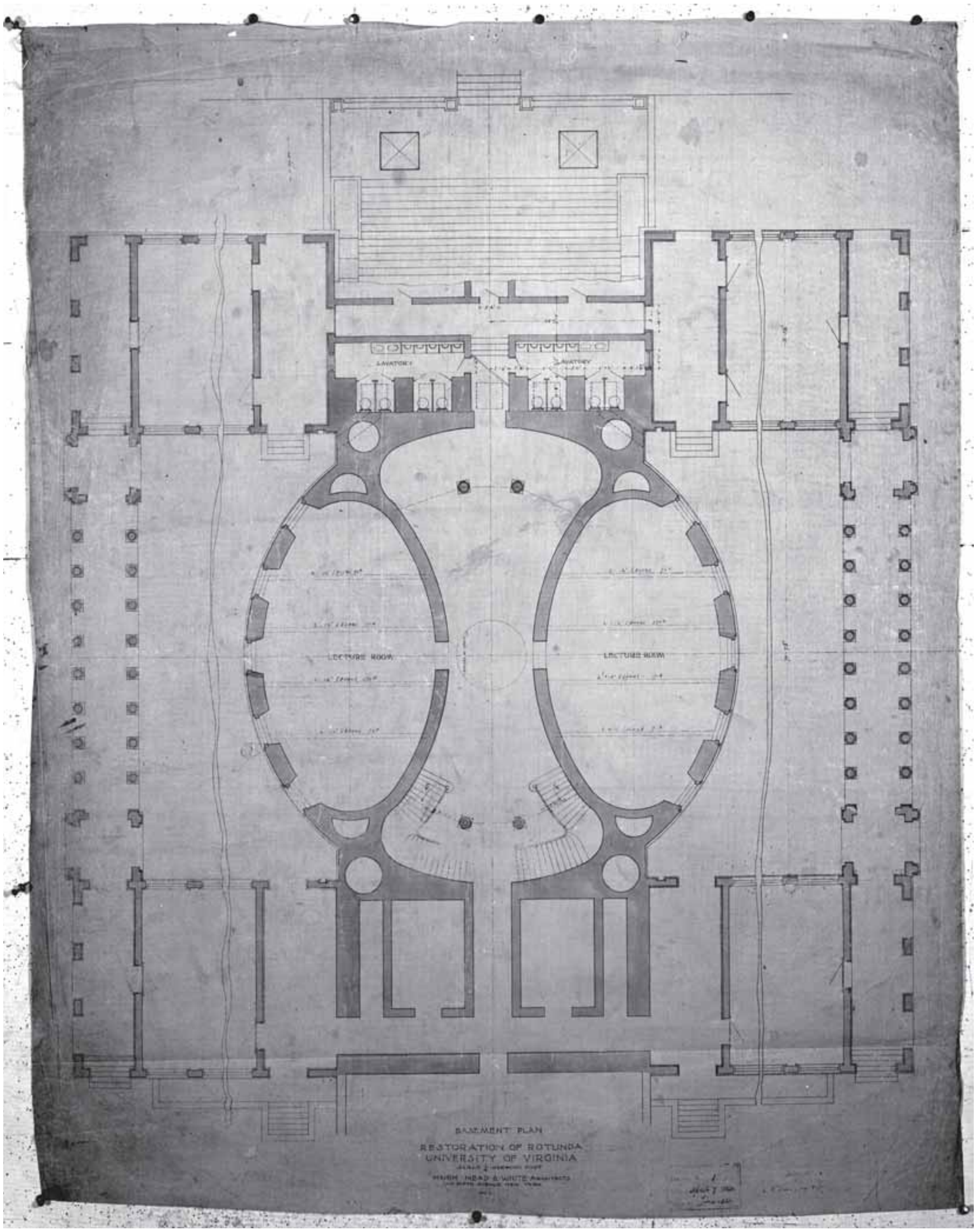



*Figure 70. McKim Mead & White ground floor plan for the Rotunda. [Special Collections, UVA]*

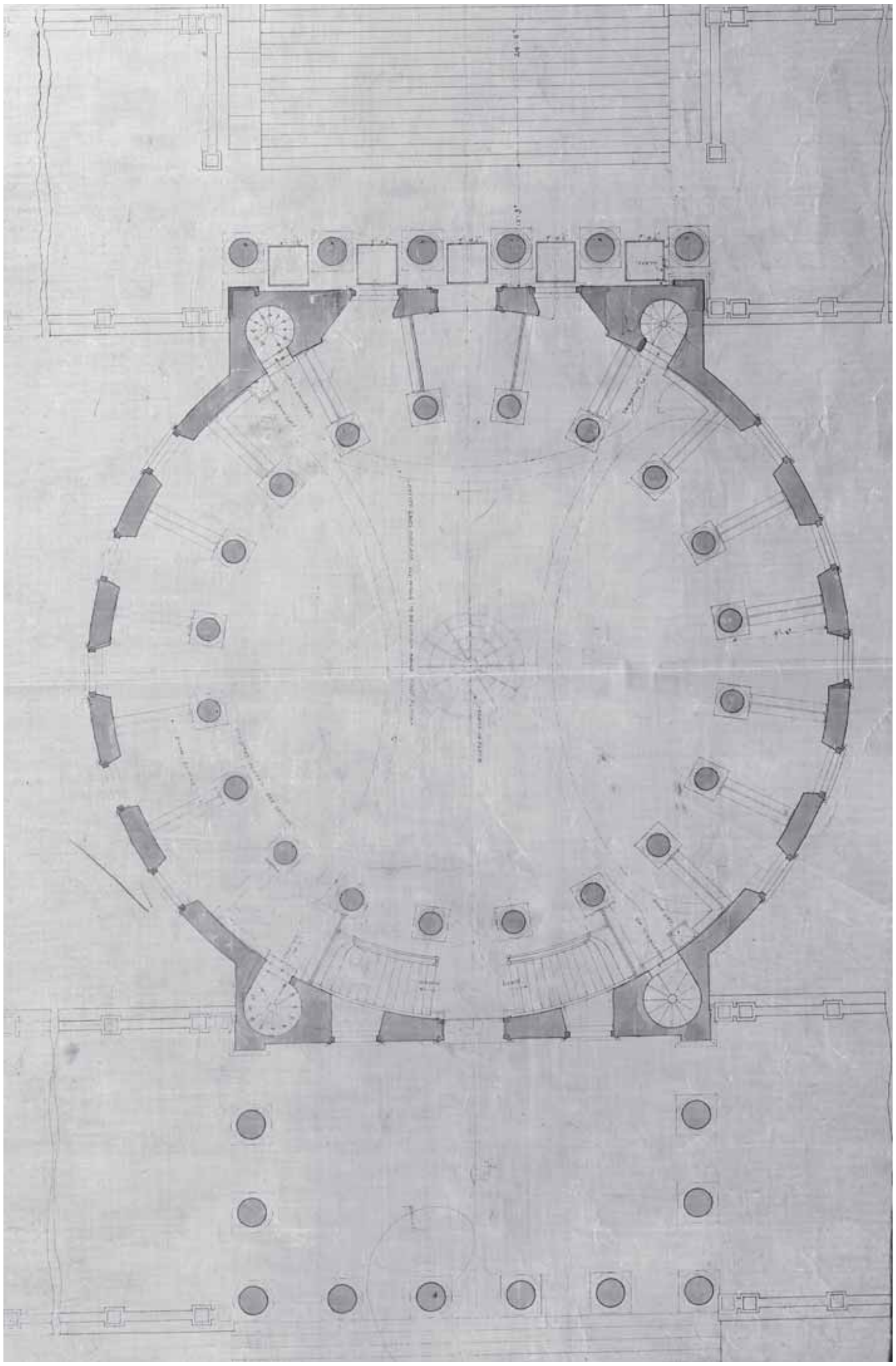


*Figure 71. McKim Mead & White first floor plan of the Dome Room. [Special Collections, UVA]*

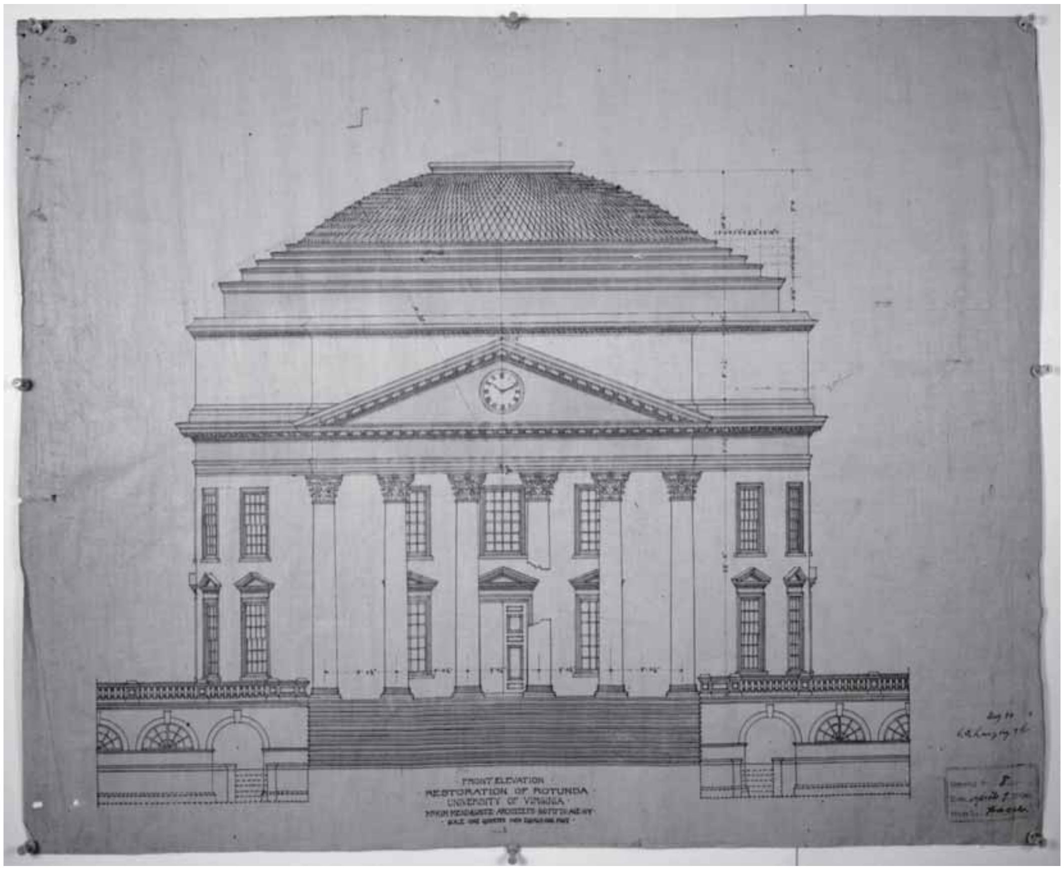



*Figure 72. McKim Mead & White drawing of the south elevation. [Special Collections, UVA]*

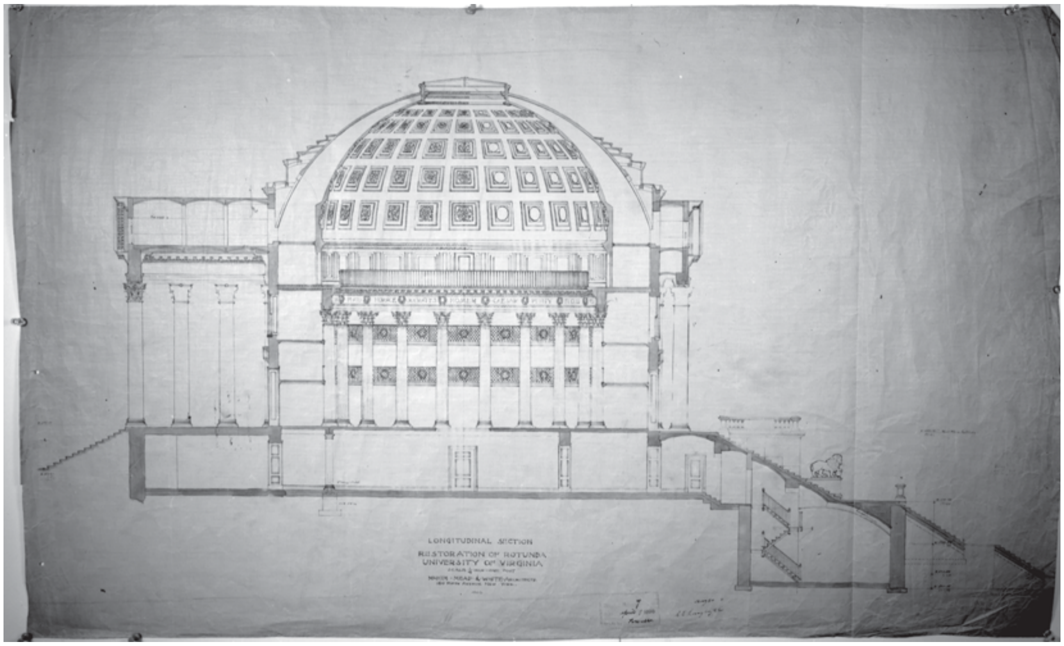



*Figure 73. McKim Mead & White section, looking west. [Special Collections, UVA]*

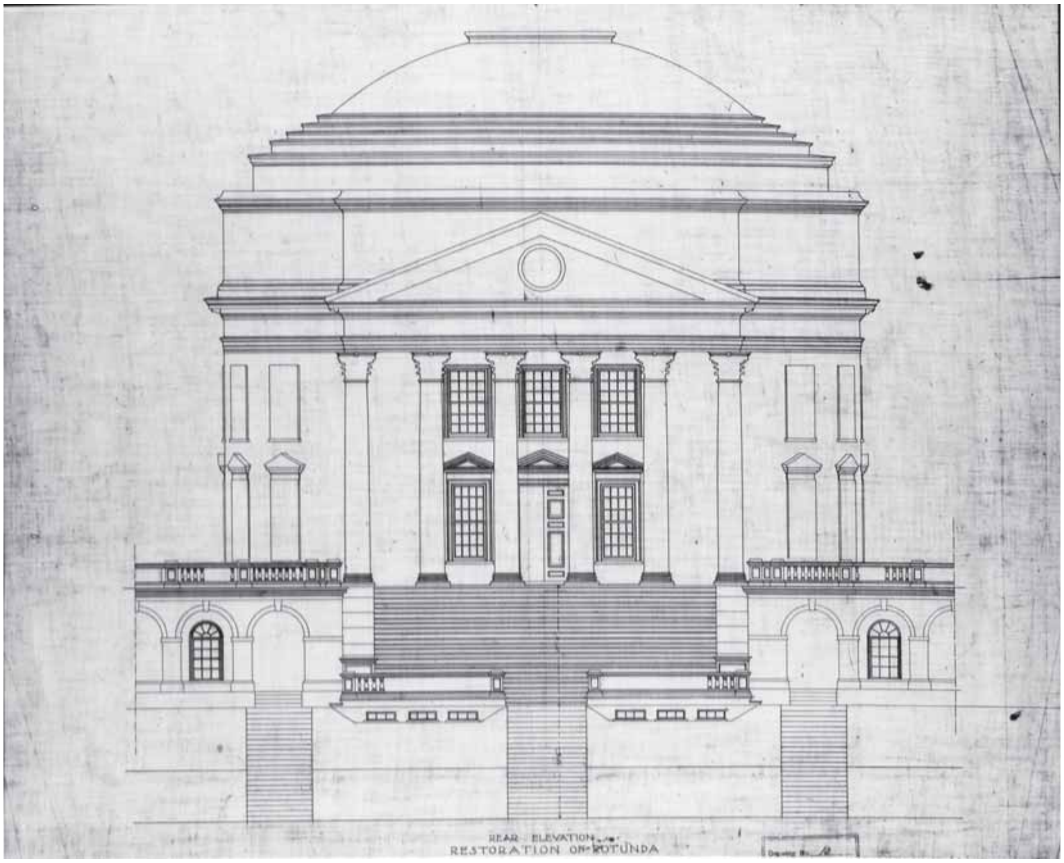



*Figure 74. McKim Mead & White drawing of the north elevation. [Special Collections, UVA]*

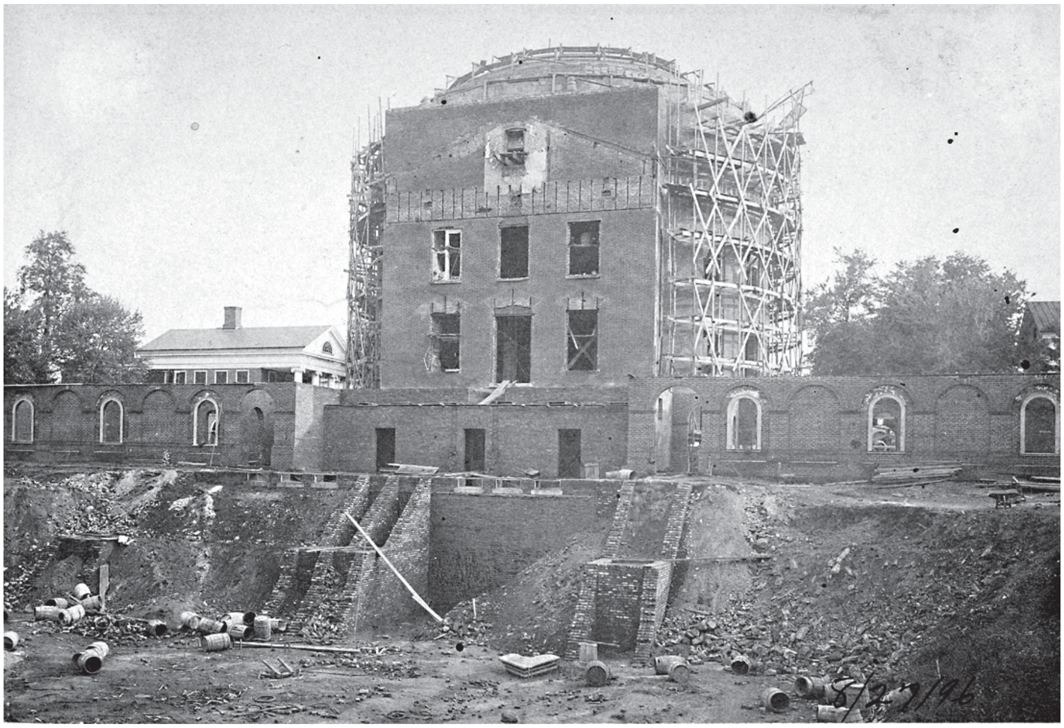


*Figure 75. View of the Rotunda under construction, from the north, August 27, 1896. [Avery Library]*

*Detail of Figure 75. Construction evidence revealed in this image indicates that the upper section of the entablature did not wrap around onto the north elevation; rather, Jefferson placed a full pediment on this elevation.*

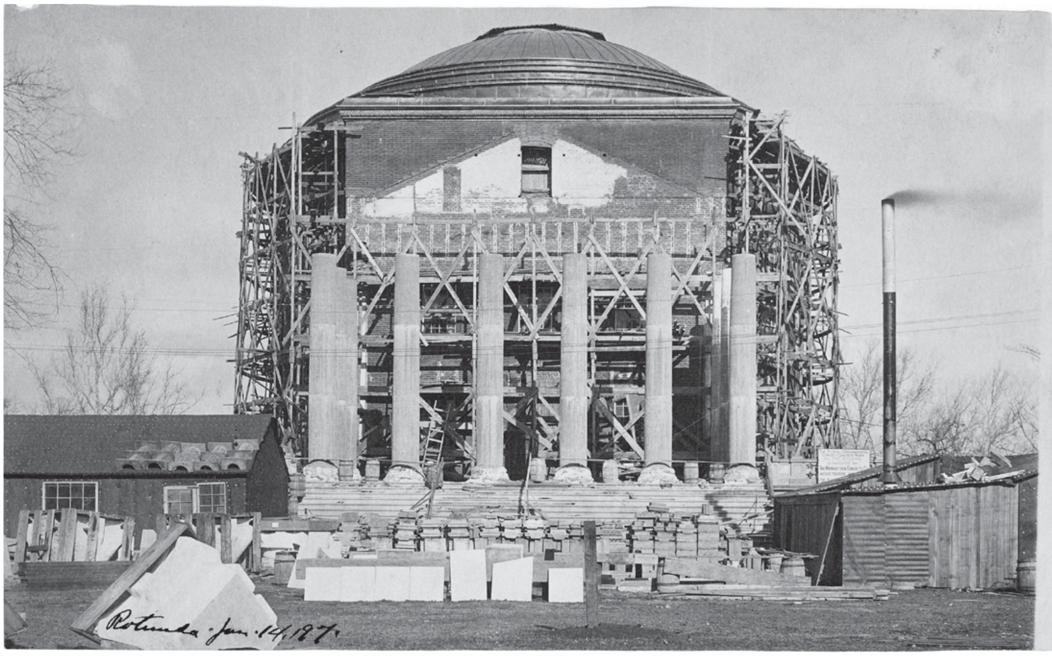



*Figure 76. View of the Rotunda under construction, from the south. [Avery Library]*

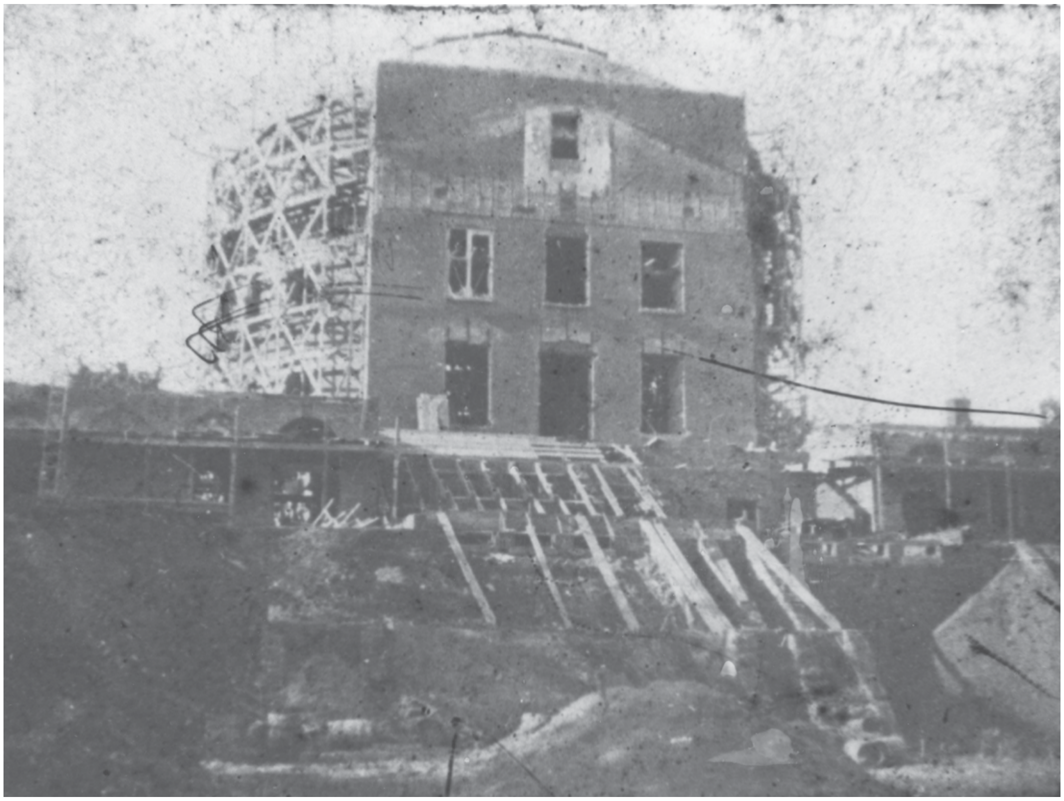


*Figure 77. The Rotunda under construction, from the north, 1896, from the Turner Family album. [MSS 10622, Special Collections, UVA]*

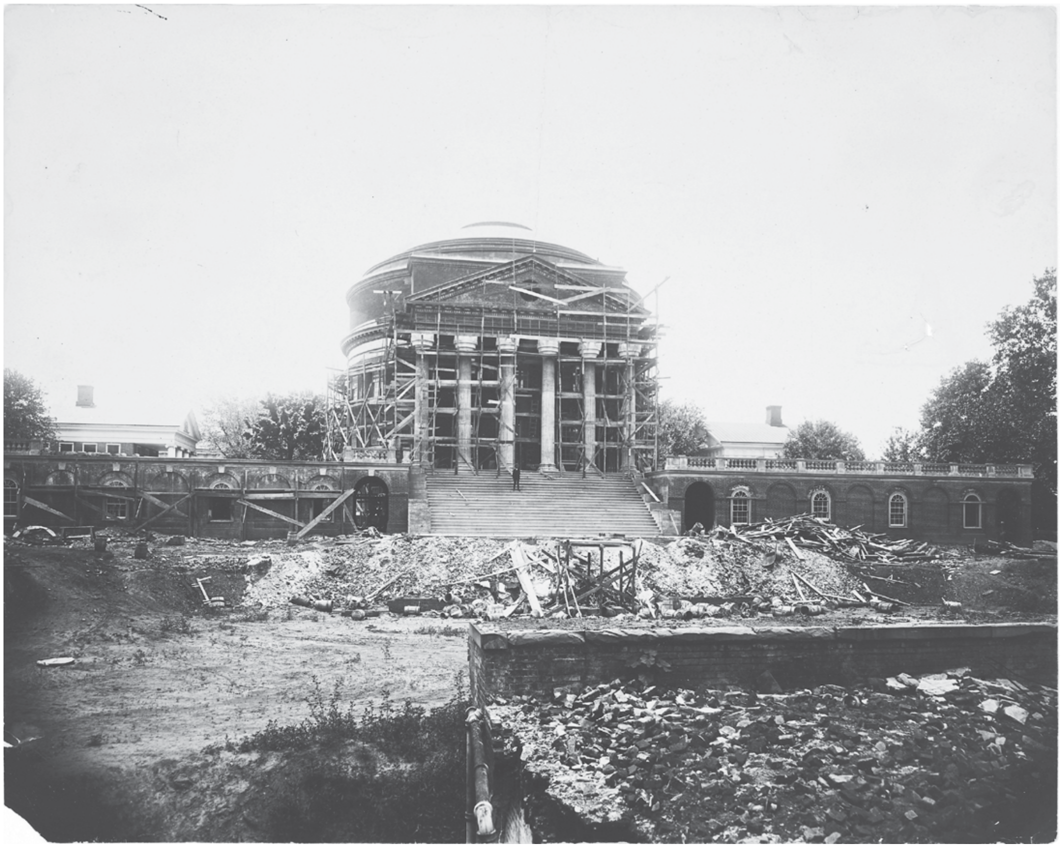


*Figure 78. View of the Rotunda under construction, from the north. [Avery Library]*

*Figure 79. View of the Rotunda and colonnade from the east, after the post-fire construction. [New-York Historical Society]*

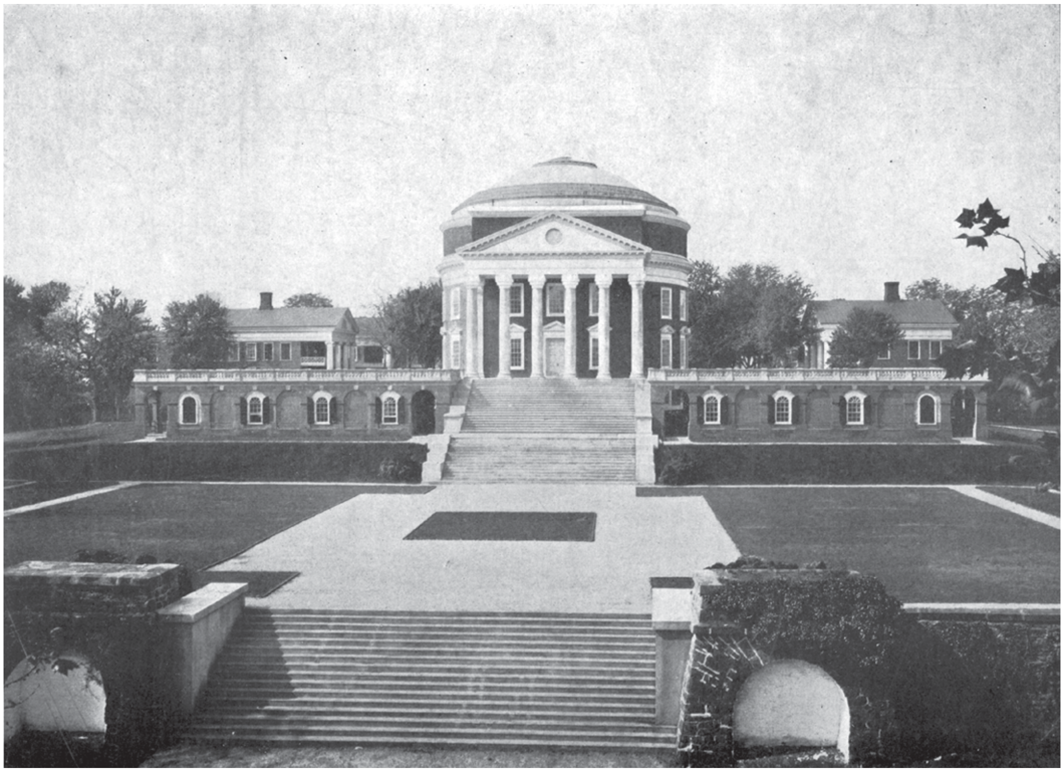


*Figure 80. View of the Rotunda and terraces from the north, 1898. [Special Collections, UVA]*

*Figure 81. Interior of the McKim Mead & White Dome Room under construction. [Avery Library]*

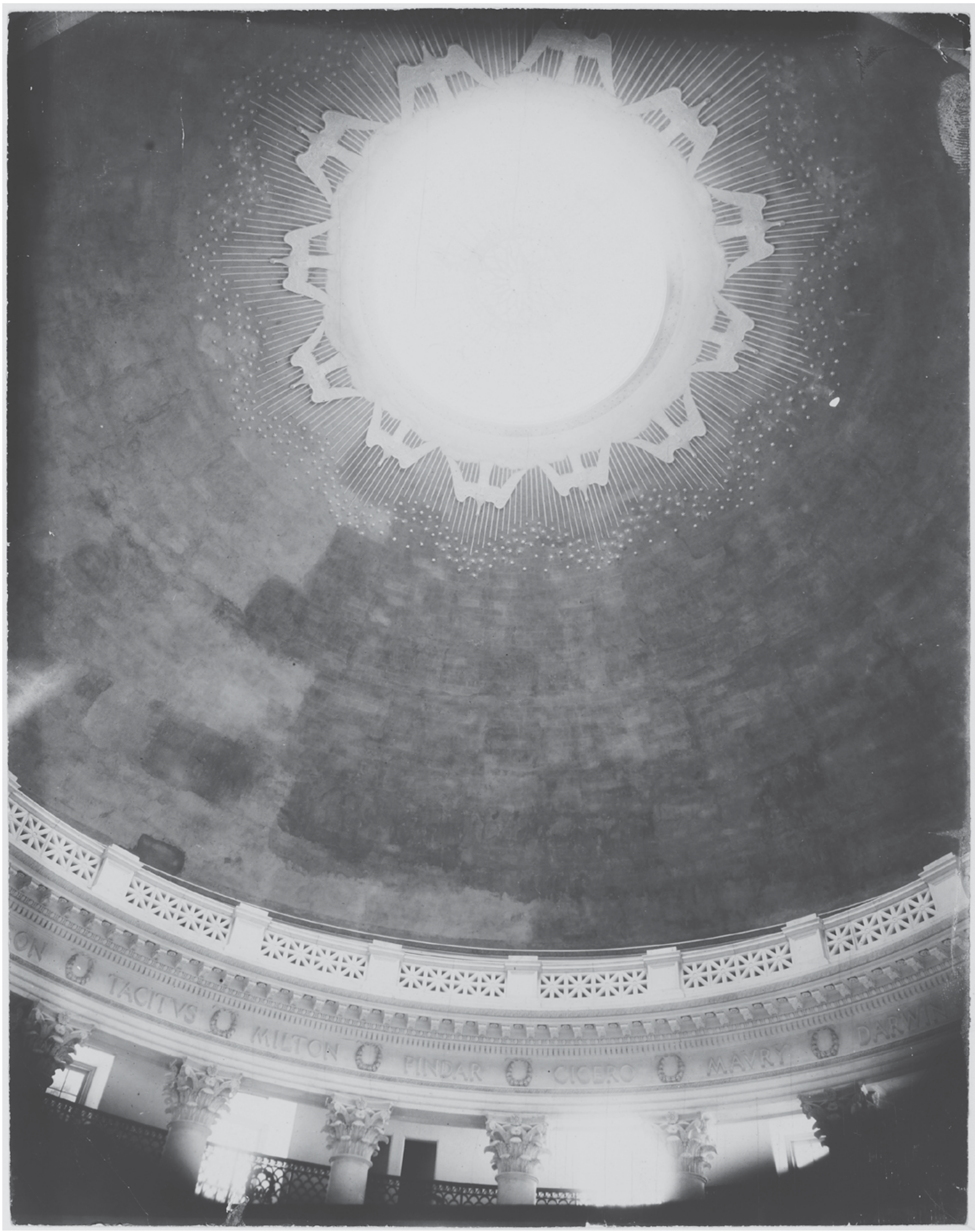



*Figure 82. View of the McKim Mead & White Dome Room ceiling and skylight, November 8, 1897. [Avery Library]*

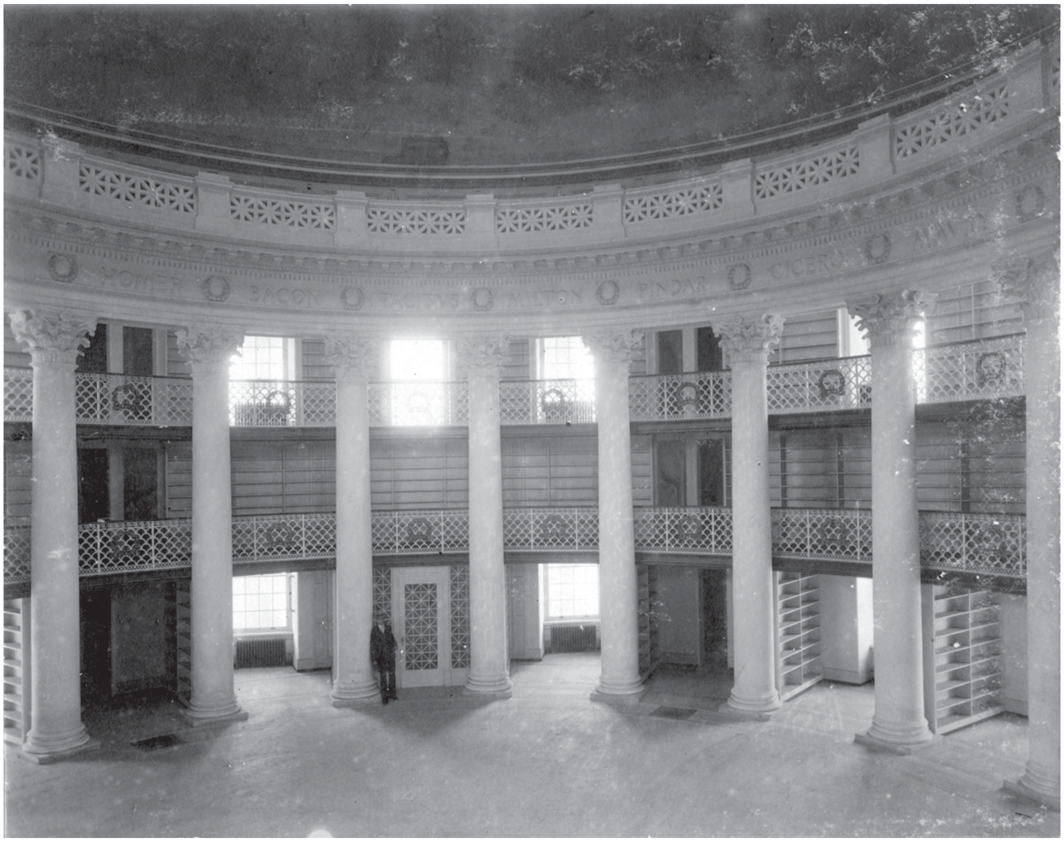



*Figure 83. McKim Mead & White Dome Room interior, circa 1898. [New-York Historical Society]*


*Figure 84. McKim Mead & White Dome Room interior, showing the upper galleries, circa 1898. [New-York Historical Society]*

*Figure 85. The McKim Mead & White Doom Room, pre-1938[?]. [Special Collections, UVA]*

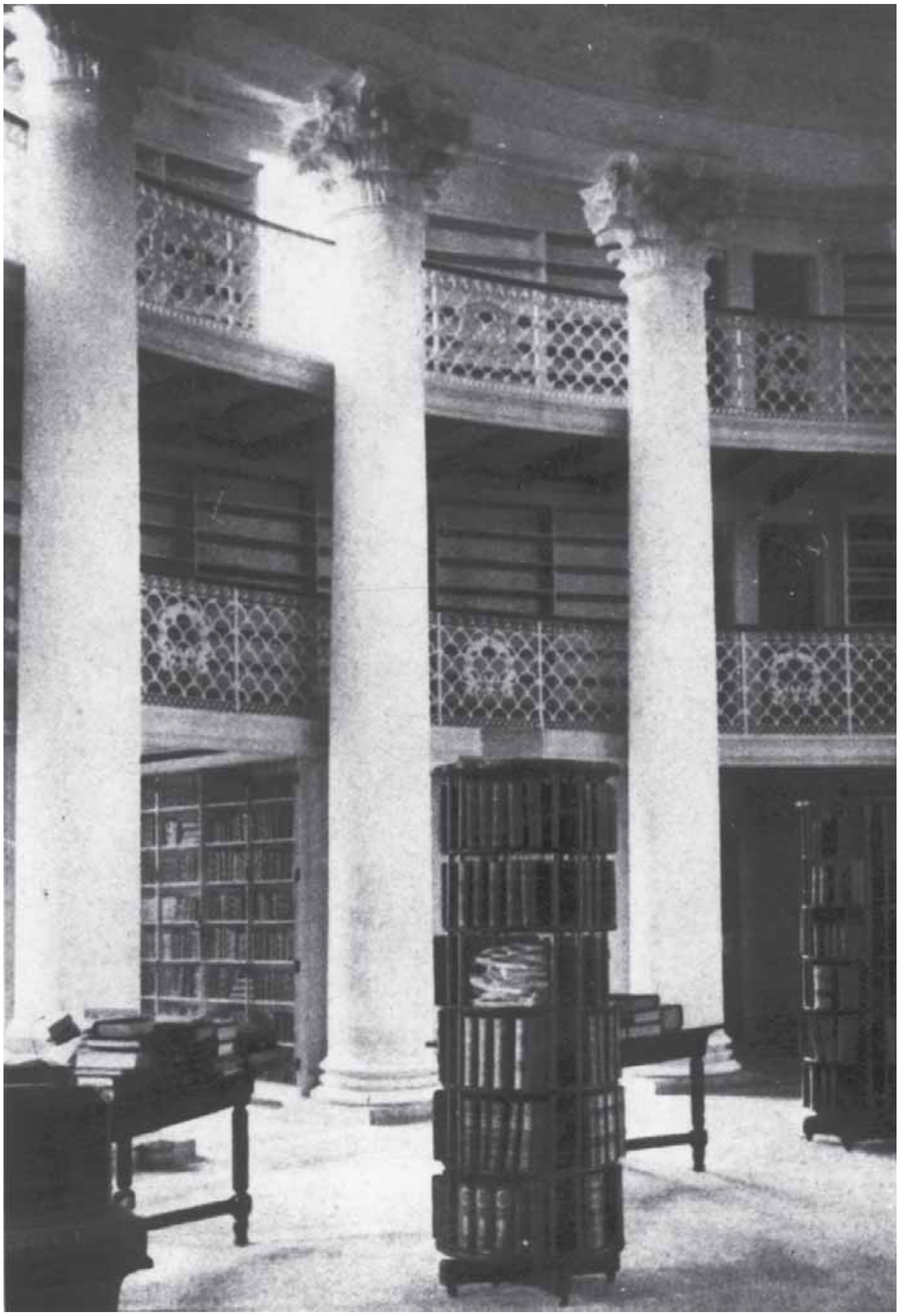


*Figure 86. McKim Mead & White Dome Room. [Special Collections, UVA]*

*Figure 87. View of the McKim Mead & White ground floor stair hall, looking south. [Special Collections, UVA]*

*Figure 88. View of the Rotunda and Pavilion I, looking west, March 16, 1914. The portico ceiling features a plaster eagle ornament. [Holsinger Studio Collection, Special Collections, UVA]*

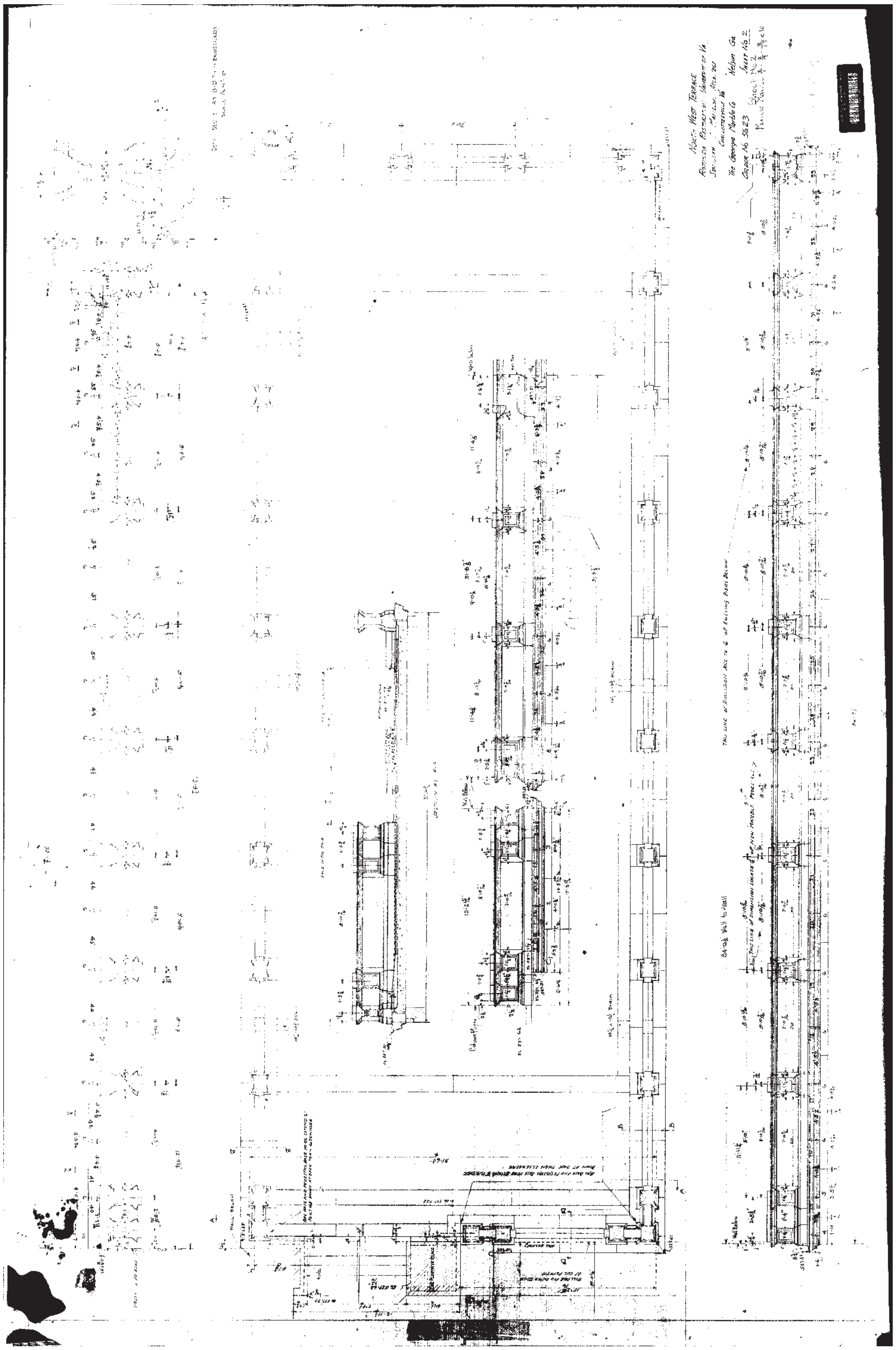


*Figure 89. Sheet No. 2 of the drawings by Stanislaw J. Makielski for the reconstruction of the terrace balustrade, 1939. [FP&C Resource Center, UVA]*

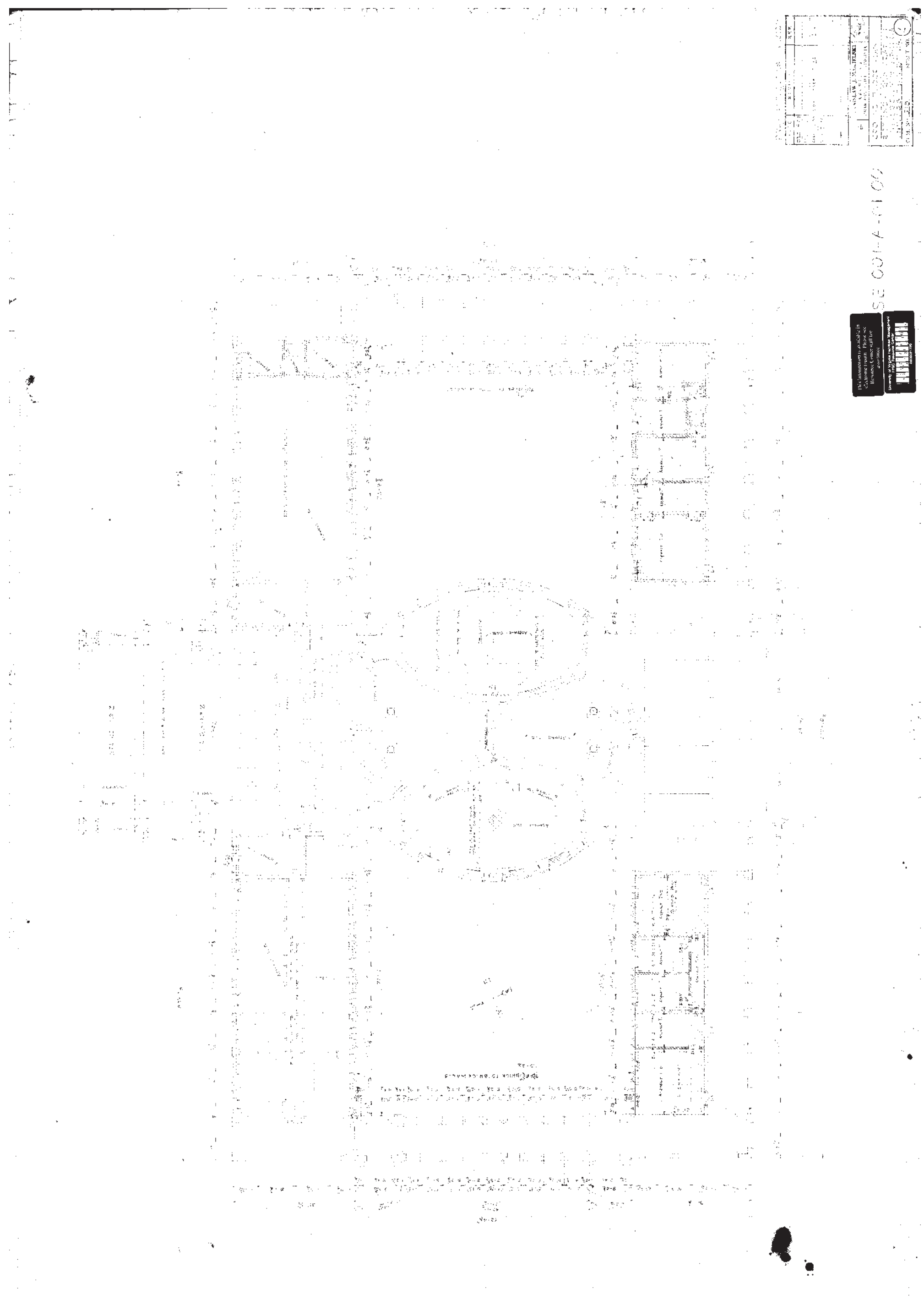
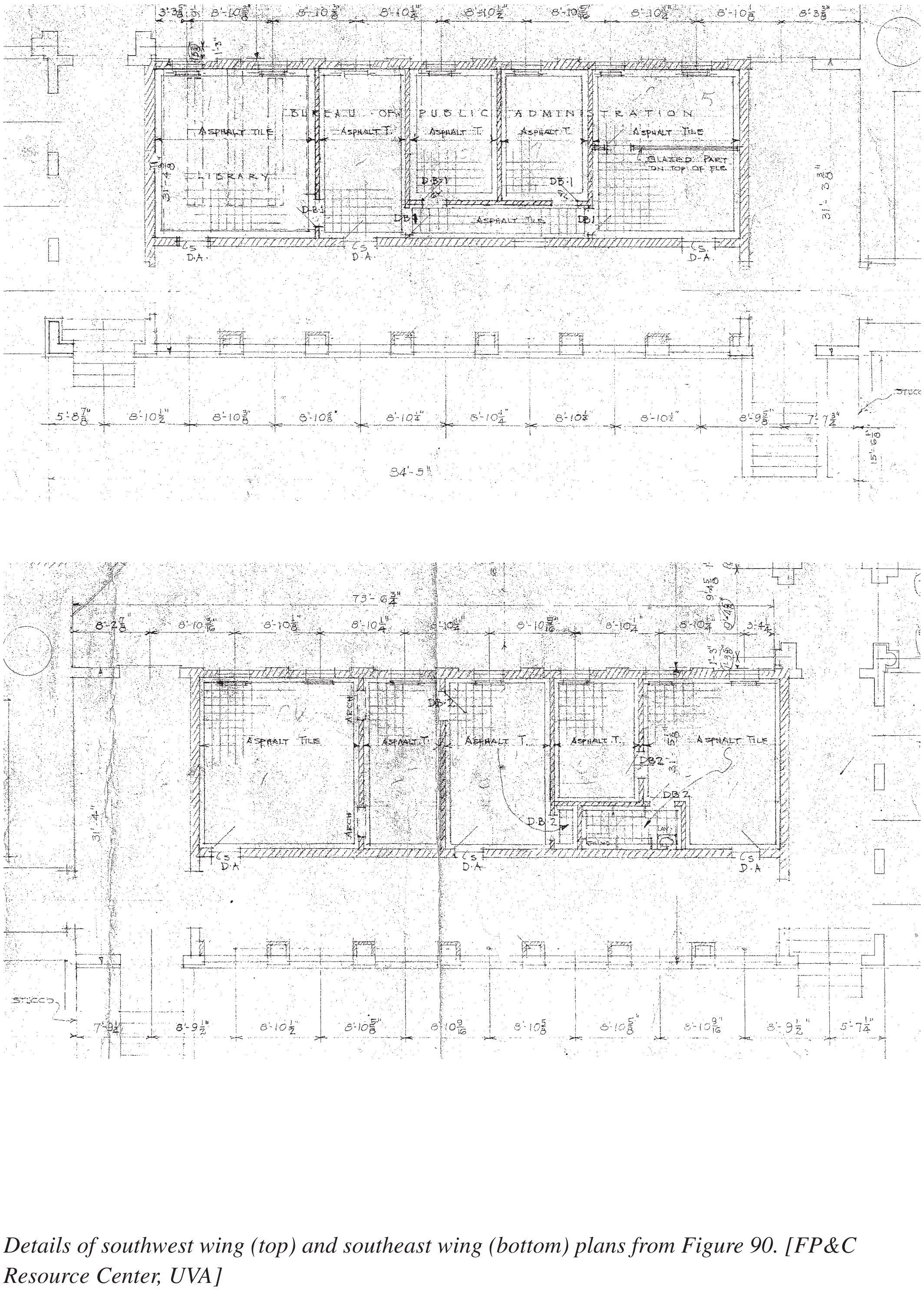
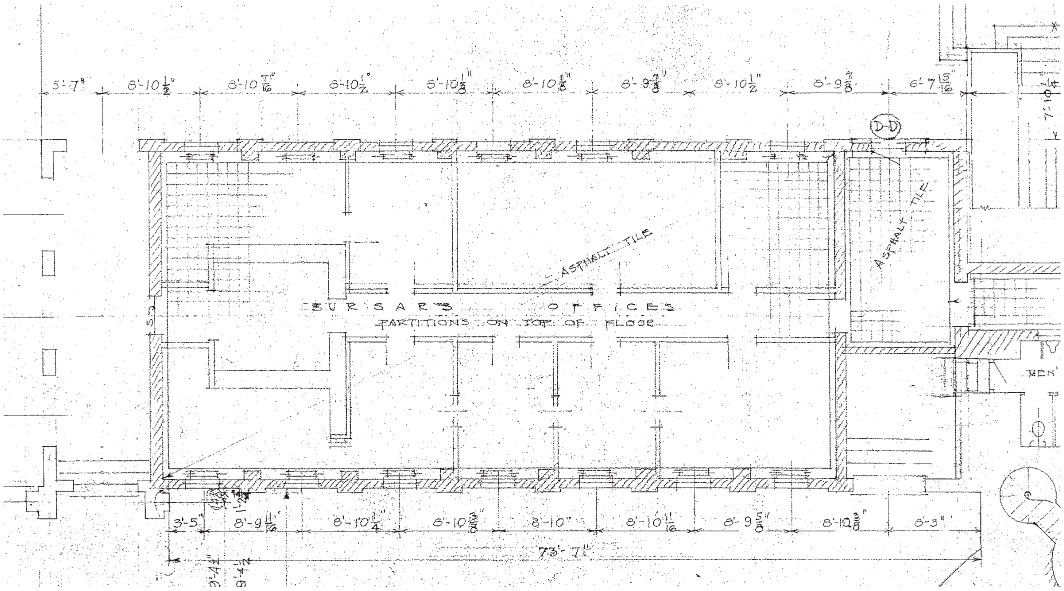
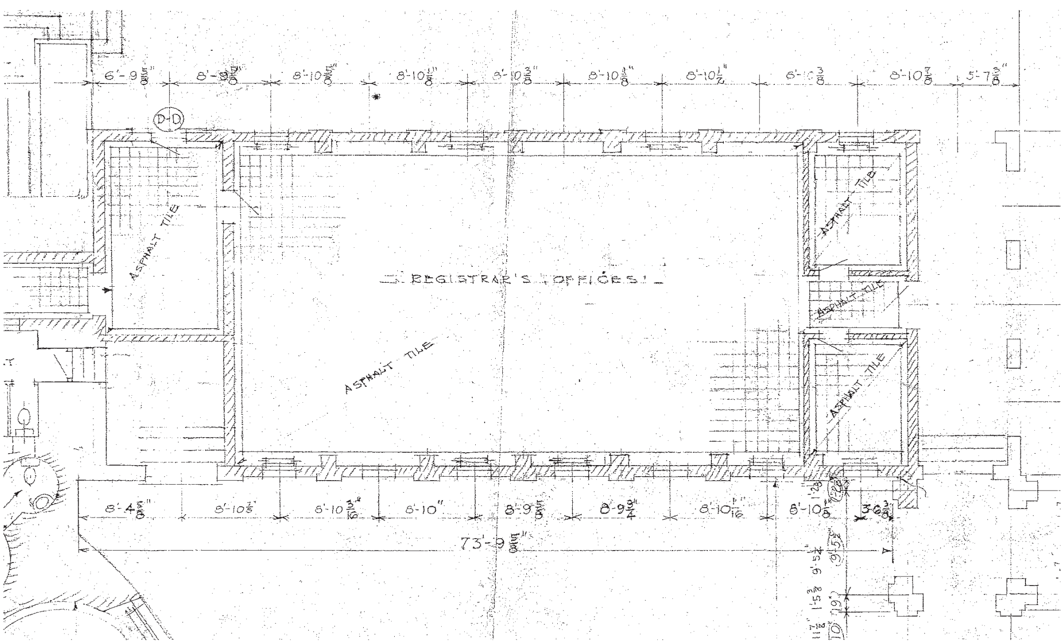


*Figure 90. Ground floor plan by Stanislaw J. Makielski for the restoration of the Rotunda, 1938-1939. This plan is invaluable for its record of the wing floor plans. [FP&C Resource Center, UVA]*




*Details of southwest wing (top) and southeast wing (bottom) plans from Figure 90. [FP&C Resource Center, UVA]*




*Details of northwest wing (top) and northeast wing (bottom) plans from Figure 90. [FP&C Resource Center, UVA]*

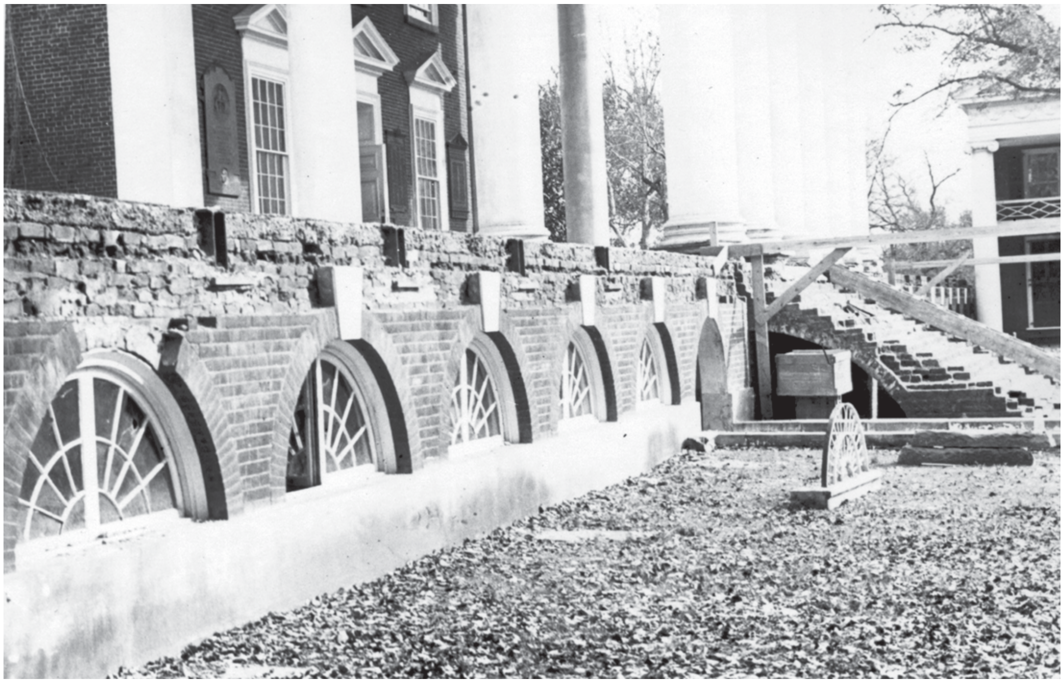


*Figure 91. View of the southwest wing and south stairs during the 1939 reconstruction of the steps. [Special Collections, UVA]*

*Figure 92. View of the northwest and southwest wings and west colonnade, looking north, during the 1939 reconstruction of the terraces. [Special Collections, UVA]*

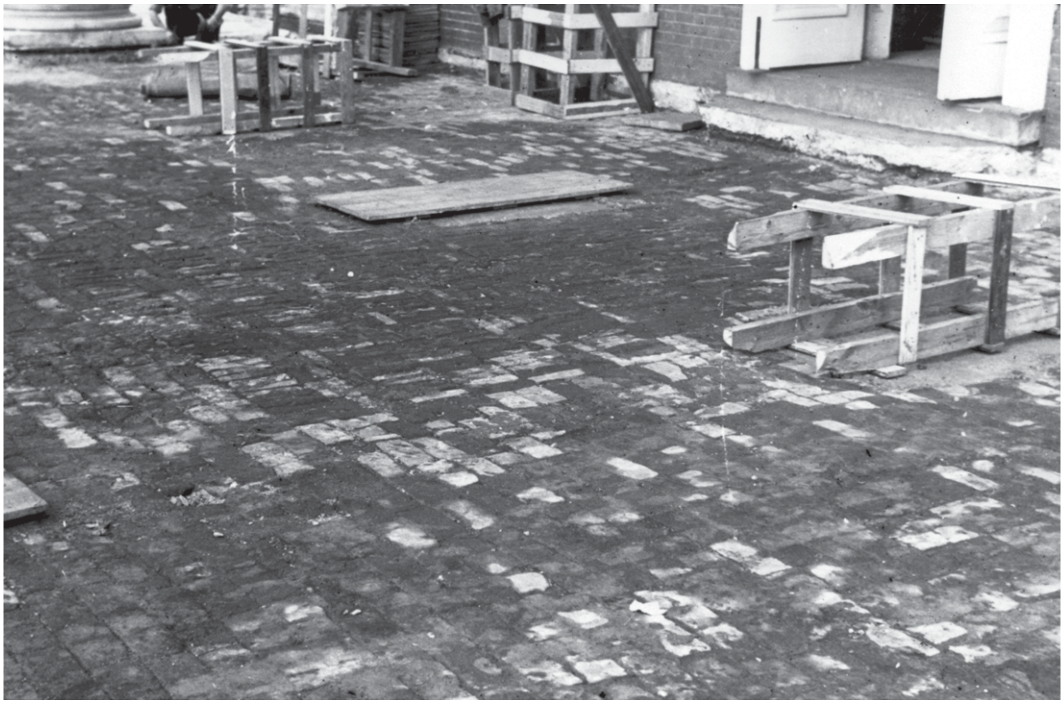


*Figure 93. The south portico floor during the 1939 construction. [Special Collections, UVA]*

*Figure 94. The south entrance, showing the McKim Mead & White door, circa 1940. [Special Collections, UVA]*


*Figure 95. McKim Mead & White Dome Room, ca. 1940. [Special Collections, UVA]*

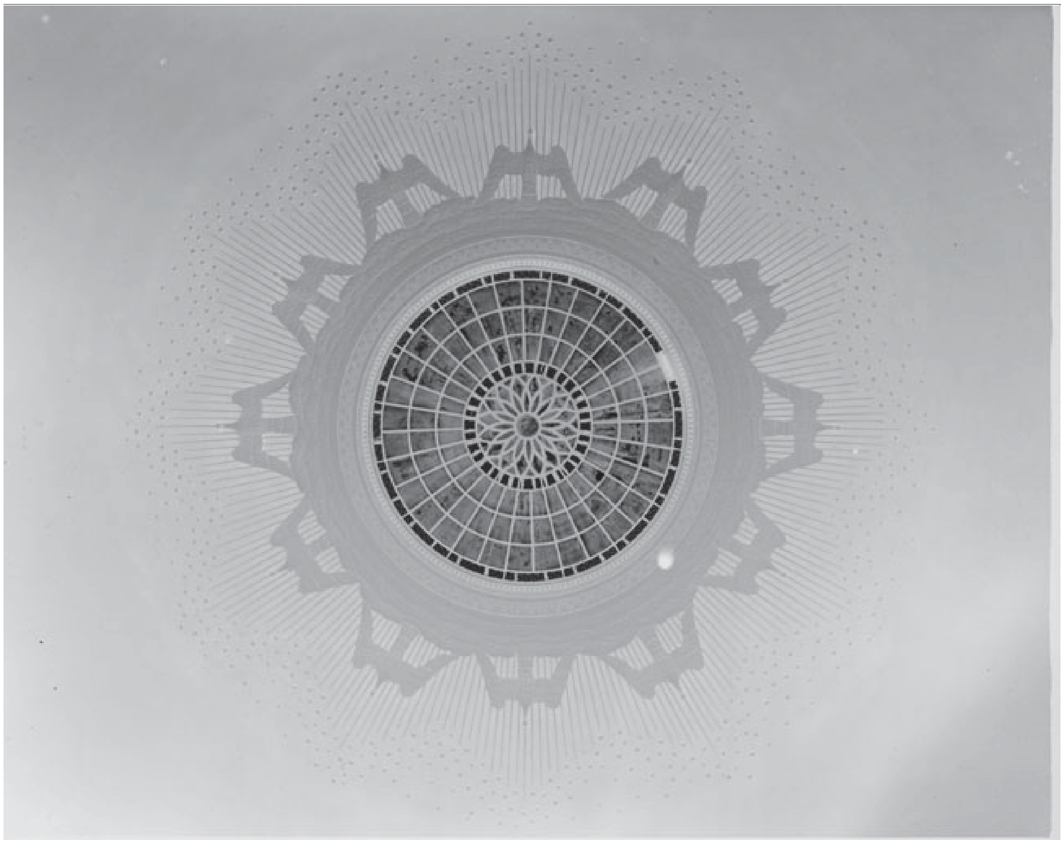


*Figure 96. View of the McKim Mead & White oculus laylight, ca. 1940. [Special Collections, UVA]*

*Figure 97. McKim Mead & White Dome Room, middle tier gallery, ca. 1940. [Special Collections, UVA]*

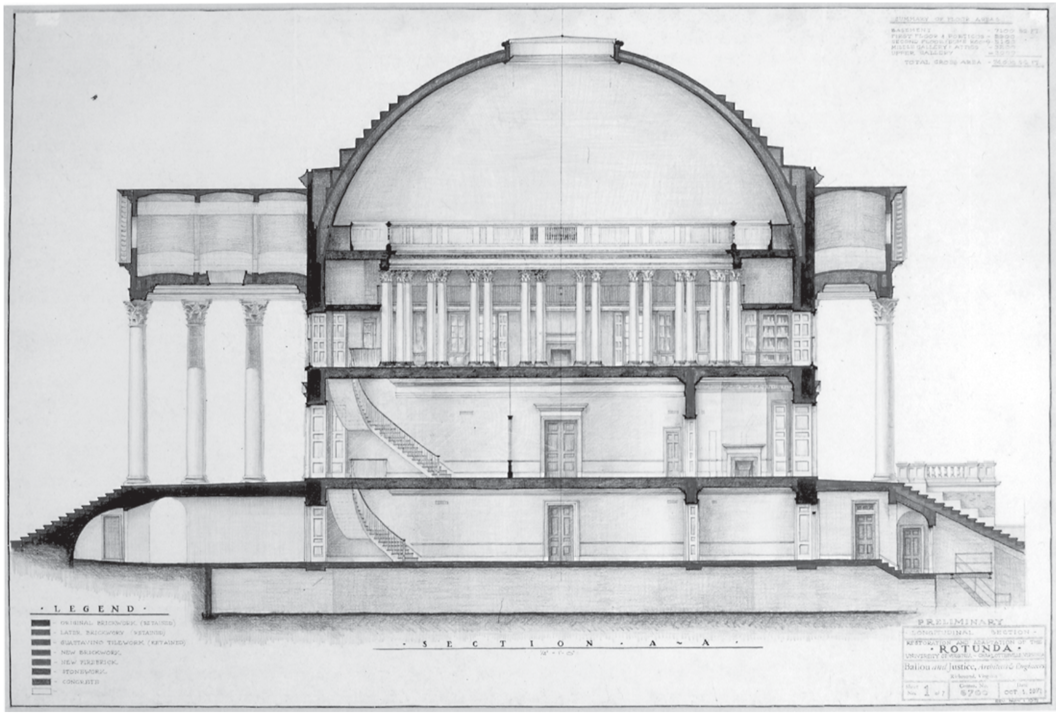



*Figure 99. Rendering by Ballou & Justice Architects for the restoration of the Rotunda in the mid-1970s. [Special Collections, UVA]*

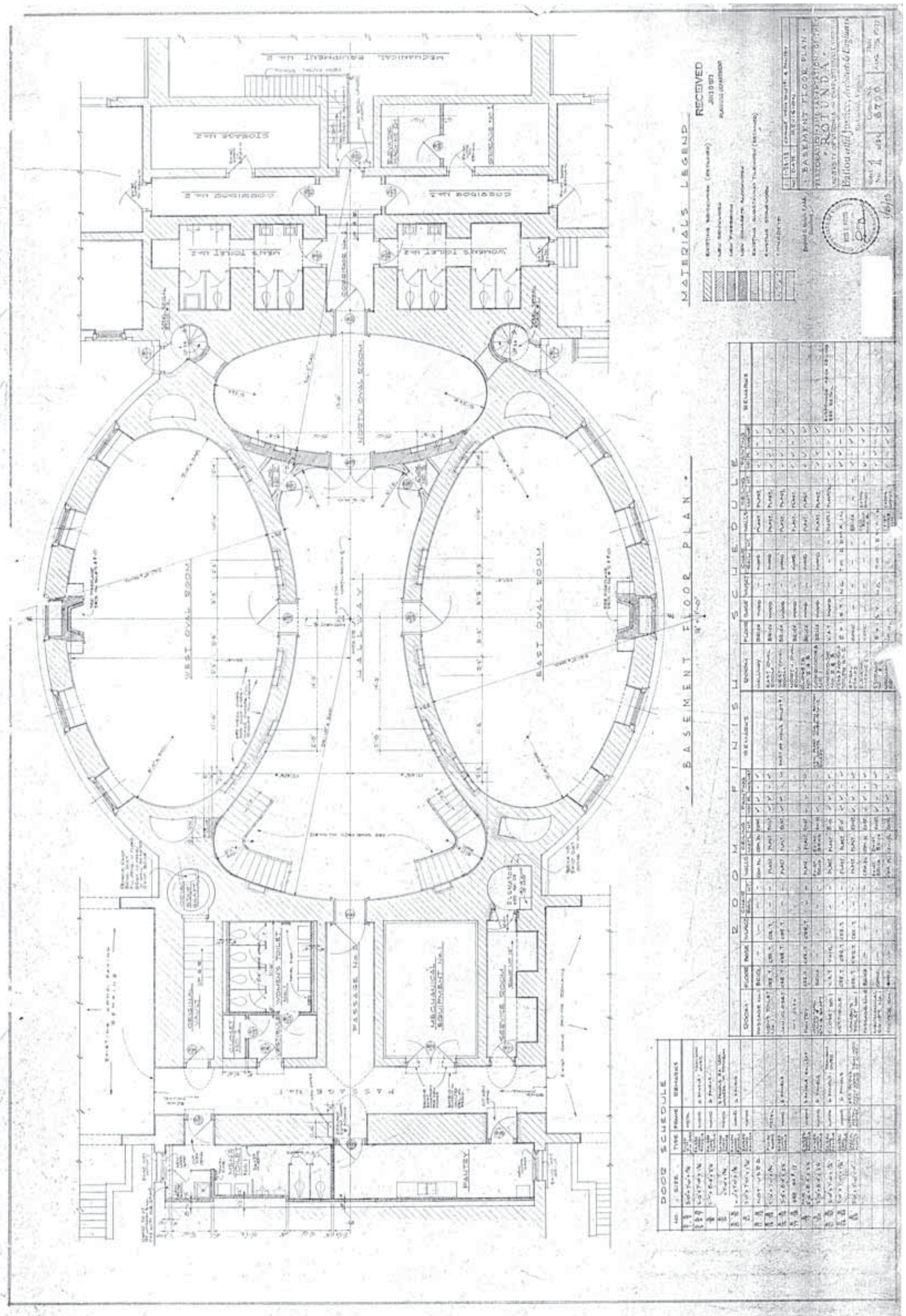



*Figure 100. Basement Floor Plan by Ballou & Justice, August 25, 1972. [FP&C Resource Center, UVA]*

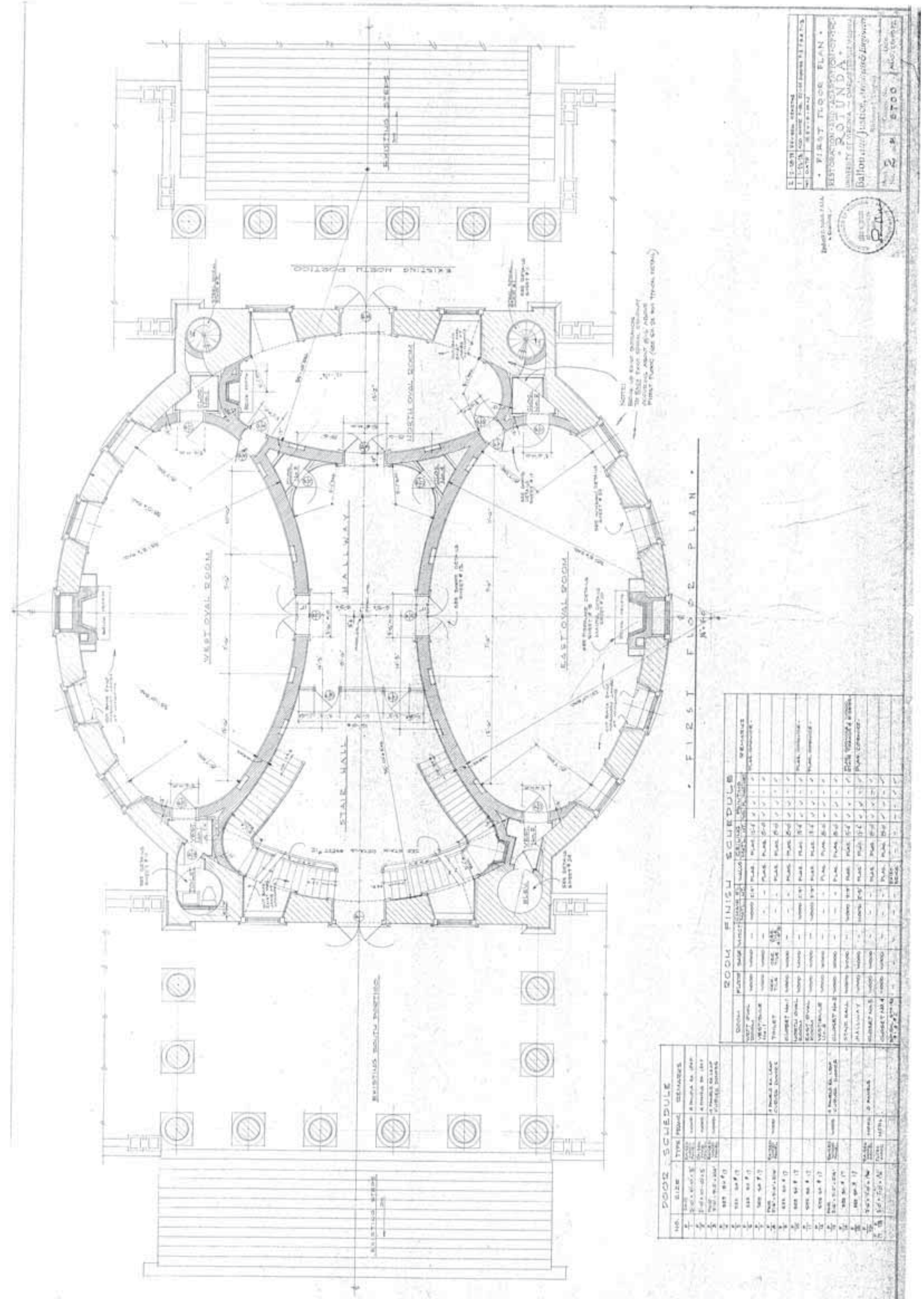



*Figure 101. First Floor Plan by Ballou & Justice, August 25, 1972. [FP&C Resource Center, UVA]*

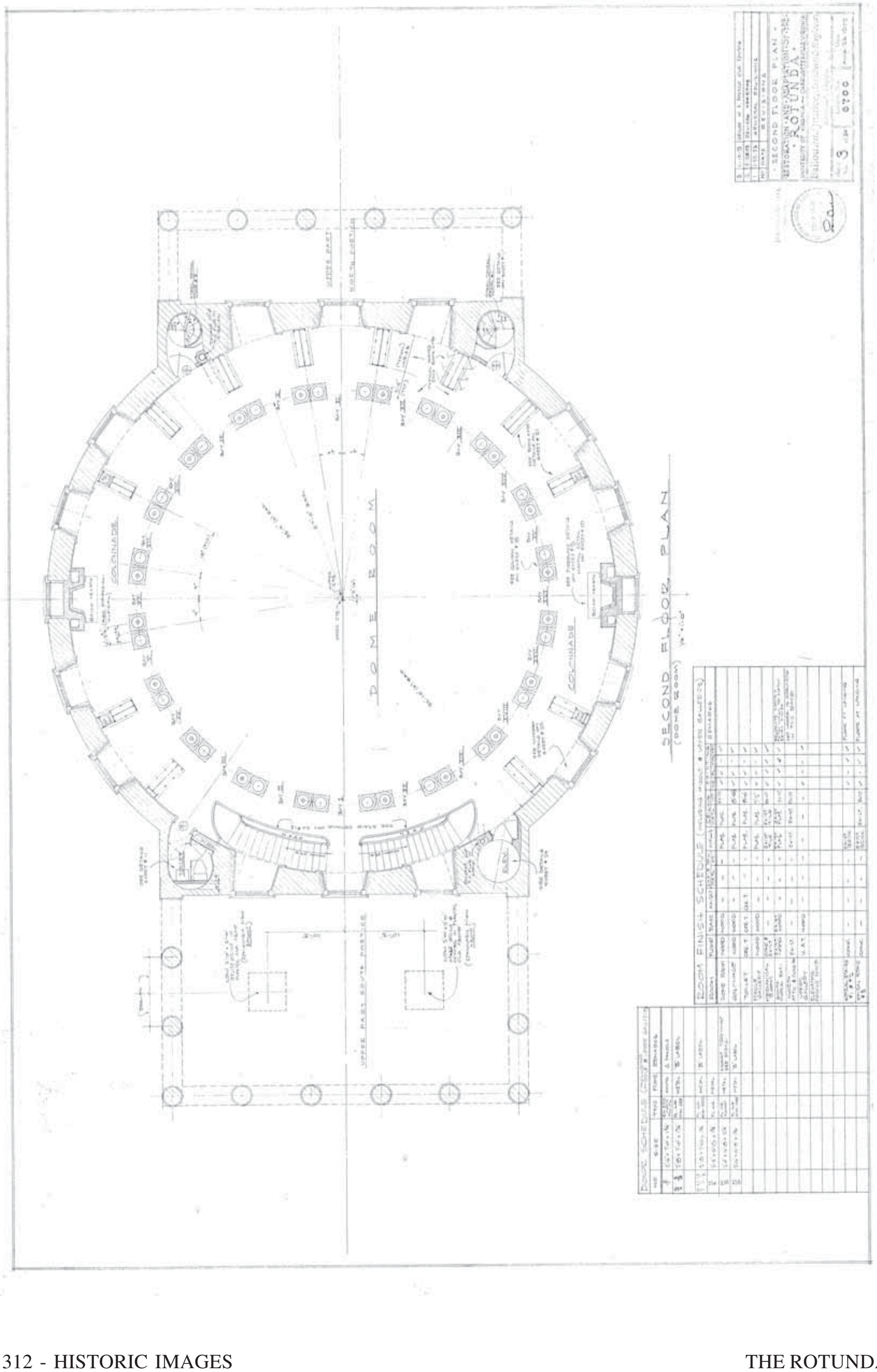



*Figure 102. Second Floor Plan by Ballou & Justice, August 25, 1972. [FP&C Resource Center, UVA]*

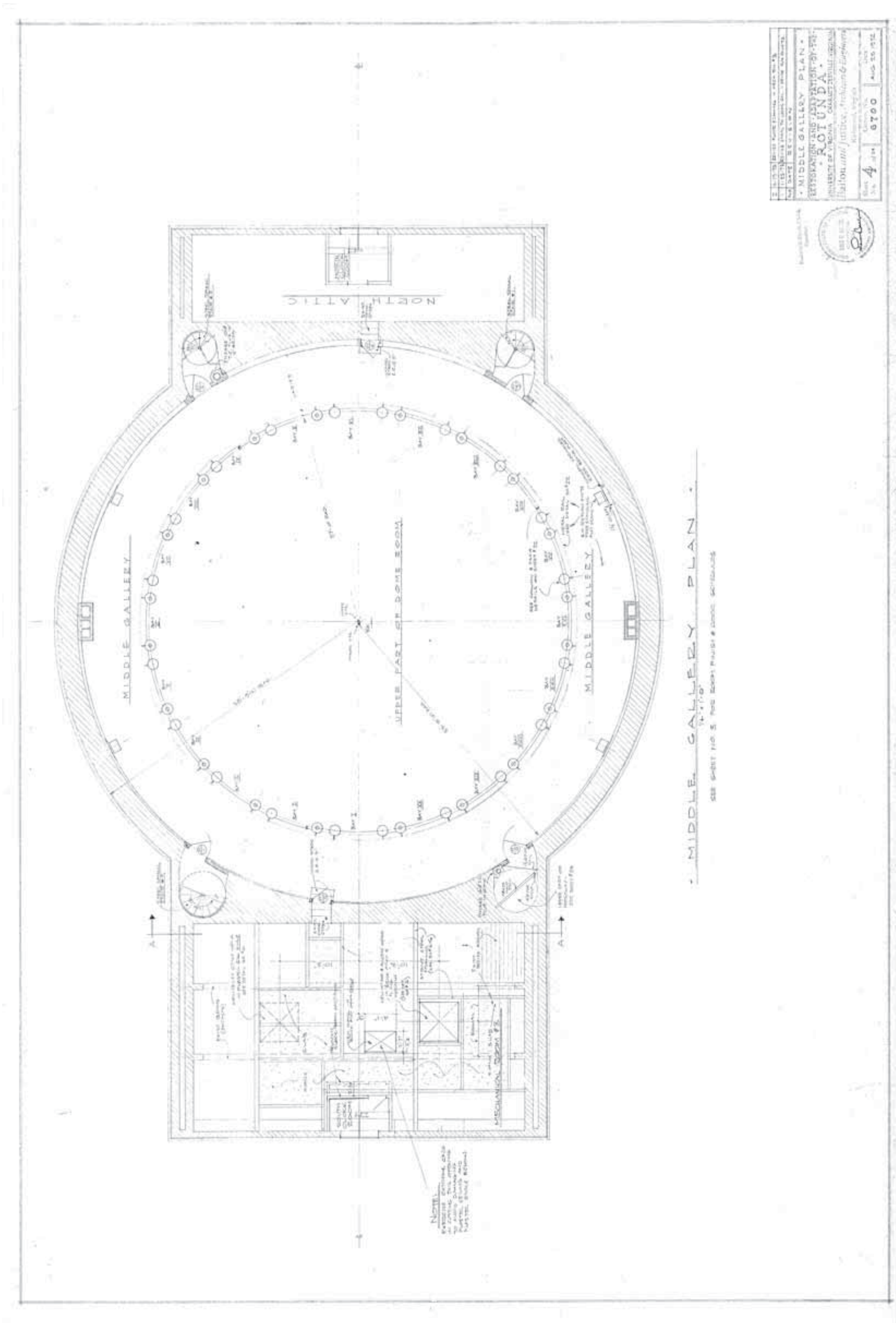



*Figure 103. Middle Gallery Plan by Ballou & Justice, August 25, 1972. [FP&C Resource Center, UVA]*

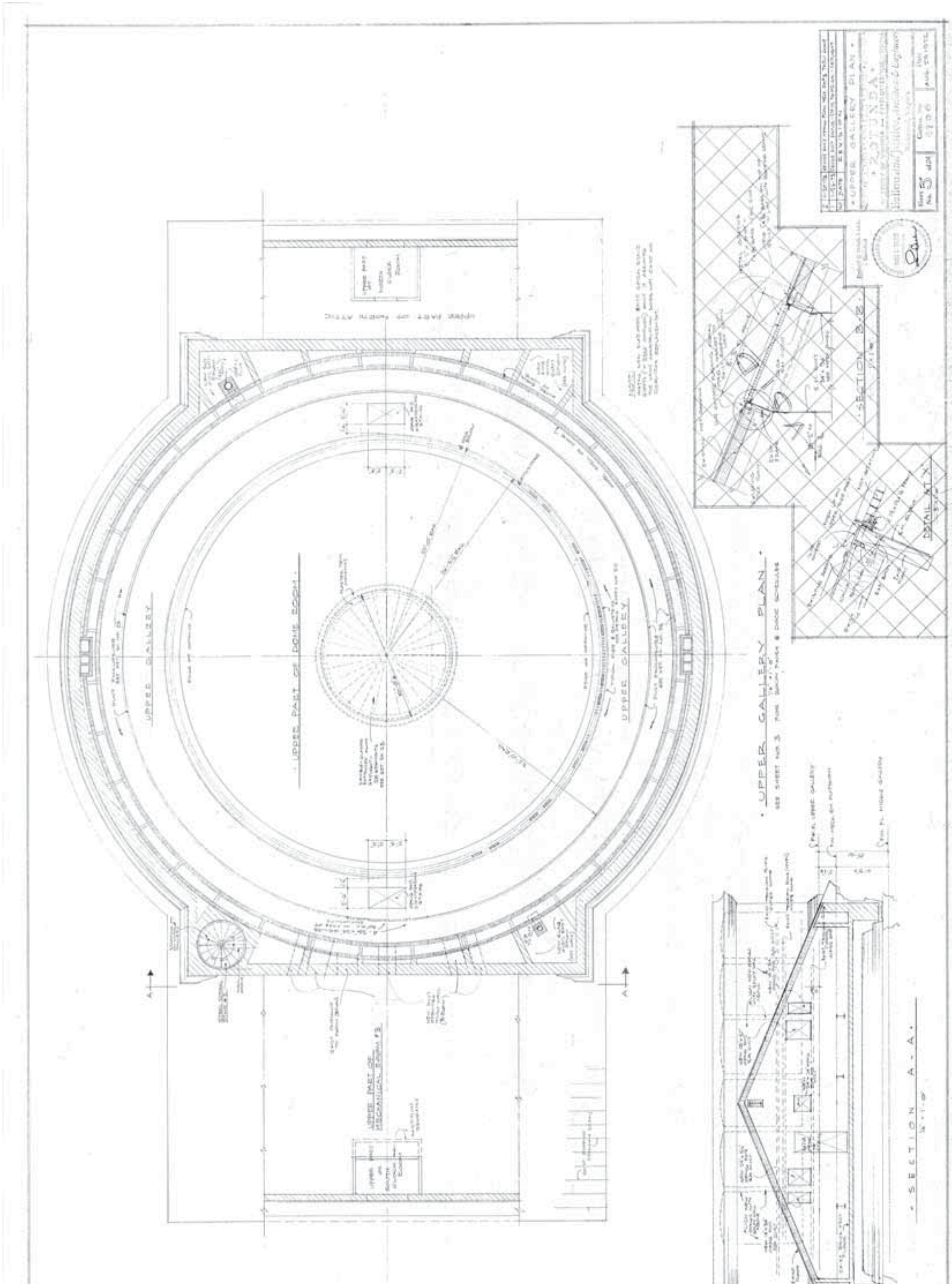


*Figure 104. Upper Gallery Plan by Ballou & Justice, August 25, 1972. [FP&C Resource Center, UVA]*

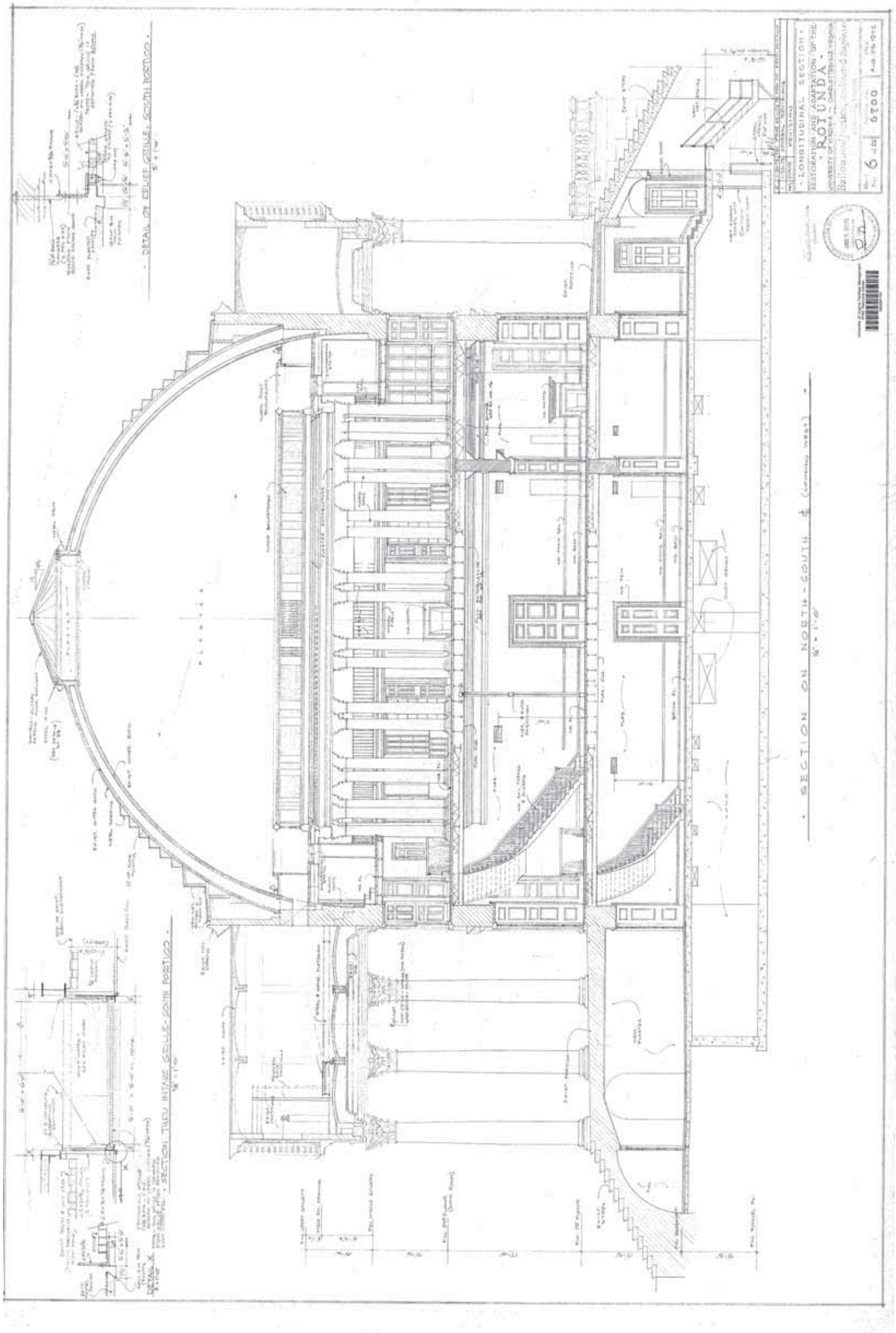


*Figure 105. Section through the Rotunda, looking west, by Ballou & Justice, August 25, 1972. [FP&C Resource Center, UVA]*

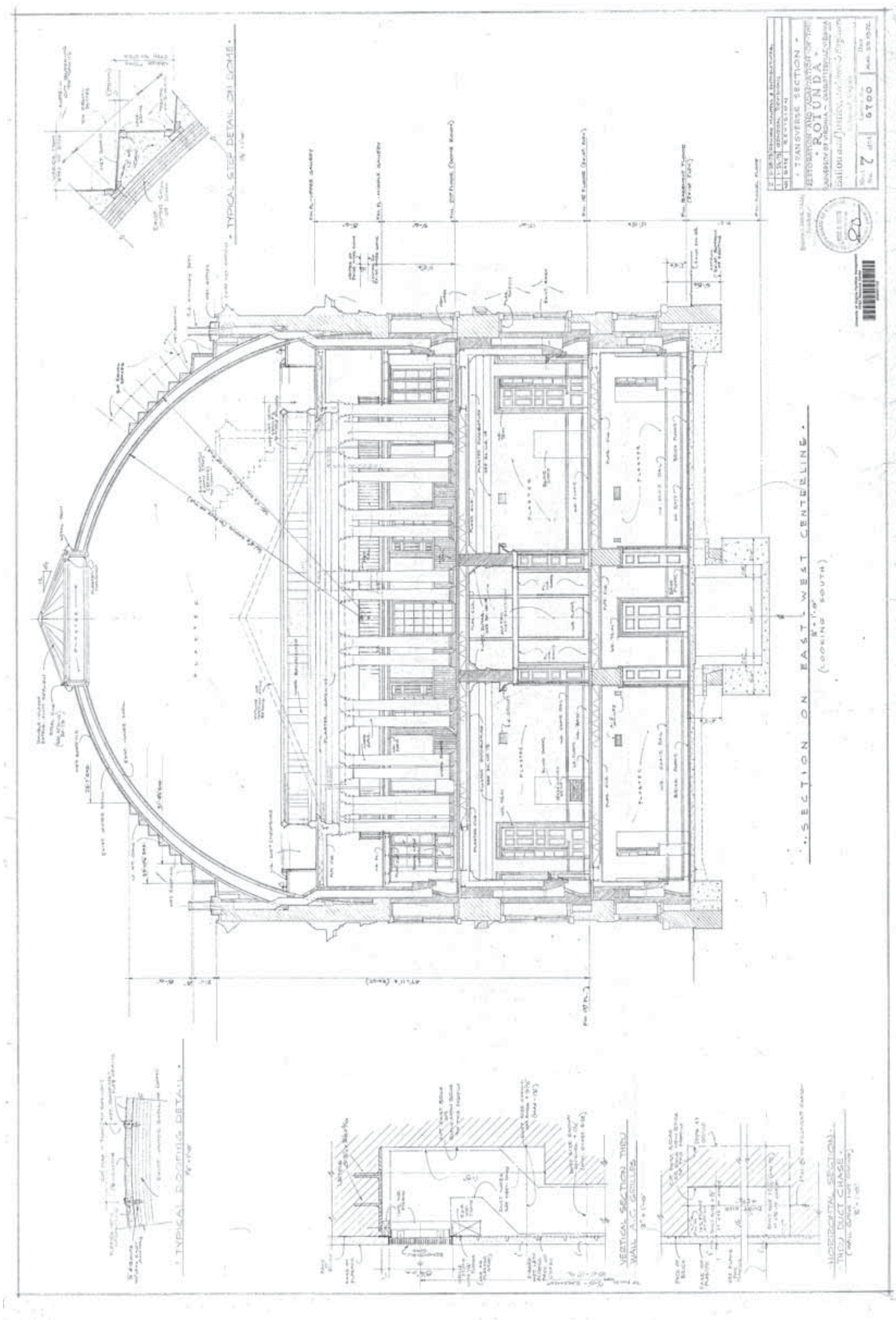



*Figure 106. Section through the Rotunda, looking south, by Ballou & Justice, August 25, 1972. [FP&C Resource Center, UVA]*

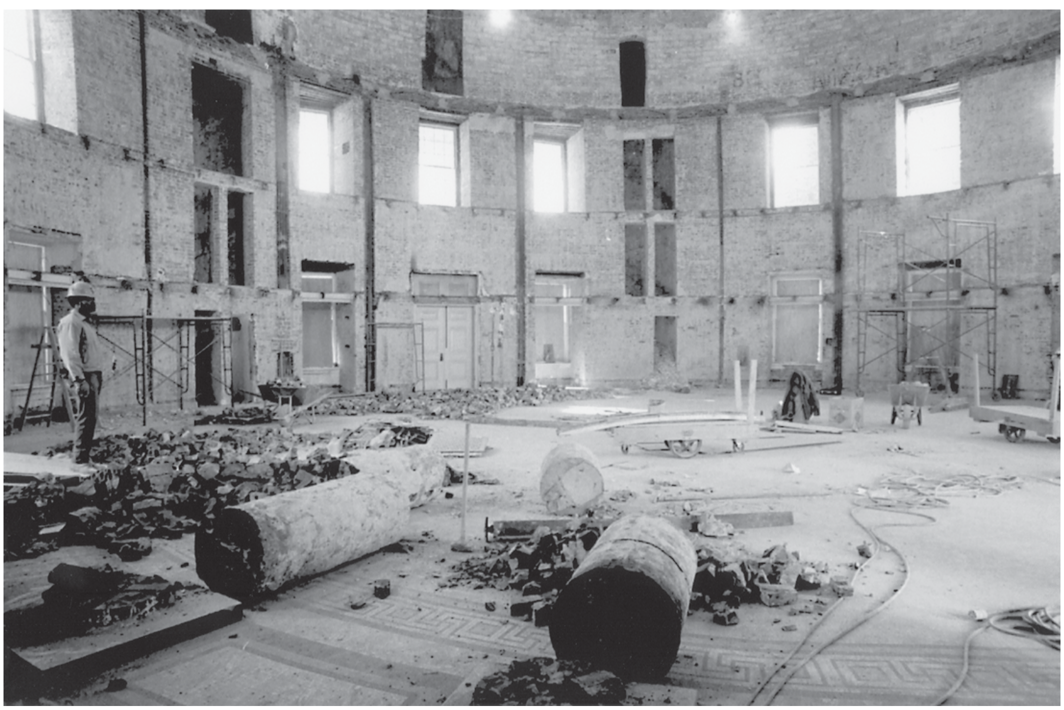


*Figure 107. Two views of the interior of the Rotunda during the 1974 demolition [n.d]. The brick laid up against the original outer wall in 1898 (to support the Guastavino tile dome) conceals any pre-fire evidence that might remain on the walls.[Special Collections, UVA]*

*Figure 108. Demolition of the main level floor, January 14, 1974. [Special Collections, UVA]*

*Figure 109. The interior of the Rotunda during demolition, January 30, 1974. [Special Collections, UVA]*

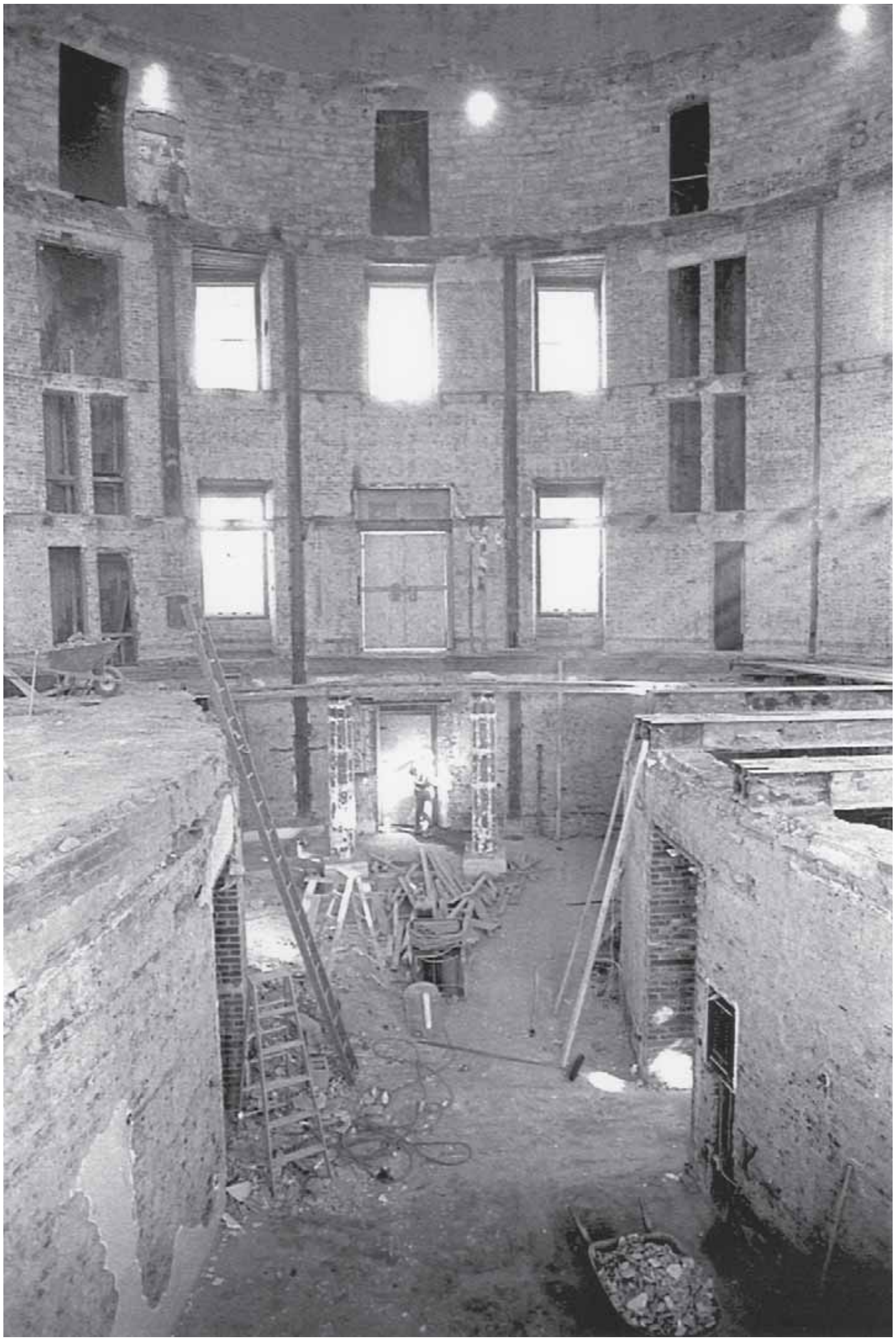


*Figure 110. The interior of the Rotunda during demolition, January 30, 1974. The basement walls to the right and left survive from the original construction. [Special Collections, UVA]*

*Figure 111. The dome during the reconstruction of the skylight, November 18, 1974. [Special Collections, UVA]*

*Figure 112. The new extruded aluminum skylight frame during the reconstruction of the skylight, November 18, 1974. [Special Collections, UVA]*

*Figure 113. Construction of the ground floor, looking south, May 8, 1975. The steel for the new stairs is in place. [Special Collections, UVA]*

*Figure 114. Framework for the Dome Room acoustical ceiling, October 10, 1975. [Special Collections, UVA]*

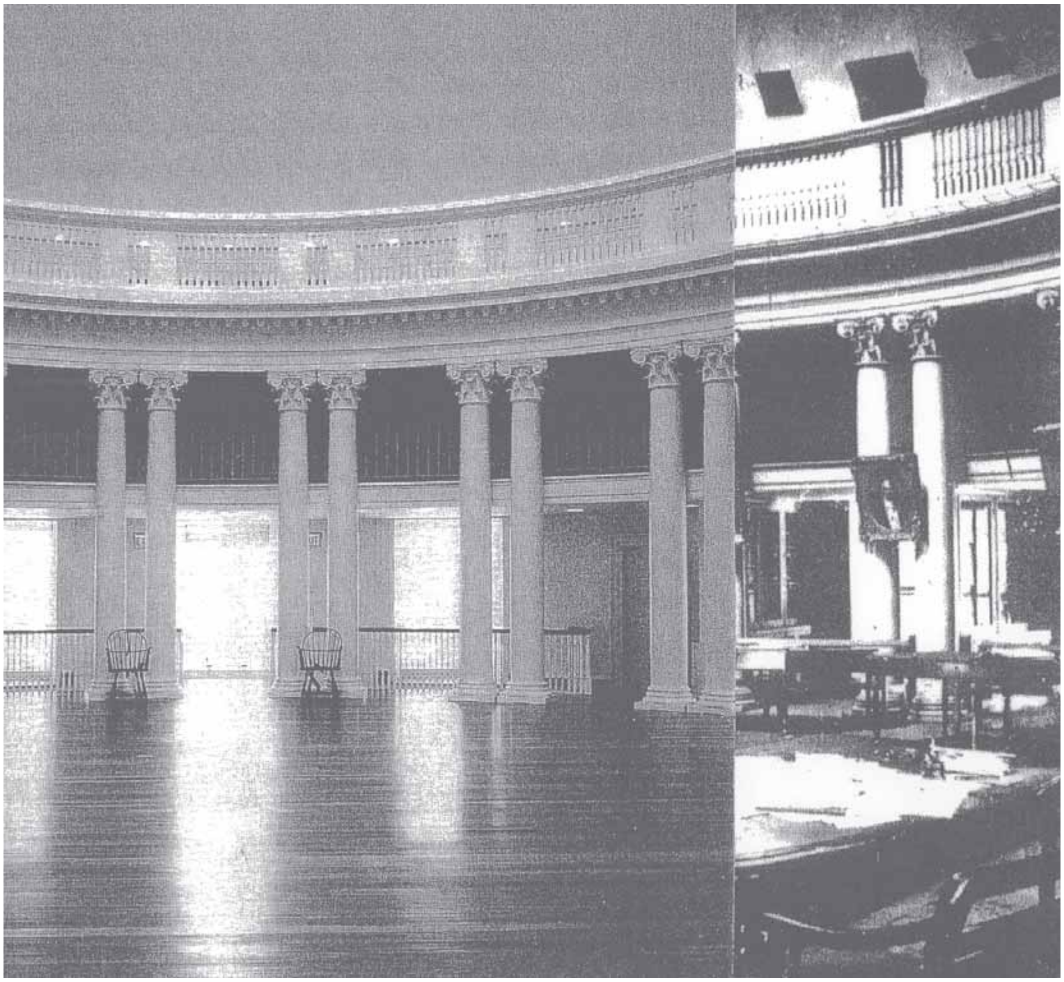


*Figure 115. View of the Dome Room after the mid-1970s reconstruction, superimposed over a pre-fire image. [JGWA]*

THE ROTUNDA

# ARCHITECTURAL DESCRIPTION

Jefferson's Rotunda, as it exists today, is the result of a remarkable series of circumstances and events. The intent of this historic structure report is to gain an understanding of the evolution of this significant American architectural icon. To accomplish this, the team undertook a thorough visual inspection of all exterior surfaces, as well as each interior space. Each surface and feature was analyzed to determine its place in the evolution of the Rotunda complex, as it evolved over some one hundred and eighty years. This evolution began before the construction process commenced. From Jefferson's initial concept for the university, that did not include a structure of the scale and in the location of the Rotunda, to suggestions made by Thornton and Latrobe that gave birth to the prominent centrally positioned building, the structure evolved and continued to evolve during construction and later.

## EARLY DRAWINGS OF THE ROTUNDA

To understand the Rotunda as it now exists and as it existed prior to the 1895 conflagration, it was necessary to thoroughly study the few original documents, both drawings and written material, that were from the hand of Jefferson and his favored craftsmen. The plans, section, and south (front) elevation drawings produced by Jefferson between about 1818 and 1819 are all that survive from the design process that must have produced many more detailed drawings [*see Figures 5-13*].

Information from Jefferson's drawings is supplemented by conditions revealed in drawings produced by John Neilson at the time of construction [*Figures 20-22*], and in much later drawings from the end of the nineteenth century, immediately after the Rotunda fire. The plans produced by McDonald Brothers Architects and McKim Mead & White [*Figures 64-73*] provide information about pre-1895 conditions that confirmed some of the plan features shown on the original Jefferson drawings.

There is remarkably little visual information concerning the Rotunda as it appeared after completion in 1827, and as it evolved until destroyed in the 1895 fire. The earliest image, actually predating the construction, is the handsome, tinted ink drawing of the south elevation (including the terraces and Pavilions IX and X) dating from February 1823 [*Figure 26*]. This beautifully rendered image has been variously attributed to Cornelia Jefferson Randolph and more recently to John Neilson, and it has also been speculated that the hand of Benjamin Latrobe was responsible. Regardless of the attribution, it is the most fully realized image of the Rotunda and the flanking terraces to survive from that time. Significantly, the fenestration does not include the pedimented architraves of the main floor windows that are seen in all of the later photographic images of the building. In fact, none of the pre-1850 drawn images show this important feature. This includes the circa 1827 E. Watts bookbinder label [*Figure 28*], as well as the various views of the Rotunda and Pavilions as seen from the east.

Only images produced after the construction of the Robert Mills Annex record these window pediments. Even the important series of views of the Rotunda, Pavilions, and Lawn as seen from southern viewpoints fail to record these pediments, although a pediment is shown at the main entrance door beyond the portico. The pediments as they now exist were designed by McKim Mead & White.

## EARLY VIEWS OF THE TERRACES

The series of images from the south record the terraces in various forms. The view by engraver Benjamin Tanner from 1826 [*Figure 27*] appears to be the most accurate, showing arcades flanking the Rotunda steps. Physical and photographic evidence indicates that the arches were in fact lunette-form window openings, originally open and later (probably 1841) fitted with sash.

The original open-arch appearance of the terraces is best illustrated by the March 1824 drawing of the north face of one of the gymnasia arcades by John Neilson [*Figure 24*].

The development of the plan of the terraces is illustrated by Neilson drawings from 1821 and 1822 [*Figures 20-22*]. The Peter Maverick plan, as drawn by Neilson [*Figure 23*], clearly shows the large open spaces that existed beneath the terrace roofs, a condition that was to exist until work undertaken in 1841 to enclose and replan these structures.

The terraces originally had flat, serrated wood shingle roofs, probably covered by a flat deck. The 1826 Tanner illustration shows people on the roof of the west wing, an indication that one could walk on these surfaces. In 1841, hipped roofs were constructed and remained until they were severely damaged in the 1895 fire. Illustrations and photographs record various balustrades along the south edges of the terraces, as well as the absence of such a feature in the period just before the fire. The earliest railings appear to be delicate Chinese fretwork designs, while the later features (possibly added in 1841 or by Mills) are formed of turned balusters positioned between paneled plinths.

## INTERIOR OF THE ROTUNDA

The analysis of Jefferson's surviving floor plans for the main floor and Dome Room (no plan of the ground floor/basement is known to exist) revealed a significant omission. The main floor plan [*Figure 6*] illustrates door and window openings as they existed and still exist today. Even the false windows situated behind the east and west chimney masses are shown by Jefferson at both plan levels. The Dome Room plan [*Figure 8*] also includes the real and false window openings in the east and west elevations, but no openings are shown in the curved and flat surfaces forming the north and south sides of the plan. The otherwise carefully drawn plan purposely omits openings in these locations. The same omission exists in the plan drawn by John Neilson. These openings need to be carefully probed to determine how they fit into the construction process. Jefferson's August 10, 1823 letter to Arthur S. Brockenbrough concerning the center opening in the south wall of the Dome Room reveals how design decisions were made as the building was under construction; probably the case for many features of the building.

The absence of pre-fire interior images of the Rotunda and terraces, except for several later nineteenth-century photographs of the north side of the Dome Room, makes it impossible to visualize the appearance of the many important spaces in the three structures.

The stair system in the Rotunda is an important feature whose appearance can only be speculated upon. Jefferson's main floor plan clearly indicates a pair of symmetrical double-flight stairs at the south end of the curiously shaped hall. The southeast stair includes a small fireplace at its intermediate landing. There are no surviving visible clues concerning the appearance and construction of the stairs, but a post-fire photograph may confirm that there was in fact of pair of stairs at first floor level. The October 28, 1895 image [*Figure 57*] shows what appears to be the outlines of the destroyed stair stringers on the walls of the hall, as seen through the open south windows. A significant aspect of the stairs as reconstructed in the mid-1970s, is found in the assertion that they were "said to be the first double freestanding stairs in the United States" (stated in the Vaughan, Gianning book on the Rotunda reconstruction). Actually, the pairs of stairs in the hall of Bulfinch's Joseph Barrell house (1792-93) predate Jefferson's design. In reality, no one knows what the original Rotunda stair looked like, and certainly there is no evidence for their construction and detailing.

The main floor plan does not show the stairs to the ground floor/basement level. These flights (if there were two) likely existed beneath the first runs of the main stair, and were probably enclosed single runs. The enclosures would provide full support for the lower runs of the main stairs. Such support would result in only the upper portions of the main stairs rising upward in an unsupported manner. The repositioning of the ground floor/basement stairs would provide for greater area at the main entrance, and allow for access to the windows flanking the entrance, a more acceptable and likely condition for the formal entrance into the building.

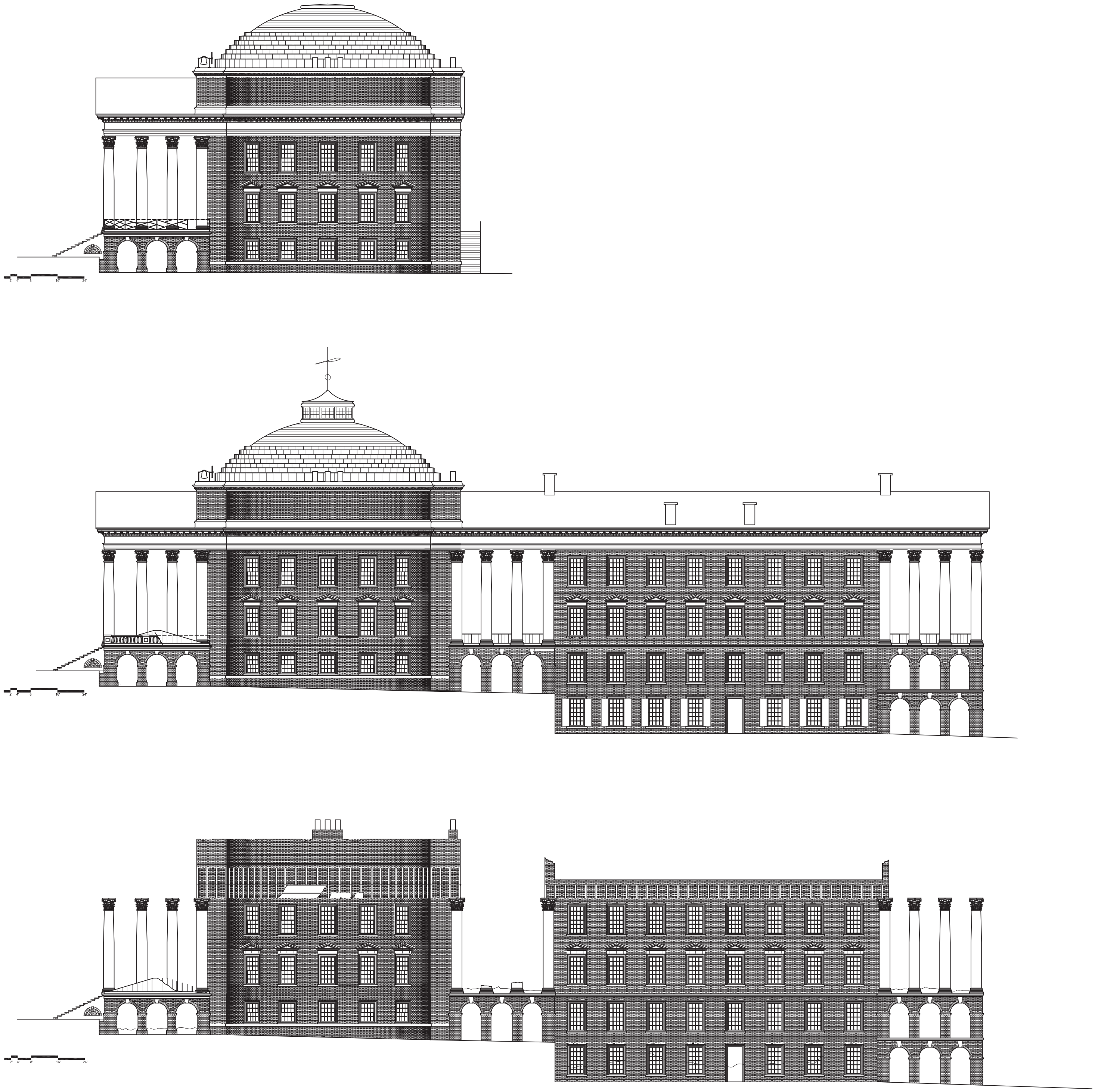
Jefferson's Dome Room plan records the main stairs as they arrive at that level. The point of their arrival, a small square patch of floor at the south end of the large circular room, was to be the location of a pair of glazed doors that opened to the upper area of the portico. A railing, not a balcony, was to be positioned in front of this opening. Jefferson was persistent about this door placemen.

The Dome Room plan does not appear to show how the two gallery levels were to be accessed, but it seems likely that one or two stairs were to exist directly above the flights rising from the main floor. Jefferson's simple drafting technique would have placed one stair above the other.

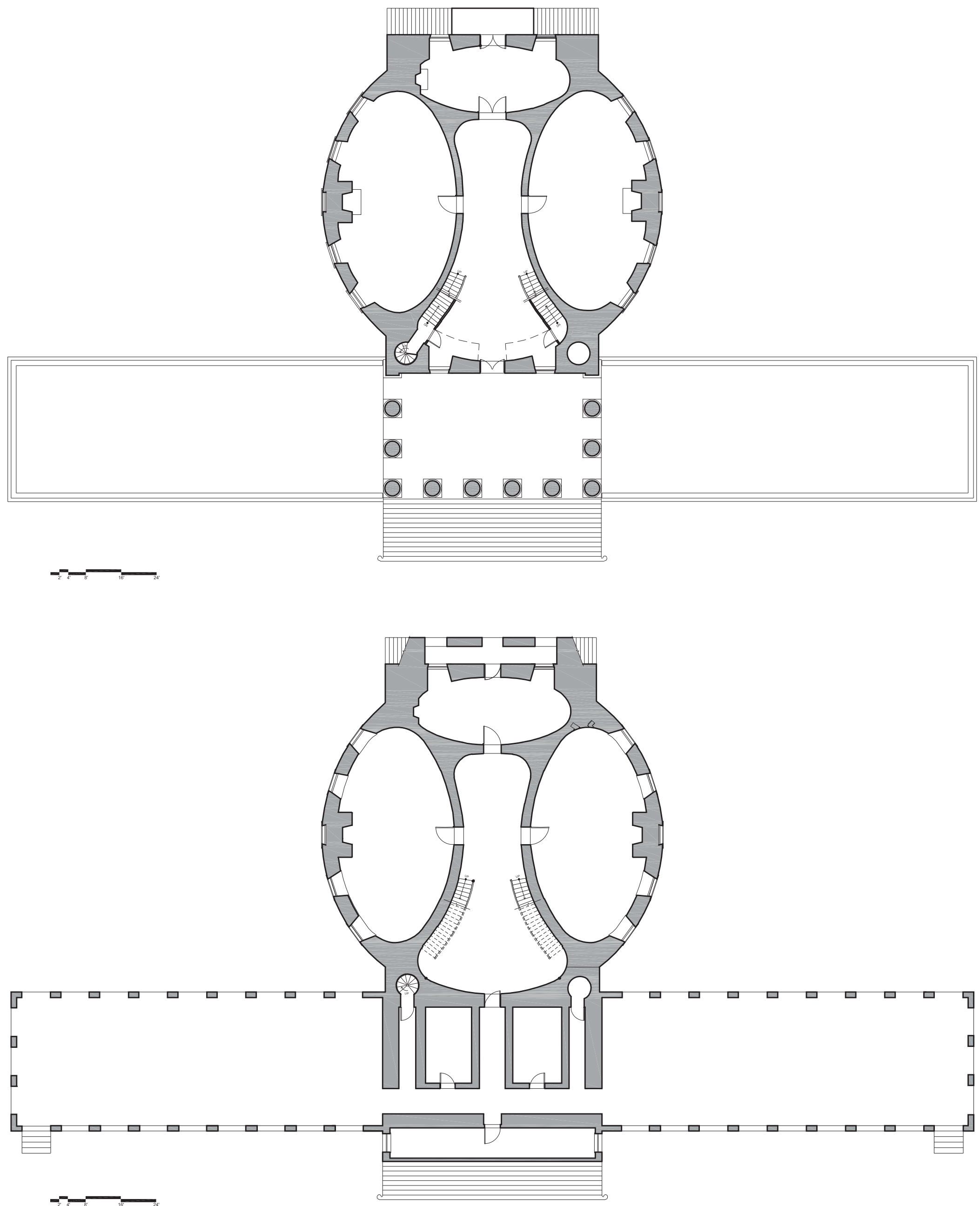
Other questions and revelations concerning the original plan and appearance of the Rotunda are found in the various room descriptions in this report. This information was collected during several trips to the Rotunda between June and December of 2006. The investigations involved careful inspection of the exterior and interior of the Rotunda and its wings. The inspections did not involve any probing into the building's fabric; such probing is recommended in the future when repairs and restoration work are undertaken.

An important aspect of the investigative process was the concurrent analysis of the various plans, illustrations and photographs of the exterior and interior of the complex of buildings. For example, the pre-fire photographs of the Dome Room were carefully compared to the existing conditions in that significant room. The same procedure was used for the exterior, where the pre-fire photographs could be compared to the conditions resulting from the McKim Mead & White reconstruction. The Ballou & Justice drawings were also helpful, in recording the conditions found in the mid-1970s.

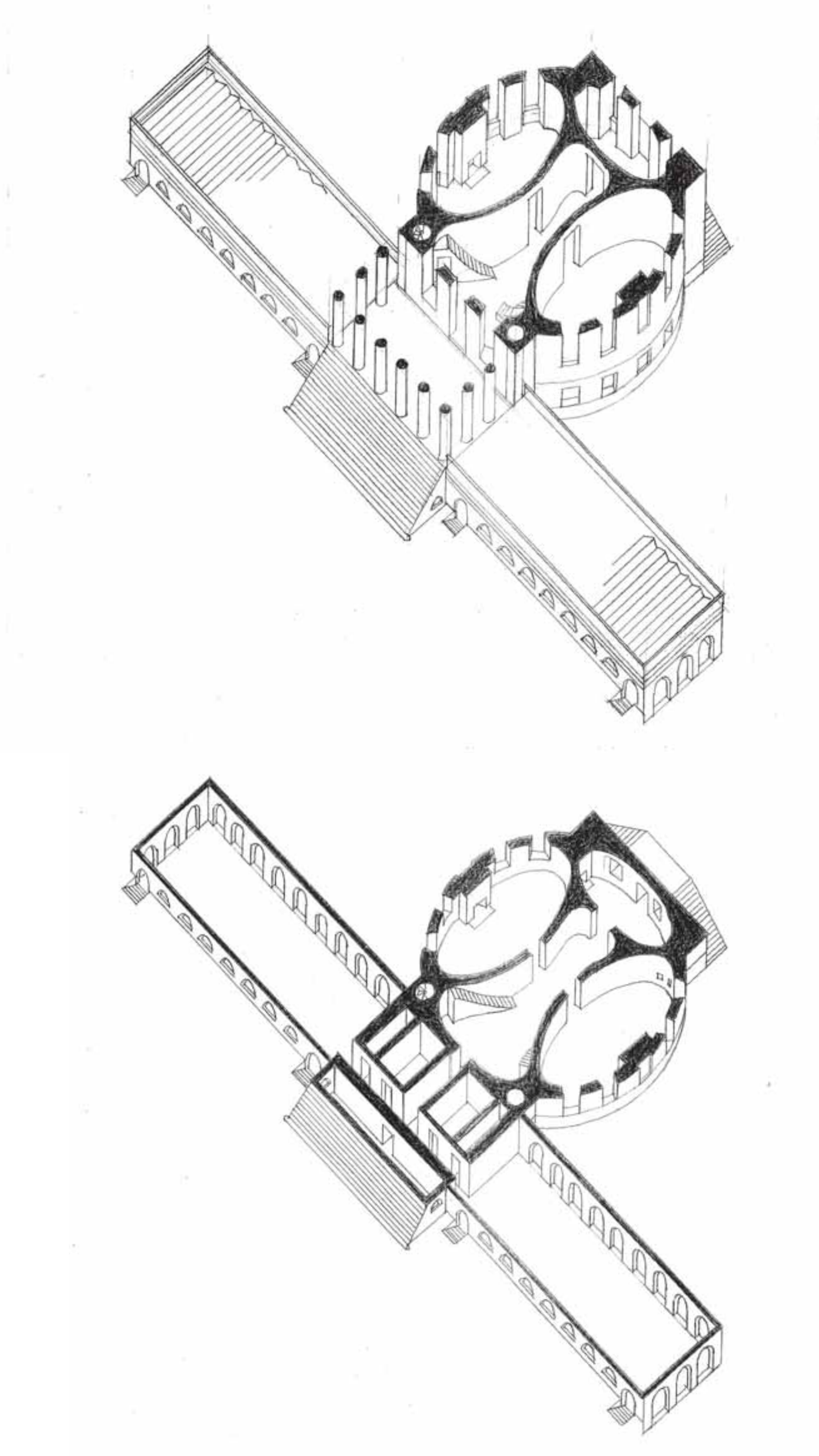
An unfortunate result of the McKim, Mead & White reconstruction project was the destruction or covering of information for original interior conditions that should have existed on the internal brick wall surfaces of the Rotunda. To support the heavier Guastavino dome, an inner surface of brick was placed over the inside face of the Rotunda walls at the main floor and Dome Room levels. This condition is seen in the dramatic mid-1970s photographs of the interior after all of the 1898 floors and finishes were removed [*Figures 107-109*]. Close inspection of the wall surfaces shown in the photographs reveals no evidence for pre-1895 conditions. The evidence may still exist behind the veneer of brick, waiting to be studied.



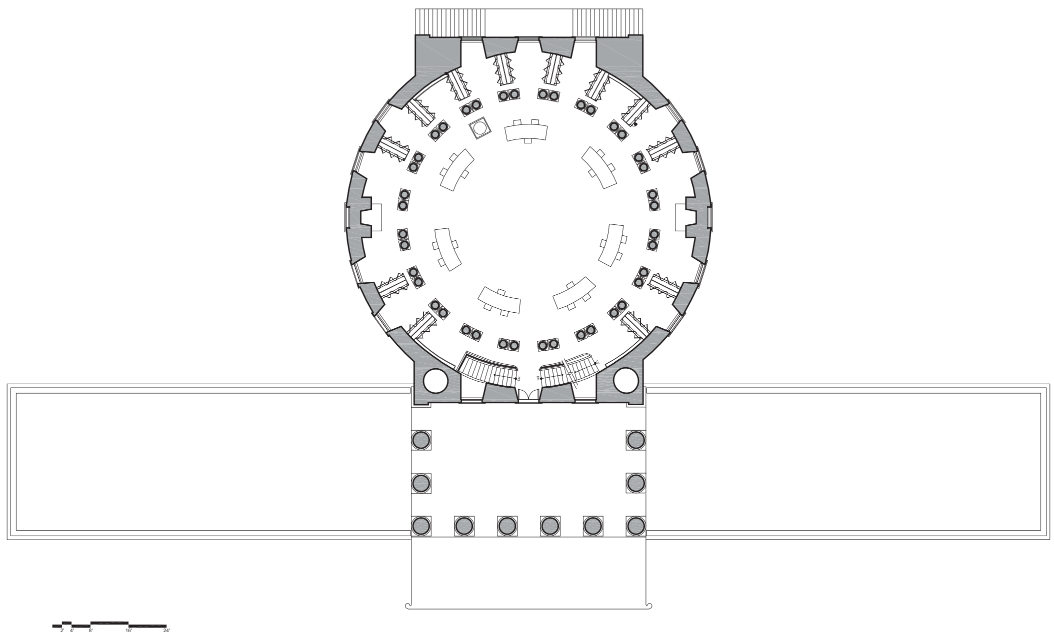
*East elevations of the Rotunda, in 1827 (top); with the Annex in 1854 (center); and after the 1895 fire (bottom). [JGWA, 2007]*



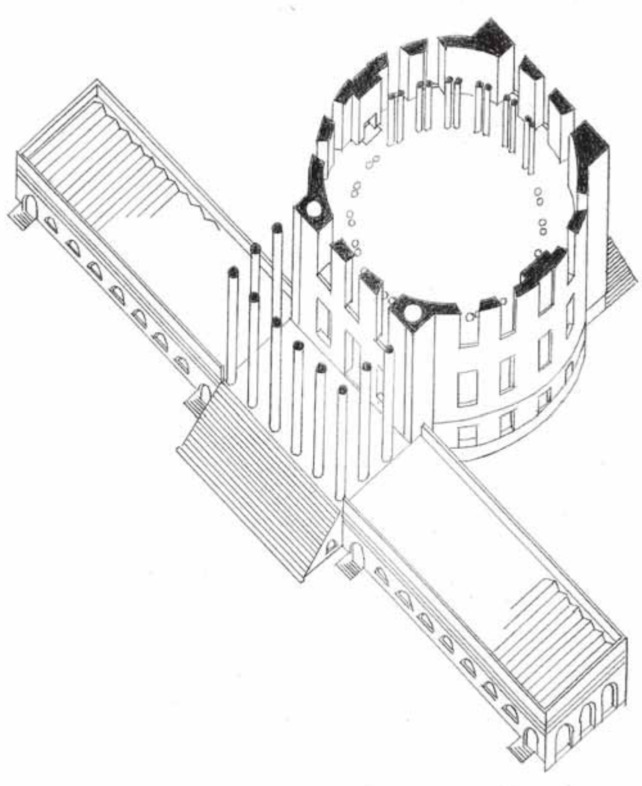
*Conjectural floor plans of the original Rotunda and terraces in 1827: ground floor (bottom) and main floor (top). [JGWA, 2007]*



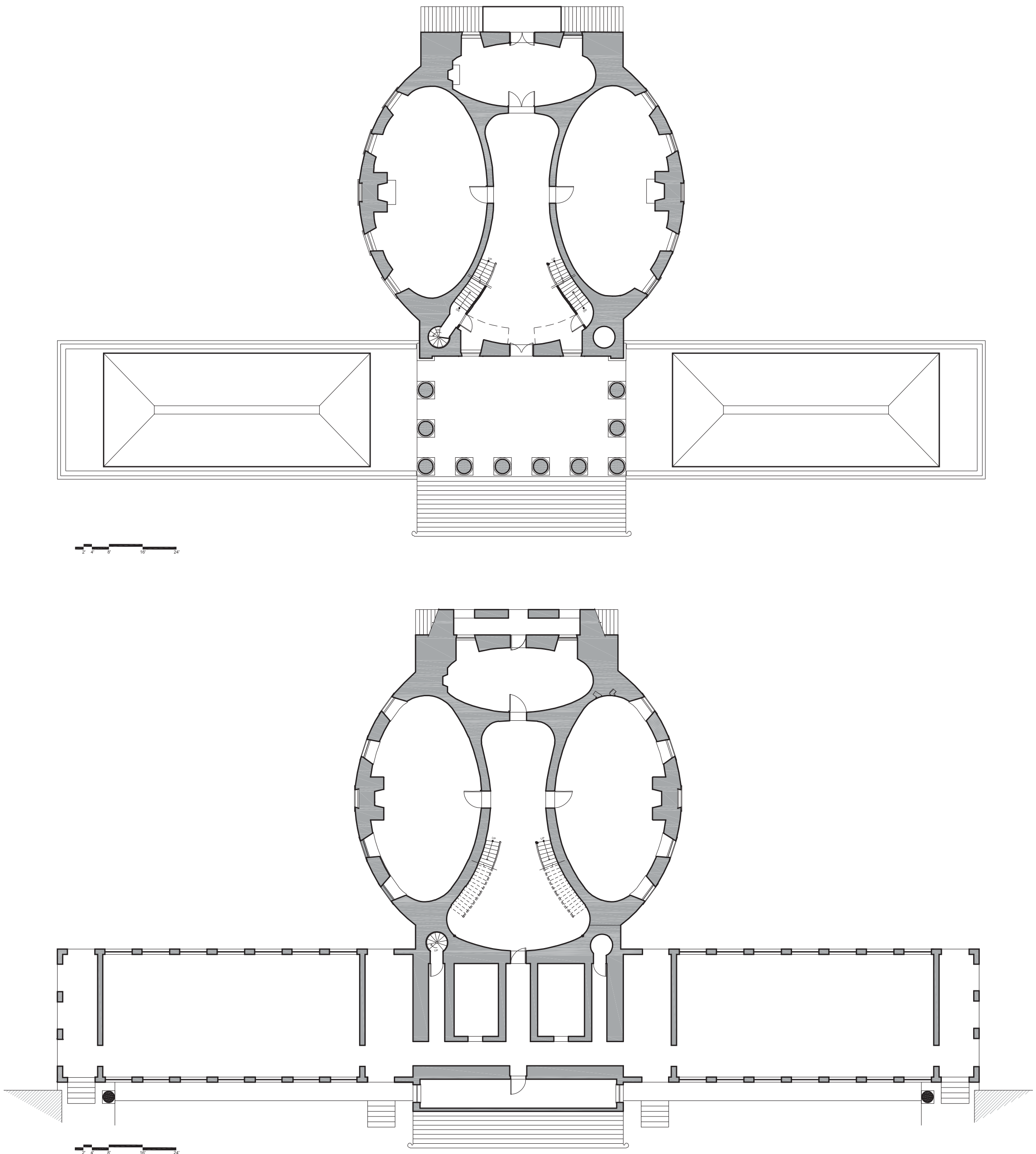
*Sketch axonometrics of the original Rotunda and terraces in 1827, showing the ground floor (bottom) and main floor (top). [JGWA, 2007]*



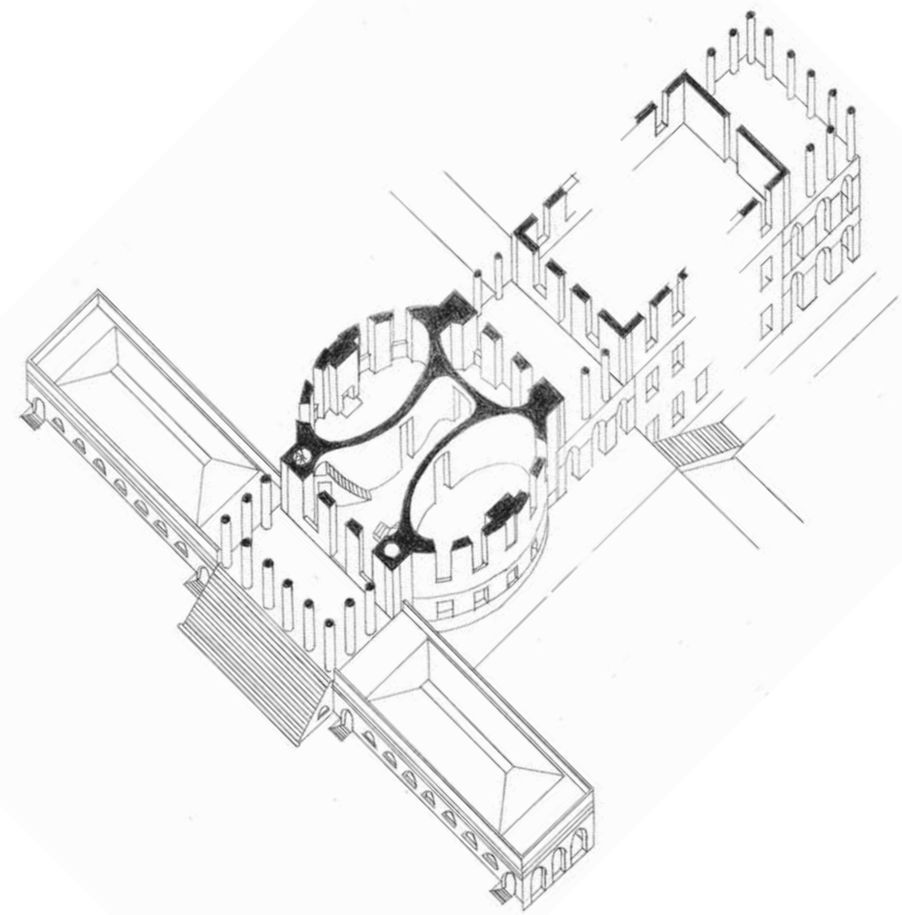
*Conjectural floor plans of the original Rotunda and terraces in 1827 at the Dome Room level. [JGWA, 2007]*



*Sketch axonometric of the original Rotunda and terraces in 1827, showing the Dome Room and the terrace roofs. [JGWA, 2007]*



*Conjectural floor plans of the Rotunda and terraces in 1841: ground floor (bottom) and main floor (top). [JGWA, 2007]*



*Sketch axonometric of the main floor plan of the Rotunda and terraces after the construction of the Annex. Note the hipped roofs on the terraces, constructed in 1841.  [JGWA, 2007]*

## EXTERIOR AND INTERIOR DESCRIPTIONS

For the following descriptions, certain generalizations were made for dating the various periods of construction, modification, reconstruction, and restoration.

- The date 1819 refers to the plans, section, and elevation completed by Jefferson in that year.
- The term "original" and the date 1827 refer to conditions that resulted from Jefferson's design and the construction that continued over several years; the Rotunda was not completed until after Jefferson's death.
- The date 1841 includes all work carried out to remodel and enclose the southeast and southwest terrace wings.
- Work carried out in the Rotunda and wings in succeeding years is specifically dated when possible. This includes the expansion carried out from the designs of Robert Mills and completed in 1853.
- The disastrous fire in 1895 nearly destroyed the entire Rotunda complex. Fortunately, masonry walls of the Rotunda and the flanking south wings survived and were repaired as part of the reconstruction by McKim Mead & White of New York City. In the description, their work is dated to 1898, the year that the complex project was fully completed.
- The next round of significant work is dated to 1939, the date on the set of drawings produced by architect Stanislaw J. Makielski of Charlottesville, Virginia. This project included extensive exterior work on the Rotunda and wings, as well as work in the interior of the wings.
- For the ambitious restoration project carried out by the firm of Ballou & Justice, the term "mid-1970s" is used, unless a more specific date is known.

The exterior and interior descriptions not only record the existing features and conditions, but also include information about previous and original conditions. This includes information and speculation about original and later nineteenth-century heating, lighting, and furnishings, as well as architectural features.

The room numbering follows the system already established by the University. Note that doors are described in detail, with their hardware, with the room into which they open.

## Exterior

The Rotunda, as it exists today, is still the anchor and focal point of Jefferson's Lawn, but the building's appearance is largely the product of the McKim Mead & White reconstruction. The Jefferson structure survives as the central brick drum, with its window and door openings, and the south wings or terraces. Stanford White rebuilt the dome and the south portico, and added a north portico and north wings to echo the south features and colonnades to connect the wings.

There are numerous photographs that record the Rotunda as reconstructed and enlarged by McKim Mead & White, but only a handful that show the building before 1895. The earliest photograph dates to 1868, and shows the Rotunda and flanking terraces as seen at a distance from the south [*Figure 34*].

The following description will list the prominent features of the building, and evidence of earlier building campaigns. The description begins with the general features, and then covers the south portico and south elevation; north portico and elevation; east and west elevations; the roof; the south wings; the north wings; the colonnades; the terraces; and the courtyards. Note that doors and windows, with their hardware, are described in detail within the Interior Description.

### GENERAL

Walls: The wall surfaces of the original drum, except in specific small areas, are composed of the original brick laid up in Flemish bond by Abiah B. Thorn and Nathanial Chamberlain beginning in 1823. The bricks are 2-3/8" to 2-5/8" high x 7-3/8" to 7-3/4" wide x 3-5/8" thick, and are laid such that the ten courses are approximately 2'-2 1/2" to 2'-4 1/2" high. By June 1824, the attic story was under construction. In that year, Benjamin Borden was paid for oiling the brick surface and penciling the mortar joints.

Windows: In an April 22, 1823 letter, Jefferson indicates that the "...handsomest entablatures for windows... can be found on plates XXXV and XXXVI of Palladio." Jefferson goes on to state that he would adopt the architrave at the left-hand bottom corner of plate XXXV. Although these plates show various entablatures suitable for window and door openings, none indicate a pediment atop the cornice. The sheet copper architraves designed by McKim Mead & White generally duplicate the Palladio profile.

Entablature: The brick walls extend up and behind a carefully proportioned, 6'-0" high sheet copper Corinthian entablature: the architrave, frieze, and cornice are each approximately 2'-0" high. The entablature was fabricated from the design of McKim, Mead, & White, and based on the original wood entablature designed by Jefferson.

The original entablature,  fabricated by Dinsmore and Neilson, was based on Plate XXVI of Book 1 in the Leoni edition of Palladio [*Figure 15*]. Post-fire photographs show closely spaced vertical wood nailers on the brick surface, to which the wood entablature was attached [*Figures 57-59*]. When the McDonald Brothers measured the evidence remaining for the entablature after the fire, they found that the height of the original entablature, together with the attic base, was approximately 8'-9 1/2" (the existing entablature, with the attic base, forms an 8'-11 3/4" high band). The original rosettes that ornamented the soffit of the wood cornice and the rake of the pediment were of "burnt" composition" (probably terra cotta), ordered from William J. Coffee of New York City in 1824. Jefferson indicated that 330 rosettes were needed.

The McKim Mead & White entablature begins with a three-fascia architrave culminating in a cyma recta molding. The frieze is a series of flat metal panels imprinted with shallow flutes. The cornice includes a bed molding (made up of a cyma recta, a denticulated course, and an egg-and-dart); a modillion band with scrolled modillions (ornamented with acanthus leaves); a corona ornamented with rosettes in the soffit; and a crown molding with a fillet, ovolo, fillet, and cymatium.

This entablature continues around the north and south porticos. The surface above the crown molding includes a shallow metal gutter that connects to the gutters on the roofs of the porticos.

Attic story: Above the entablature, the brick walls rise 12'-8 1/2" to form an attic story; this surface was constructed in 1824, after the dome structure was completed. The 2'-5 1/2" high sheet copper base includes a frieze, torus, fillet, and cavetto molding.

At the top of the attic story, a 1'-8 1/4" high metal cornice is composed of a cavetto, fillet, and egg-and-dart course below a dentil course and a cymatium. Above the cornice, the metal sweeps up in a 1'-1" deep scotia to the rim of the roof gutter.

*The Rotunda from the southeast. [JGWA, 2006]*

*The entablature architrave and frieze (left), and cornice (upper left). [JGWA, 2006]*

*The soffit of the cornice (top), and the attic story (left). [JGWA, 2006]*

*The cornice gutter and the base of the attic story (top); the crown molding at the top of the attic story (bottom). [JGWA, 2006]*

ROTUNDA: SOUTH PORTICO

The south portico is five bays wide and projects three bays from the south facade. Ten columns and two engaged pilasters, which replaced the original features designed by Jefferson, support an entablature, pediment, and gabled roof.

The existing fireproof south portico, designed by McKim Mead & White, replaced the wood frame structure that was destroyed in 1895. A photograph of the south front of the Rotunda immediately after the fire shows that only the ten structural brick columns that supported the pediment, and the brick wall of the south facade, survived the fire [*Figure 57*]. The pediment, roof, and ceiling of the portico were destroyed. The photograph shows the triangular outline of the pediment on the brick wall, and a tall doorway centered in the wall that opened from the attic of the portico into the upper gallery of the original Dome Room.

In a letter dated February 2, 1896, McDonald Brothers described what evidence remained of the original portico:

> Measurements taken from the old walls show the height of the columns of the portico, including base shaft and capital to be 28'6". The survey also shows the diameter of the columns at the base to be about 2'11"... The height of the base of the old columns measured from the floor to the top of the torus is 17 7/8", within 1/8" of the proportions of the same members on the Pantheon.

The portico as designed by Stanford White seems to follow these proportions. The concrete columns, including the marble bases, shafts, and capitals, are 28'-6 1/2" high. Above the apophyge, the concrete column shafts are approximately 3'-2" in diameter.

Columns: The Corinthian columns sit on 4-3/4" high, 4'-2 1/4" square plinths. Each of the 1'-3" high marble bases is composed of (from the bottom) a torus; fillet; scotia; two beads; scotia; fillet; torus; and fillet. The concrete shafts extend up to intricately carved marble capitals (approximately 3'-5" high).

Pediment: The columns support the Corinthian entablature that wraps around the portico; the cornice is carried up as a raking cornice on the pediment. The tympanum of the pediment is faced with the same shallow, fluted metal panels as the entablature frieze. At the center of the tympanum is a clock dial and frame, which replaced the original Simon Willard clock destroyed in the fire. The original clock face was of greater diameter (about 6'-2") than the current feature.

A comparison of pre-fire photographs of the pediment with the post-fire conditions reveals subtle differences in molding profiles, a different proportion and closer spacing of the original dentils, and thirteen modillions under the rake of each side of the pediment cornice as compared to the fourteen currently in place.

Ceiling: Prior to the fire, the original plaster-on-lath portico ceiling was positioned above a full entablature that duplicated the exterior entablature. An 1892 photograph records this important feature.

The existing plaster ceiling is trimmed at the edge with an entablature set on the column capitals. A plaster eagle, a copy of the ornament on the hall ceiling at Monticello, ornaments the center of the ceiling. This ornament was first placed here by Stanford White. A 1914 Holsinger Studio photograph records the eagle with an electric light fixture suspended from its belly [*Figure 88*]. Two large intake panels and eight light fixtures were inserted in the ceiling in the mid-1970s.

Floor: The south portico floor was historically paved with marble. In 1824, 1,400 square feet of Italian marble was ordered for the front portico floor and platform of the back steps. The current marble surface, installed in 1939, includes 1'-6" x 4-‘6" slabs forming rectangular fields bordered by 1'-6" square slabs. Photographs from the 1930s work shows that beneath the marble there is a subfloor of brick pavers [*see Figure 93*].

Stairs: From the portico floor, stairs descend south in fifteen risers to the sidewalk. The marble steps, installed in 1939 over a brick substructure to replace the deteriorated concrete steps from the post-fire construction, have 6-1/2" high risers and 1'-1" deep treads. The bottom tread extends out to the east and west, and ends in a volute.

The first stone steps were not installed until about 1832. Pre-fire photographs reveal that originally there were fourteen risers. There were no handrails. Although all of the Jefferson and Neilson drawings show massive cheek walls flanking the steps, these walls were never constructed.

The wrought metal handrails were installed in 1998.

Stair windows: In each of the stair cheek walls, an original lunette window opening is trimmed by a 6" wide single fascia architrave with a key block, and is fitted with a single-paned hopper sash. Original semicircular iron grilles with radiating rods cover the openings. These openings and grilles are visible in pre-fire photographs.

## ROTUNDA: SOUTH ELEVATION

The three-bay-wide south elevation is the flat south surface of one of the “buttresses” that Jefferson designed to support the dome. The original brick is laid in Flemish bond, such that ten courses are approximately 2'-4 1/4" high. Engaged pilasters project 6" from the east and west ends of the elevation extend up to Corinthian capitals to support the portico roof; the entablature of the portico ceiling extends across the facade. The base of the facade is trimmed with a marble fascia. The brick wall surface, as it returns north at the corners, is slightly battered as it rises upward. This subtle condition is evident in the corners, where the battered wall attaches to the curved wall of the drum.

Above the portico roof, the brick facade extends straight up to the roof at the base of the dome.

The first-story doorway and flanking window openings, and the three second-story window openings, are original 1827 features. The pressed and rolled copper trims and wood window sash date to the McKim Mead & White reconstruction.

Door: The main entrance doorway is framed by an 8-3/4" wide wood architrave from the mid-1970s. Above the architrave, a shallow fluted frieze extends up to a denticulated crown molding and pediment; all fabricated of sheet copper from designs of McKim Mead & white. A pair of mid-1970s stile-and-rail doors, each with four raised and recessed panels, replaced the post-fire doors.

Windows: The original window openings flanking the doorway have 8-1/4" wide two-fascia copper architraves, and pediments to match the doorway. The 1898 marble sills are 5-1/2" high, slightly thicker than the sills seen in the pre-fire photographs. The openings are fitted with 12/12 wood sash from 1898.

The current window entablatures and pediments differ in proportion from those seen in pre-fire photographs. The old images record a frieze that is only three bricks in height; the current sheet copper frieze is a full five brick courses in height. The reason for this change made by McKim Mead & White is unknown. Post-fire photographs reveal that the destroyed wood frieze and pediment was attached above each opening to three symmetrically placed vertical wood nailers, affixed to the brick wall surface [*Figure 57*]. The identical method of attachment can be seen in post-fire photographs of the Mills Annex [*Figures 61-62*].

The same 8-1/4" two-fascia copper profile is used to trim the second-story window openings that light the Dome Room. These openings have marble sills and 12/12 wood sash from 1898.

Curiously, these three second-story openings were not shown on Jefferson's 1819 floor plan of the Dome Room, and neither of the John Neilson's plans (November 1821 and 1822) show the three openings. It appears that initially, Jefferson did not intend to have windows in the south wall of the Dome Room; perhaps he was leaving additional wall space for the library bookcases. Eventually, openings were included, presumably at Jefferson's direction. In an August 10, 1823 letter to Brockenbrough, Jefferson wrote, "I have omitted to place a door in front, opening under the Portico... it should be of the width of the main door below." Jefferson also asked for a railing across the lower portion of the opening: "a folding sash door so as to give light when shut. its bottom to be closed by an open pannel either Chinese or iron."

The next day, Brockenbrough suggested that a window would work better than a door, and explained that he had already prepared a stone sill and window frame for that opening. Jefferson immediately wrote back that he thought a door would be "greatly preferable to a window both as to appearance & use, exactly such as in my parlour, except that the bottom panels had better be of wood." It is not known if a door was ever placed in the opening. In the earliest known photograph of the Rotunda (1868), 12/12 sash are clearly shown in all three second-story openings. These upper level brick openings, and the corresponding openings on the north elevation, should be probed to determine if the brick was modified after the initial construction.

Furnishing and fittings: At the first-story level, two large 1906 bronze memorial plaques commemorating Confederate soldiers from the University who died in the Civil War are fastened to the brick wall surface on either side of the doorway. Between the east window and the east pilaster, there is a bronze plaque in memory of soldiers from the University who died in World War I. A bronze plaque in honor of Woodrow Wilson, a graduate of the University, is mounted to the wall between the west window and west pilaster. The pre-fire photographs do not reveal any objects attached to this facade.

On each side of the doorway, there are four small holes in the masonry that presumably mark the locations of holdbacks.

*The Rotunda from the south (left); and the south pediment (below). [JGWA, 2006]*

*The south portico column capital (top) and base (bottom). [JGWA, 2006]*

*South portico ceiling (top); south elevation (bottom). [JGWA, 2007]*

## ROTUNDA: NORTH PORTICO

The McKim Mead & White portico on the north elevation is similar to the south elevation, but only one bay deep; as explained by Professor William Thornton, the portico was "much less in depth, in order to not detract from the dignity of the southern front."

Stairs descend from the north portico between stepped marble cheek walls to a concrete landing. The marble steps, reconstructed in 1939, have 6-1/2" high risers and 1'-1" deep bullnosed treads.

## ROTUNDA: NORTH ELEVATION

The north elevation generally duplicates the conditions of the south elevation. To the east of the doorway, three vertically-placed bronze plaques mounted to the brick wall memorialize soldiers from the University who died in World War II, Korea, and Vietnam.

There are no known Jefferson-era drawings that document the appearance of the north face of the Rotunda. The Jefferson and Neilson plans indicate that a central door flanked by window openings were the significant features at the main floor level. Neilson shows a platform with flanking steps in front of the doorway. In 1824, 160 square feet of marble tiles were ordered for the "Platform of the back steps." The November 1821 Neilson plan includes a representation of the back steps. The porch platform extends to the outer (east and west) edges of the windows flanking the doorway. Short flights of steps then ascend to the ground. The reality of the ground level on the north side of teh building make this scheme impossible; the steps would be much too steep, much like those that ascend a Mayan pyramid. Either the flat form was much shorter (its depth is unknown), or the steps would have to extend well beyond the outer edges of the facade. This situation is discussed in a letter from Brockenbrough to Jefferson dated July 14, 1824. Regardless of their form, the platform and steps likely included some sort of iron railing.

At some date during or after the original construction, three window openings were placed in the wall surface above the doorway. Neither Jefferson's nor Neilson's floor plans show window openings in this location. The brick surface behind the copper pediments above the door and windows need to be probed to determine the age of the previous wood pediments destroyed in the 1895 fire. Post-fire photographs show that the existing elements are attached to the brick surface at each opening by three evenly spaced vertical wood nailing strips, the same condition seen on the other facade and on the Mills Annex.

The entablature that originally encircled the building continued across this facade, and evidence for this feature is preserved in the north pediment attic (401A). There is no obvious evidence for a raking pediment on the surface of the attic story, but a careful analysis of photographs taken of the north elevation in 1896 reveals that Jefferson did place a pediment above the entablature [*Figure 75*]. It was removed when Robert Mills carried out the expansion in 1853. A possible reconstruction of the appearance of this elevation was developed by Peter Hodson and drawn by Calder Loth in 1966. An update of that drawing might show the pediment; place additional openings in the face of the stair platform to provide openings for the windows in the ground floor north oval room; and show the arches of the terrace wings as open, as they originally were [*Figures 29-30*].

*North elevation and portico from the east (top); and the north portico ceiling (left). [JGWA, 2006]*

ROTUNDA: EAST ELEVATION

The east elevation includes the curved east face of the rotunda drum, five bays wide, between the tall, narrow north and south “buttresses.”

The original bricks are laid in Flemish bond, such that ten courses of brick are approximately 2'-2 1/2" high.

The brick foundation is capped with a 9-1/2" high stone water table, which projects approximately 1'-0" out from the brick. This coping stone was quarried in 1833 and set in 1834. The brick extends up thirty-seven courses above the water table to a course of blackened bricks, then steps back to the main surface of the drum. The blackened brick course aligns with the marble crown molding below the balustrade of the wings; it is not seen in the post-fire photographs.

Doors: A doorway at the base of the north “buttress” was inserted in the mid-1970s to provide access to a spiral utility stair. The plain metal door is set into a metal frame.

Windows: There are five original 1827 window openings in each of the three stories; the center openings at each level are false windows, set in front of the reconstructed east chimney. The trim and sash date to the McKim Mead & White restoration/reconstruction.

The post-fire photographs reveal that the false windows survived the conflagration, but were removed when McKim Mead & White created functional window openings in these locations. In those photographs, a brick wall surface can be seen behind the broken glass of the false windows [*Figures 58-59*].

Each ground level window opening is framed by a 7-3/4" wide two-fascia architrave set in the opening. The sandstone sills sit directly on the water table. The sills are 5-1/2" high at the outside ends, and then dip down to 5" at the center. The cut stone surface of each sill retains a curved outline, that may indicate that the original sash were curved. The opening are fitted with 1898 8/8 sash. There are two small metal hooks above each architrave.

The tall first-story (or main level) window openings have similar trim to the south window openings: 8-1/4" wide two-fascia architraves; marble sills; pediments; and 12/12 wood sash, but the trims are curved to follow the surface of the drum and are positioned on the face of the brick wall rather than within the openings.

Like the front and rear elevations, the window entablature and pediment vary slightly in size from the conditions seen in pre-fire photographs.

The second-story window openings that light the Dome Room are also similar to the south windows, with 8-1/4" two-fascia architraves, marble sills and 12/12 wood sash.

Systems: At the north and south ends of the drum, cables extend from the roof and down into the ground. A concrete well with a diamond-plate cover is positioned in the ground near the center of the drum. Six outlets with plastic caps are set in the ground along the edge of the drum.

### ROTUNDA: WEST ELEVATION

The west elevation is currently a mirror image of the east elevation, but the post-fire (1895) photograph taken by Wampler [*Figure 58*] reveals some features that were unique to this elevation. In the photograph, the south buttress wall surface includes four small circular openings, one above the other. The very top opening is in the attic story. Fire debris obscures the wall surface at ground floor level, where a fifth opening may have existed. These openings may have been vents for the shaft that housed the bell rope. The origin of the openings is unknown, and they do not appear in the 1892 photograph of the Rotunda from the southwest. The Wampler image also records a small rectangular opening at the bottom of the west buttress, just above the stone water table.

As in the east elevation, a doorway in the north "buttress" was inserted in the mid-1970s, for access to a new stair.

Systems: At the north and south ends of the drum, cables extend from the roof and down into the ground. Six outlets with plastic caps, like those around the east drum, are set in the ground along the west drum.

*The Rotunda east elevation (top) and west elevation (left). [JGWA, 2006]*

*East elevation ground floor window (left) and main floor window (top). [JGWA, 2006]*

*East elevation Dome Room window.*
*([JGWA, 2006]*

ROOF/DOME

The narrow, flat surface of the roof around the dome is covered in mid-1970s, flat-seamed sheet metal. A 7-1/2" wide gutter wraps around near the edge of the roof to drains in the northeast, northwest, southeast, and southwest corners.

Access to the roof is through a roof hatch in the southwest corner. The opening dates to the post-fire construction. A gabled door, covered with sheet metal, opens to stairs that descend to the southwest stairwell. The flat roof surface immediately east of this hatch may be the location for the original bell.

The chimney vents protrude through the east and west ends of the roof; metal mesh screens cover the vents. Ventilation pipes extend up through the northeast, northwest, and southwest corners of the roof. Originally, there were probably chimney flues at all four elevations. The 1856 lithograph published by Casimir Bohn [*Figure 33*] shows some of these chimneys, and they are seen in views taken after the fire. In 1827, sheet metal funnels may have been installed at each flue. The north and south chimneys were needed for the fireplaces in the north oval rooms and the stair landing fireplace in the main hall. A chimney must have also vented the small ovens in teh ground floor east oval room.

The seven concentric steps at the base of the dome are finished in 3'-10" to 4'-1" wide flat-seam sheet metal. The first riser is 2'-6" high, and 1'-9 1/2" deep; the five intermediate risers are 1'-3-1/2" to 1'-4 1/2" high, and 1'-2 1/4" to 1'-6-3/4" deep. The top riser is 1'-1 1/4" high, and 1'-6 3/4" deep. The original steps were constructed of wood, and covered in tin.

The Guastavino tile dome is made up of two shells, approximately 1'-6" apart. Between the tile layers, the cement layers are approximately 1/2" thick. The outer dome is currently covered in flat-seam sheet metal, installed in the mid-1970s. According to the Ballou & Justice drawings, the metal was installed over 1-5/8" insulation, and was tied to the tile structure through 2x2 treated wood strips, fastened with 1/4" diameter bolts with lead cinch anchors.

The original wood-framed dome had a slightly lower profile, according to Jefferson's front elevation drawing. In 1824, the roof and dome were covered in tinplate and copper was used for gutters. By 1826, the roof was leaking and the surfaces were covered or patched with additional tinplate.

The mid-1970s extruded aluminum skylight frame has twenty-eight sections, each with double glazing. The torus curb around the oculus opening, installed in the mid-1970s, is covered with sheet metal. The diameter of the current opening is about 17'-8"; Jefferson's elevation drawing indicates an opening of above 16'.

Jefferson's skylight was problematic, as it leaked. There were constant requests to fix the leaking skylight, as water continued to come into the library. To remedy the problem, in around 1840 a large glass and tin lantern was installed over the opening. Atop the lantern, a weathervane included a large 8' to 10' long quill. This lantern is seen in several images, including the 1856 Bohn lithograph. The weathervane was removed in 1860, and the lantern soon followed.

Sometime after 1880 (a photograph of that date shows no lantern) a large twelve-sided wood and glass lantern was placed over the opening and remained in place until the 1895 fire.

The roofs of the north and south porticos are finished with standing seam metal; the seams are approximately 1'-10 1/2" apart, on center. Gutters along the east and west ends of the roofs connect to the gutters in the east and west entablatures of the Rotunda drum.

*The west wide of the roof, looking southwest (left); and the east side of the roof, looking south (below). [JGWA, 2006]*

*The skylight (top) and the west chimney (bottom). [JGWA, 2006]*

*Roof hatch (left); and south portico roof (below). [JGWA, 2006]*

## SOUTH WINGS

The wings flanking the south portico were designed by Jefferson to join the Rotunda to the east and west covered walks and the Pavilions flanking the lawns. The wings served as gymnasia for the students. The 1825 Maverick plan shows that the rectangular wings were nine bays wide and three bays deep, with arcades along the north, east and west elevations; the south elevations had lunette openings at the higher grade.

While accounts of the 1895 fire infer that these wings were "blown up" to prevent the fire from spreading, post-fire photographs reveal that the exterior walls seem to have survived without serious damage; only the later hipped roofs and interiors were partially destroyed. The McDonald Brothers partially reconstructed the southeast wing, and subsequently both wings were fully reconstructed/restored by McKim Mead & White.

The wings, as they now exist, are still nine bays wide, with arched open passages in the end bays. The walls are brick, laid in a Flemish bond. Along the north elevations, and the end elevations, the arched bays are delineated by brick piers. The piers rise from plain plinths and two-course-high bases up to two-course-high corbeled "capitals." The brickwork of these piers varies slightly, perhaps due to the repairs after the fire. For instance, in the southwest wing, the shafts at the three northeast openings are seventeen courses high, while the shafts at the three northwest openings are made up of larger bricks, and are sixteen courses high.

Windows: The arched openings in the south elevations spring from 7-1/2" high water tables. Each of the lunette openings is framed by a 2-3/4" wide ogee molding and is fitted with a pair of nine-light, quarter-round casement sash with radiating muntins. In each opening, only the west sash is hinged, opening into the corridor. Similar sash appear in photographs taken before the fire, and it is possible that some sash survived the fire. The sash were installed in 1841, when the "gymnasia" were enclosed to create interior spaces.

On the north elevations, the seven center openings of each elevations were filled in and fitted with arched window sash in 1841. The openings have 6-1/2" wide two-fascia architraves, and sit above simple square-cut sills. Each opening has a 6/6 wood sash and a 6-light semicircular fanlight, dating to the 1898 post-fire reconstruction. Storm sash have been installed over the wood sash. The space between the window frames and the original, wider arched openings was infilled with masonry covered in cement parging.

Balustrade: At the top of the walls, a 1'-5 3/8" high marble cornice includes a bed molding (composed of a frieze, a fillet, a bead, and ovolo) and a crown molding (composed of a corona, a fillet, a bead, and a cyma recta molding). Above the cornice, a 2'-9 1/2" high marble balustrade extends along the edge of the terrace roofs. The cornice and balustrade were installed in 1939 to replace the cast cement McKim Mead & White balustrade. The original wood cornice was extensively damaged by the fire and then removed.

Photographs from the end of the nineteenth century, just before the fire, show no balustrade along the wings, but this was not always the case. The earliest detailed images of the Rotunda and wings show railings along the south sides of the terraces. The February 1823 Neilson south elevation rendering includes simple rails in a lattice diamond pattern, but laters views from 1826 to 1845 consistently record railings of delicate Chinese-influenced fretwork, much like the current railings between the Pavilions. The 1856 Bohn's Album image shows a different railing, with vertical balusters, and in the earliest photograph, from 1868, it can be seen that the railing had groups of nine turned balusters separated by square paneled plinths. This same condition is seen in several later photographs.

Stairs/ramps: The wings connect to Pavilions I and II with steps in the east and west bays of the south elevations. The steps in the outermost bays are concrete and are eight risers high, with 1'-1" deep treads.

In the bays flanking the south portico steps, the concrete steps descend from the brick-paved walkway that is directly south of the portico steps. The steps have seven risers, with 1'-0" deep treads. Drains are set into the center of the herringbone-paved landings.

A ramp descending from the front of Pavilion I to the landing at the east bay of the southeast wing was installed in 1998. The ramp is paved with herringbone brick, to match the adjoining passages and walkways.

The steps and ramp are set within concrete retaining walls. There are also ramps along the west and east elevations (outer) elevations of the wings. Wrought iron railings along the steps and the ramps were installed in 1998.

Systems: On the north elevation of the southeast wing, there is an electrical box near the westernmost window opening; a "Carrier" air conditioning unit and a "Westinghouse" switch near the westernmost window; and a concrete well with a metal grate in the ground near the west passage opening.

An electrical box is mounted to the north elevation of the southwest wing near the second pier from the east. There is an air conditioning unit near the third bay from the west.

*The Southwest Wing, from the south. [JGWA, 2006]*

*The Southwest Wing, from the northwest. [JGWA, 2006]*

*The Southwest Wing west elevation and ramp (top) and south ramp (bottom). [JGWA, 2006]*

*The Southeast Wing from the southwest (left) and from the northeast (below). [JGWA, 2006]*

NORTH WINGS

The north wings were designed by Stanford White to expand the capacity of the Rotunda. Originally, each north wing held a single large lecture room, flanked at each end by open passages. The outer passages still remain open; the passages flanking the south portico were enclosed beginning in 1939.

The wings are nine bays wide, and three bays deep, with arched open passages in the end bays. The bricks are laid in stretcher bond (typically between the piers); Flemish bond (typical in the spandrels and tympanums); and common bond (in some of the pier shafts). Ten courses measure 2'-4 1/2" to 2'-5 3/8" high.

As in the south wings, the bays are delineated by brick piers. The piers begin at the brick foundation with two-tier bases; the shafts extend up to two-course-high corbeled "capitals." The shafts are made up of eighteen to nineteen courses, depending on the size of bricks used. The marble cornice and balustrade extend across the tops of the wings.

The north elevation of each bay includes a door in the original inner passage, and four window openings in alternating bays. The south elevations include windows in each of the enclosed bays.

The doorways are framed by 6-1/2" wide two-fascia architraves, and are fitted with six-paneled doors. Above each opening is a cornice, and a fifteen-light fanlight.

Each of the window openings (four in each of the north elevations, and seven in each of the south elevations) is framed by a 6-3/8" to 6-1/2" wide two-fascia architrave, and is fitted with a 6/6 wood sash and a six-light fanlight. Most of the sash date to the 1898 reconstruction; the window sash in the 1939 openings are later. Two-paneled screens cover the openings. There are pintels for shutters in the brick walls flanking the openings; the shutters have been removed.

Systems: There are six small bronze ventilation panels in the spandrels of the arches in each of the north and south elevations. Additional systems in each elevation include:

> Northeast wing: There are three large concrete wells with metal grates near the three west windows in the north elevation; and an electrical box near the east end of the elevation. An air conditioning unit has been inserted into the 1939 west window of the south elevation; two large grilles are positioned above the arched opening. A large distribution panel is mounted to the west end of the elevation.
>
> Northwest wing: There is a concrete well with a metal grate between the two east window openings. An electrical box is mounted to the east end of the elevation. On the south elevation, six electrical boxes (with conduit extending into the ground) are positioned below the windows. There is a large electrical distribution box near the 1939 east window opening, and a large ventilation panel above that window.

*The Northeast Wing from the northeast (top) and the southeast (bottom). [JGWA, 2006]*

*The Northwest Wing from the west (top) and the southeast (bottom). [JGWA, 2006]*

## COLONNADES

Stanford White designed the colonnades to connect the original south wings to the new north wings. The colonnades are eight bays wide, and one bay deep; one-bay-wide connecting archways join the colonnades to the wings.

Tuscan columns delineate the colonnade bays. The 9'-3" high columns sit on two-tier, 11" square plinths, and support a marble soffit that is integrated into the marble balustrade. Engaged pilasters are set at the north and south ends of the colonnades, flanking the connecting archways.

The interior of each colonnade is paved with brick, set in the typical herringbone pattern. One-brick-wide borders extend along the edges of the column plinths. The plaster ceiling is approximately 11'-7" above the paving, and is trimmed with a 6" cornice that sits above the marble soffit.

The connecting archways at the north and south ends of the colonnades feature a single arch in each bay. Each arch is edged in a 8-1/2" wide two-fascia architrave, and springs from an engaged pilaster. Within the connecting archways, the plaster ceilings are approximately 10'-6" above the paving.

The colonnades are lit by light fixtures mounted to the ceiling: two in each colonnade, and one in each of the connecting archways. In the northwest and southeast archways, the fixtures are set in access panels.

## TERRACES

Stanford White created the hard-surfaced terraces that extend above the wings and the colonnades to connect the south and north porticos. Before the fire, the 1841 hipped roofs above the south wings prevented the wings from being used as walkways. Originally the south wings were covered by serrated wood shingle roofs. These irregular surfaces were probably covered in decking that formed a flat surface. The 1826 Tanner engraving shows people standing on the terrace above the southwest wing, but in 1827 it was proposed that iron railings be placed in to the right and left of the portico to exclude access to the gymnasia roofs.

McKim Mead & White's cast concrete balustrade was replaced with the existing 2'-9 1/2" high marble balustrade in 1939.  The balustrade is composed of 7-1/4" square turned balusters spanning between paneled piers that are centered over the piers of the wings and the columns of the colonnades. A 5-1/4" molded railing extends across the balusters wraps around the piers; 3-1/4 slabs sit above the railing over the piers.

The terraces have been through numerous roofing campaigns. The most recent construction, in 2000-2004, resulted in fields of 1'-1 3/4" square granite pavers, set between 1'-3" wide bands of white marble. Metal drains are set into the pavers.

## WEST COURTYARD

The west courtyard reflects changes made in 1978, when a the University created a paved path leading west to a rectangular terrace in honor of the presidency of Edgar Finley Shannon, Jr. (president of the University from 1959-1974).

## EAST COURTYARD

The east courtyard includes a 9'-0" x 15'-0" rectangular fountain, designed in 1960 by T. K. Fitz Patrick in honor of  former University president Colgate W. Darden.

The fountain walls are faced with bluestone on the exterior, and topped with a marble ledge. The interior of the pool is lined with mosaic tile. At the center, the fountain itself is a tazza-form, cast-iron urn.

*The east colonnade, looking north (top) and south (bottom). [JGWA, 2006]*

*The west colonnade and terrace (top); and the east terrace, looking south (left). [JGWA, 2006]*

*The west courtyard, from the southeast (top); and the east courtyard, looking east (bottom). [JGWA, 2006]*

FEATURES NORTH OF THE ROTUNDA

The appearance of the landscape north of the Rotunda is a product of the last century. After the 1895 fire destroyed the Annex, formal landscaping was introduced at this side of the Rotunda for the first time. McKim Mead & White designed a series of formal terraces, but these designs were scaled back to a landing at the base of the steps and a second terrace set within the rampart walls.

Eventually, in 1959, the rampart was removed and the large intermediate brick terrace and brick paths were constructed. The northernmost and lowest terrace was added by the Garden Club of Virginia in 1976.

The marble stair of the north portico is set between marble cheek walls. The steps date to 1939, and replaced the McKim Mead & White concrete steps. They have 6-1/2" high risers and 1'-1" deep bullnosed treads.

The stair descends north to a bluestone and concrete landing, that appears to date to the McKim Mead & White work. Concrete paving borders the landing. From the east and west ends of the landing, concrete steps descend in four risers to brick walkways that extend along the north wings. The herringbone brick paving of the walkways are set between concrete aprons.

***1959 brick terrace***

From the landing, a concrete stair (with 6" high risers and 1'-1" deep treads) descends north in seventeen risers to the 1959 brick terrace. The steps are set between low, 3'-6 1/2" wide concrete cheek walls. The banks beyond the cheek walls are planted with ivy.

The brick paving is laid in fields of herringbone pattern bordered by strips of modified boxed pattern.

At the center of the brick terrace is a grass square and a statue of Thomas Jefferson by the artist Moses Ezekiel, dedicated in 1910. The statue has not changed since Mary Myer's description appeared in a 1910 Alumni Bulletin:

> The pedestal of Roman marble [8'-1" high] rests on a low [9" high] granite base. The pedestal decreases in circumference, until its top is the exact size of the lower edge of the bronze Liberty Bell which it supports. On top of the bell a small platform, decorated with laurel boughs, and formed apparently of a section of the beam from which the bell depended, supports the life-size statue of Jefferson.
>
> Around the top of the bell, which forms part of the pedestal, is the inscription on the original Liberty Bell; around the lower edge, these words "To perpetuate the teachings and example of the founders of the Republic this monument to Thomas Jefferson was presented to the people." Placed at regular intervals

> against the bell are four winged female figures, symbolic of Liberty, Justice, Religious Freedom, and Human Freedom. The statue of Liberty faces north, Justice, south, Religious Freedom, west, and Human Freedom, east.
>
> ...Above these symbolic figures stands Jefferson... The sculptor represents him as he looked at the time of the Declaration of Independence, a copy of which he holds in his hands."

At the north of the brick terrace, steps descend in sixteen risers to a smaller terrace with fifteen panels of herringbone bricks. The brick risers are 6-1/4" to 6-1/2" high, and the bluestone treads are 1'-0 1/2" deep. Brick cheek walls, laid up in stretcher bond, flank the steps.

Light standards: Light poles are positioned in the grass to the northeast, northwest, southeast, and southwest of the brick terrace. The octagonal standards are set on concrete bases, and include the seal of the University of Virginia and a plaque reading "G8-79."

Flagpoles: Two flagpoles, donated to the university in 1917 (one for the United States flag, and one for the Virginia flag), are set in the grass to the east and west of the terrace. Each of the bronze flagpoles rests on an octagonal concrete base/bench. The east flagpole bears a plaque that reads: "A GIFT/FROM THOMAS FORTUNE RYAN/ TO THE UNIVERSITY OF VIRGINIA/APRIL 13-1917." On the west flagpole, a similar plaque reads: "A GIFT/TO THE UNIVERSITY OF VIRGINIA/FROM PAUL GOODLOE McINTIRE/CLASS OF 1879/DECEMBER 14TH 1917."

Sundial: In the grass to the east of the terrace, there is a bronze sundial set in a cast concrete base. The sundial was originally donated in 1913 by the class of 1910, along with two stone benches. The benches are no longer in place. The existing bronze sundial, donated by the Seven Society in 1968 to replace the original, sits on the original cast concrete base.

***1976 brick terrace ("forecourt")***

At the north end of the lower 1959 terrace, three shallow brick risers descend to the 1976 brick "forecourt". This brick paving, which uses similar fields of herringbone brick and borders of modified boxed brick to the 1959 work, extends to the low stone wall at University Avenue.

Wide brick paths lead east and west from the south end of the terrace and then divide off to diagonal walkways. Stantions are set at the openings to these paths.

The planting beds flanking the terrace are planted with boxwood and trees.

Light standards of the same type as those on the 1959 terrace flank the steps and the north end of the paving.

Six wood benches, donated by alumni in 2006, are set along the edges of the terrace.

*The 1959 terrace, looking north from the 1896 bluestone landing. [JGWA, 2006]*

*The Moses Ezekiel statue of Thomas Jefferson, looking south. [JGWA, 2007]*

*The base of the east flagpole. [JGWA, 2007]*

*The sundial east of the 1959 brick terrace. [JGWA, 2007]*

*The 1976 Garden Club terrace, looking northwest. [JGWA, 2007]*

## Interior

### GROUND FLOOR: ROTUNDA

Although there is no known floor plan of the ground floor from Jefferson's hand, written references reveal that the plan duplicated that of the first floor. Jefferson's first floor plan illustrates three oval rooms surrounding an irregular dumbbell-shaped hall, all fitting neatly within the circular outline of the Rotunda.

Reference is made to the ground floor oval rooms in a letter dated May 10, 1832 from James Madison to Joseph C. Cabell; and by a visitor in October 1824 who notes that "On the ground floor are two elliptical rooms 50 ft by 30 ft (guess) & one much smaller."

The plan as completed by 1827 included the unusual dumbbell-shaped hall and probably a pair of symmetrical stairs at the south end ascending to the first floor. The ground floor entrance was positioned in the south wall, between the two flights of stairs. This doorway opened to a passage and corridor beneath the portico platform. The corridor provided access to the outdoors through the gymnasia, or wings, flanking the portico.

Doorways in the curved walls enclosing the central stair hall provided access to the large east and west oval rooms and the smaller north oval room. The hall was a dark space, since there were no windows to the exterior. The only natural light could have come from the first floor window openings at the top of the two south stairways, but it is likely that those stairs were enclosed, blocking the natural light.

Each of the two large oval rooms featured a pair of window openings flanking a fireplace centered on the outer wall, and single doors opposite that provided access to the hall.

The much smaller north oval room probably included a fireplace fitted into the curved west end of the oval, and possibly a pair of window openings flanking an exterior doorway in the north wall. The north windows and doors opened to the space beneath the platform and steps of the north porch. This condition would have diminished the natural light entering the north oval room, making it less desirable than its larger neighbors.

The exterior and interior walls forming these spaces were laid up in brick. These brick surfaces survived the 1895 configuration that destroyed all of the finishes in these rooms, and the interior curved surfaces of the two larger rooms survive to this day.

No known drawings or written descriptions provide clues to the appearance of the ground floor rooms as completed in 1827. It can be assumed that the walls and ceilings were finished in plaster and the floor surface was composed of brick. In 1826, B. Phillips was paid for paving in the basement. There is no evidence for the other finishes such as the wood trim, doors, and stairways. Whether the fireplace had a fully detailed mantelpiece is also unknown.

No known photographs record the ground floor rooms before or immediately after the 1895 fire.

***McDonald Brothers Architects Plan***

Evidence for the original plan of the ground floor is found on the floor plan produced by McDonald Brothers Architects in 1895-96 [*Figure 64*]. The well-delineated plan, complete with measurements, shows the two surviving east and west oval rooms and notes that the chimneys (fireplaces) in those spaces are to be "cut away" to provide for new window openings. The fireplaces are shown as dotted outlines on the plan. The inner brick wall of the smaller oval room is dotted in the plan for removal, but is mistakenly shown at the south end of the central hall. This mistake probably occurred due to the rapid nature of the production of the set of proposal drawings.

The McDonald plan also includes the layout of the area beneath the original south portico and steps. Their proposal does not seem to indicate any work in this area, which generally retains the same plan that exists today.

***McKim Mead & White Plan***

McKim Mead & White's ground floor plan [*Figure 70*] records conditions much like the McDonald Brothers plan. The two large oval rooms remain, minus their fireplaces. The smaller north oval room is removed with the space becoming part of the dumbbell-shaped hall. Two significant differences include the placement of two toilet rooms and storage areas beneath the proposed new north portico (the McDonald Brothers plan places a lecture hall in that location); and the positioning of a double flight of stairs at the south end of the hall. The McKim Mead & White stairs, as initially conceived, were directly inspired by Jefferson's double stairs in the same location, as seen on his plan of the main floor. The McKim Mead & White plan records the same arrangement of space beneath the original south portico as shown in the McDonald plan.

The ground floor plan as actually completed in 1898 is recorded by the 1939 Makielski floor plan [*Figure 90*]. The pairs of stairs located at the south end of the dumbbell-shaped hall ultimately did not duplicate the arrangement probably favored by Jefferson. The stairs were confined to a much smaller area at the south end of the hall.

***1970s plan***

The McKim Mead & White plan survived minor changes in finishes until the restoration of the Rotunda was carried out in the mid-1970s. That project retained the two original oval rooms and reconstructed their missing fireplaces. The smaller north oval room was rebuilt and a pair of stairs, based on Jefferson's main floor stair design, were placed at the south end of the hall. The mid-1970s finish detailing was based on precedents found in surviving buildings designed by Jefferson.

At the end of the ambitious mid-1970s restoration, the only building fabric from 1898 or earlier that survived in the ground floor was the brick of the outer walls and inner walls of the large oval rooms, and the window sash and related hardware installed by McKim Mead & White.

***Typical Finishes***

The following are the typical mid-1970s finishes found in the ground floor of the Rotunda.

Floor: Brick pavers are laid in a herringbone pattern. The pavers average 3-5/8" wide x 7-5/8" long.

The 1939 Makielski plan indicates that asphalt tile was used throughout the ground floor. The floor finish in place in 1898 after the post-fire reconstruction is unknown. It is likely that brick was placed here in 1827.

Walls: The brick masonry walls are finished with plaster. Original brick from 1827 remains in place in the outer walls and in the walls of the two large oval rooms.

Ceiling: The plaster-on-lath ceilings are 10'-10 1/2" above the floor. The mid-1970s plaster is applied to expanded metal lath. The probable original 1827 plaster finish would have been applied to split wood lath.

Baseboard: The typical 7-3/4" high baseboard includes a splashboard and a cap molding composed of (from top to bottom) a cavetto, bead, and ogee molding. The character of the original 1827 or 1898 baseboard may exist on some of the original brick wall surfaces.

Chair rail: The 3-1/4" high chair rail is composed of a fascia with two beads and a cavetto at the bottom edge, and an ogee and fillet at the top edge. The top edge of the rail is 2'-10" above the carpet. Evidence for the placement of a chair rail in the ground floor rooms in 1827 is not known to exist.

Doors: The doorways into each room are framed by 7-1/4" wide two-fascia architraves. Each reveal is lined with three tiers of raised panels that align with the panels on the doors. The door openings as they now exist are in locations used in 1827 but the exact character of the trim at that time is unknown.

Doors: The doors are slightly curved to follow the curve of the elliptical rooms' walls. The typical door is 3'-8 5/8" wide x 8'-2 3/4" high x 2-3/8" thick, and has six raised panels. Whether the 1827 doors were curved, and what their panel arrangement was, is undocumented.

Hardware: Typically, each door is hung on four 5" high butt hinges; the locksets vary slightly at each door. Some of the surface-mounted rim locks were antique at the time of their installation.

Windows: The original 1827 window openings are set deeply into the exterior masonry walls above 6" high wood sills; each opening is framed by a simple mid-1970s fascia and bead surround.

Each of the McKim Mead & White 8/8 chain-hung sash have a pair of original brass inset sash lifts on the bottom rails, and an original thumblatch on the meeting rail. The original Jefferson-era sash may have been slightly curved to follow the curve of the stone sills.

***Lower Center Hall (101)***

The original dumbbell shape of the hall plan was Jefferson's solution for the central space resulting from the placement of three oval rooms within the confines of the circular building form. There is no known Jefferson plan of this hall; the conditions as they now exist date to the mid-1970s restoration. The south, east, and west brick walls date to the original 1827 construction, as do the door openings in those surfaces. The other plan features are based on Jefferson's plan of the main floor.

Walls: The curved wall surfaces at the north end of the hall date to the mid-1970s reconstruction, but are based on Jefferson's 1823 floor plan that shows the faint outlines of such walls, and the June 16, 1823 letter instructing Arthur Brackenbrough to construct them of brick or wood frame. Both documents actually refer to the main floor.

Baseboard: The walls are trimmed with a typical mid-1970s baseboard.

Chair rail: The mid-1970s chair rails on the east and west walls terminate near the stairs, and then begin again in the southeast and southwest corners beneath the stairs.

Jefferson's use of a chair rail in the hall is undocumented.

Doors: There are typical doorways with typical architraves in the east, west, north, and south walls. In the south doorway, access panels have been cut into the bottom panels of each reveal. The panels have pairs of small hinges, and have small decorative latches.

In the northeast and northwest curved corners of the hall, blind doorways to closets are framed with 2-1/2" wide flush fascia and bead trims. The placement of doors in these locations cannot be documented to 1827.

North door: The opening is fitted with a pair of doors curved to fit the curve of the wall. Each leaf is 2'-6" x 8'-3" high x 2-1/4" thick, and has three raised/recessed panels.

The width of the opening, installed in the 1970s, was based on Jefferson's plan of the main floor.

Hardware: Each leaf is hung on four 5" high wide-swing butt hinges. On the west leaf, there is an antique 8-1/8" wide x 5" high iron rim lock with brass knobs, an oval keyhole escutcheon, and an iron keeper with brass strike edge; and a 4-1/4" high brass mortise deadbolt with "Corbin Russwin" key cylinders on both sides.

Closet doors: The closet doors are plain, flush doors, trimmed with the chair rail and baseboard moldings to blend in with the wall surfaces. Each door is 2'-10" wide x 7'-0" high; the thickness varies as the hall face of the door is curved to follow the curve of the wall.

Hardware: The doors are hung on brass concealed pivot hinges, and fasten with key-operated locks and magnetic latches.

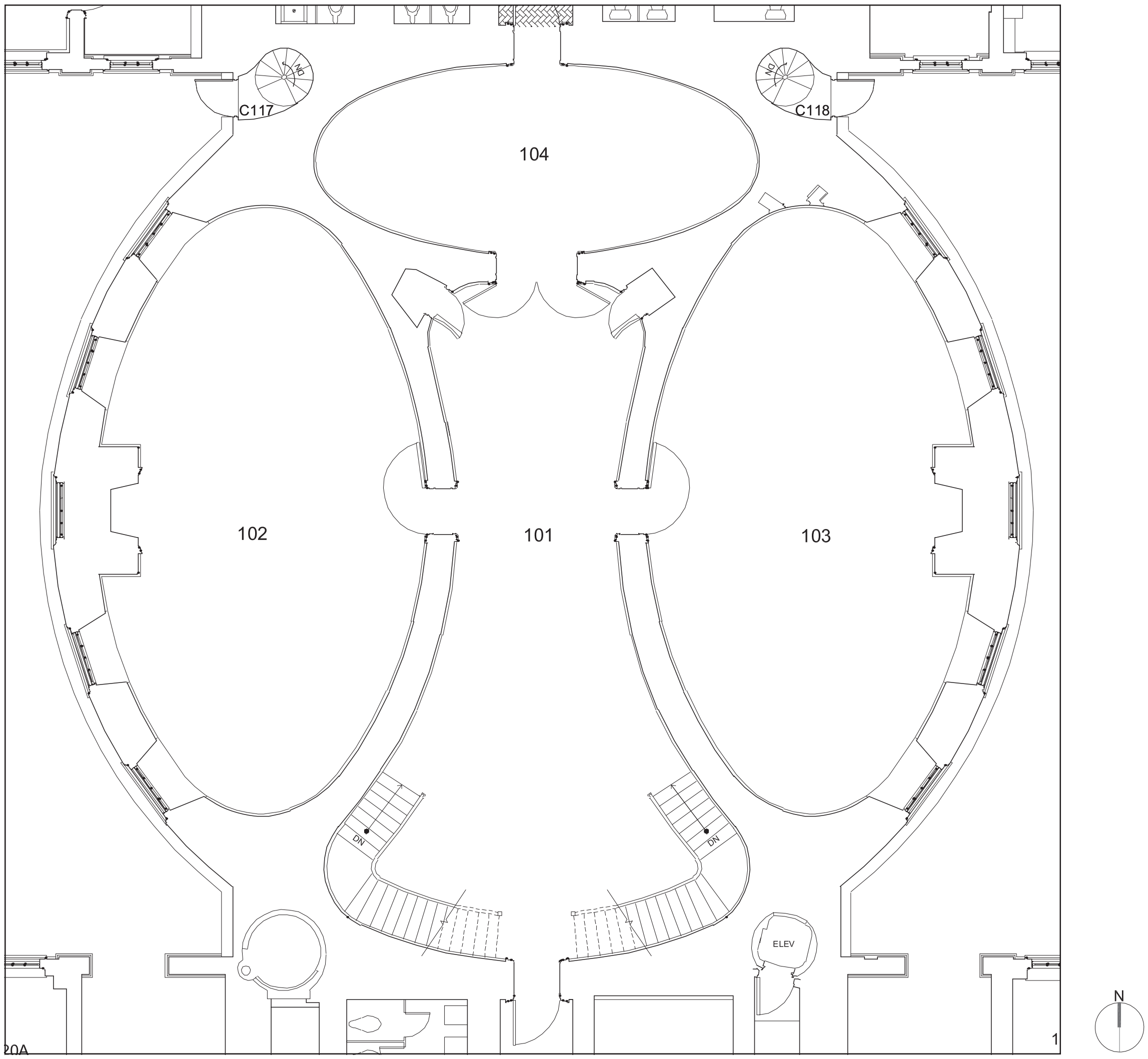
Stairs: Two mid-1970s staircases at the south end of the room are curved to follow the curve of the walls. The wood stair surfaces conceal a steel stair structure. This accounts for the massive appearance of the stair stringer.

Each stair begins with eight risers ascending south to a landing. Fourteen risers then wind up along the walls to the main floor. The risers are 7" to 7-1/4" high.

Below each of the bullnosed treads is a 3/4" high molding with a fillet and a cavetto that returns on the stringer; below that molding, a curvilinear bracket decorates the stair stringer. The bottom edge of the stringer is trimmed with a bead and fascia molding.

The 2-5/8" high handrails are supported by 1-1/2" turned balusters (three to a tread), and terminate at turned newel posts.

There is no visual or written evidence for the configuration or appearance of the 1827 stair from the ground floor to the main floor. It is possible that a single enclosed run




*Detail of the ground floor plan of the Rotunda (not to scale). [JGWA, 2007]* existed on one or both sides of the hall, ascending beneath the bottom runs of the main floor stairs.

Lighting/electrical: The room is lit by three chain-hung, brass and glass lanterns that include two-tier candle fixtures that hold electric candles. These fixtures were installed as part of the mid-1970s restoration. The windowless space makes the use of artificial lighting a necessity.

Other electrical fittings include five recessed fixtures in the south end of the ceiling (near the stairs); switches near the south entrance and near the stairs; and receptacles in the east, west, and north walls.

Heating: There are registers in the northeast and northwest walls, near the ceiling, and a register in the east wall, south of the doorway.

There is no documentary evidence that the hall was heated in 1827 or later in the nineteenth century.

Equipment: An exit sign is mounted to the south wall, above the doorway. There are communications receptacles in the baseboards of the north, east and west walls.

***Closets (101A & 101B)***

The two closets were created as part of the reconstruction carried out in the mid-1970s. There is no documentary evidence that Jefferson intended such features in these locations.

The herringbone brick floor of the stair hall continues into these spaces. The walls and ceiling are finished with plaster. Narrow wood moldings, 2-1/2" wide, trim the door openings.

***Lower West Oval Room (102)***

The oval brick masonry shell that encloses this room survived the 1895 fire and was retained in the McKim Mead & White reconstruction. The extant window sash survive from that project, but all of the other finishes and conditions now found in the room date to the mid-1970s restoration.

In 1825, Jefferson agreed to Dr. John Emmet's request to use this room and the east oval room for "chemical purposes."

Doors: The doorway in the east wall is framed by the typical mid-1970s architrave. The opening in the brick wall may date to the original construction.

East door: The door is a typical six-paneled curved door.

Hardware: The hardware is contemporary with the mid-1970s door, and includes four 5" high butt hinges, and an antique 8-1/4" wide x 4-3/4" high iron rim lock with two brass knobs and an oval brass keyhole escutcheon; there is a brass night bolt latch at the bottom of the case. Above the box lock is a 6-1/4" high mortise lockset with a turnkey (on the west face) and a key cylinder (on the east face).

Windows: There are five original 1827 window openings in the west wall with typical McKim Mead & White sash and hardware; the center opening is hidden behind the mid-1970s chimney breast. The four visible openings have typical mid-1970s trim.

Fireplace: The mid-1970s, 10'-2" wide concrete block chimney breast projects 3'-2" from the west wall. The brick-lined firebox is painted black, as is the plain stucco surround. The surround is bordered by a 7-1/4" wide, two-fascia, wood architrave. The hearth and firebox are paved with bricks.

The original chimney breast and fireplace were removed as part of the post-fire reconstruction by McKim Mead & White. There is no documentation of the original appearance of the fireplace and mantel.

Lighting/electrical: The room is lit by four large brass ten-arm chandeliers. Each arm supports a frosted glass shade. The mid-1970s electrical fixture are an abstract simulation of an early nineteenth-century Argand fixture. Lighting in the nineteenth century likely included suspended ceiling fixtures and/or wall brackets that would have changed from oil, to kerosene, to gas, and finally to electricity.

Other electrical elements include a switch near the east doorway, and receptacles in the baseboard.

Heating: Three thermostats are mounted to the south face of the chimney breast. There are two registers in the north and south face of the chimney breast, and four registers in the east wall near the ceiling.

The room was originally heated by the fireplace, but by 1828, the faculty requested that stoves be placed in the various rooms.

Equipment: There are network/communications receptacles in the baseboard.

### *Lower East Oval Room (103)*

The oval brick masonry shell that encloses this space survived the 1895 fire, and was retained in the McKim Mead & White reconstruction. The extant window sash survive from the 1898 project, but all other finishes and conditions now found in the room date to the mid-1970s restoration.

In 1825, Jefferson agreed to Dr. Emmet's request to use this room and the west oval room for "chemical purposes." Two small oven-like recesses from that era survive in the north wall.

Doors: The doorway in the west wall may date to the original 1827 construction. The opening is framed by the typical mid-1970s architrave.

West door: The door is a typical mid-1970s six-paneled curved door.

Hardware: The hardware on this door is similar to the hardware on the door to the West Oval Room (102): four 5" high butt hinges; an antique 8-1/4" wide x 4-3/4" high iron rim lock with two brass knobs and an oval brass keyhole escutcheon; and a 6-1/4" high mortise lockset with a turnkey (on the west face) and a key cylinder (on the east face). Inside of the antique rim lock, a strip of taped is marked "B16 #3."

Windows: There are five original 1827 window openings in the east wall; the center opening is hidden behind the chimney breast. The sash date to the McKim Mead & White reconstruction. Besides the typical 1898 hardware, there are latches on the bottom rails of all but the center and northeast window sash.

Fireplace: The mid-1970s concrete block chimney breast and mantel are mirror images of those in the Lower West Oval Room (102): a 10'-2" wide chimney breast projects 3'-2" from the west wall; the brick-lined firebox is painted black, as is the plain stucco surround; and the surround is bordered by a 7-1/4" wide two-fascia architrave. The hearth and firebox are paved with bricks.

The original chimney breast and fireplace were removed as part of the post-fire renovation by McKim Mead & White.

Ovens: The mid-1970s work revealed two original ovens built into the brick wall in the north end of the room. The two 1'-0" wide x 1'-4" high openings to the ovens are framed by narrow, flush fascia and bead trims. The plain, flush wood doors are hung on pivot hinges and have magnetic latches. All of the woodwork dates to the mid-1970s.

Originally the oven openings were likely covered by cast or wrought-iron doors set in the plaster-finished brick wall. Brick ledges in each oven supported iron grates. Currently there are five 1'-0 1/4" long, cast-iron, dumbbell-shaped bars forming a grate. Some or all of these bars may have been found here at the time of the ovens' discovery.

Dr. Emmet's chemical laboratory would have required a much more complex built-in stove and oven apparatus than the two so-called ovens now represented. Davidge Hall (1812) in Baltimore, Maryland includes a Chemical hall that retains elements of a demonstration stove and affiliated features that must have existed here and in the West Oval Room.

Lighting/electrical: The room is lit by four large, brass, ten-arm chandeliers like those used in the West Oval Room (102). Other electrical elements include a switch near the west doorway, and receptacles in the baseboard.

Heating: Three "Johnson Control" thermostats are mounted to the north face of the chimney breast. There two registers in the north and south face of the chimney breast, and four registers in the west wall near the ceiling.

The room was originally heated by the fireplace, but in 1828 the faculty requested that stoves be placed in the various rooms.

Equipment: There are network/communications receptacles in the baseboard.

***Lower North Oval Room (104)***

The oval room as it now exists is a result of the mid-1970s reconstruction of the curved south wall removed as part of the McKim Mead & White renovation. In its original form, the room probably had two windows and a doorway in the north wall and a fireplace at the west end of the room. In 1828, "the natural and artificial curiosities given to the University" by Jefferson were moved to this room.

The room now houses the office of the Rotunda Administrator.

Doors: The opening in the north wall probably survives from the original 1827 construction; the south doorway was reconstructed in the mid-1970s. The original width of the south doorway is unknown. All of the door trims date to the mid-1970s work.

Windows: There are currently no window openings in this room. Investigations of the brick wall surfaces flanking the north doorway may reveal evidence for original window openings like those in room 205 directly above this space. If Jefferson did place windows here, they would have been partially obscured by the structure of the original north porch and steps.

Lighting/electrical: The room is lit by two large, brass, ten-arm chandeliers like those used in the West Oval Room (102). Other electrical elements include a switch near the north doorway, and receptacles in the baseboard.

Heating: Three "Johnson Control" thermostats are mounted to the south wall, east of the doorway. There are two registers in the south wall, near the ceiling.

The brick surface at the west end of the room should be probed for evidence of a fireplace and chimney flue.

Equipment: There are network/communications receptacles in the baseboard.

*Lower Center Hall (101), looking southeast. [JGWA, 2006]*

*Lower Center Hall (101), looking southwest. [JGWA, 2006]*

*Lower Center Hall (101), looking north. [JGWA, 2006]*

*Lower Center Hall (101), southwest stair. [JGWA, 2006]*

*Lower West Oval Room (102), looking north. [JGWA, 2006]*

*Lower West Oval Room (102), looking south. [JGWA, 2006]*

*Lower East Oval Room (103), looking north. [JGWA, 2006]*

*Lower East Oval Room (103), looking south. [JGWA, 2006]*

*Lower West Oval Room (102) fireplace. [JGWA, 2006]*

*Lower East Oval Room (103), original oven. [JGWA, 2006]*

*Lower North Oval Room (104), looking east. [JGWA, 2006]*

*Lower North Oval Room (104), looking west. [JGWA, 2006]*

GROUND FLOOR: BELOW SOUTH PORTICO (CRYPTOPORTICUS)

This collection of corridors and rooms survived the 1895 fire.

***East/West Passage (C101)***

This vaulted corridor survived the 1895 fire; it probably exists much as it did in 1827, although the various surfaces and finishes have been renewed.

Floor: The floor is paved with herringbone pavers.

Walls: The walls are finished with plaster on brick masonry.

Ceiling: The original 1827 barrel-vaulted brick ceiling is finished with plaster. At its highest point, the ceiling is 9'-9" above the floor.

Doors: At the center of the north wall, the corridor opens to the hallway that leads to the main entry (C102). To the west of that opening, doorways open to a closet (105) and a women's toilet room (T102). To the east are a wide doorway (widened in the mid-1970s) to a mechanical room (108), and a doorway to the elevator (C103).

There are three doorways in the south wall, opening to the men's toilet room (T101) and a catering pantry (106). The southeast and southwest openings were created in the mid-1970s; the center opening may date to 1827.

All of these doorways are framed by simple 2" to 2'-1/2" wide fascia trimmed with beads at the interior edges. The doorway to the women's toilet room (T102) has a louvered ventilation panel, and there is a ventilation panel above the opening to the mechanical room (108).

> Southeast door (to 106): The 2'-11 5/8" wide x 7'-0" high x 1-3/4" thick stile-and-rail door has six raised panels.
>
> > Hardware: The door is hung on three 4-1/2" high butt hinges. A 4-3/4" high mortise lockset has two knobs and oval keyhole escutcheons.

Lighting/electrical: The hall is lit by five fixtures mounted to the ceiling.

Furnishings and fittings: Bronze plaques are mounted to the east and west walls. The plaque on the east wall lists the presidents of the University of Virginia; the west plaque commemorates the Rectors of the university.

***Ground Floor Entrance Corridor (C102)***

The finishes in this corridor are similar to those of C101. The original 1827 doorway in the north wall is currently used as the main entrance into the Rotunda.

Floor: The floor is paved with herringbone brick pavers.

Walls: The original 1827 masonry walls are finished with plaster.

Ceiling: The original 1827 barrel-vaulted ceiling, finished with plaster, slopes up to the north end of the corridor. At the south end, the vault is 9'-10" above the floor; at the north end, the highest point of the vault is 10'-9" above the floor.

Door: The 1827 doorway in the north wall is framed by a mid-1970s 7-3/4" wide two-fascia architrave.

A glazed door was installed in this corridor in the 1970s; the door has been removed.

North door: The 1827 opening is fitted with a typical mid-1970s six-panel door, 3'-8 3/4" wide x 8'-4 1/2" high x 2-1/4" thick.

Hardware: The door is hung on four 5" butt hinges. Other mid-1970s hardware includes a push latch on the north face, and a grip and key cylinder for a deadbolt on the south face. Push buttons on the west reveal, and on the west wall of the corridor, operate an electronic opener (for accessibility).

Lighting/electrical: The corridor is lit by two ceiling fixtures, similar to the fixtures used in C101.

***Elevator Passage (C103)***

Originally this passage probably provided access to the bottom of the circular shaft that housed the weights of the Willard clock, ordered in 1826.

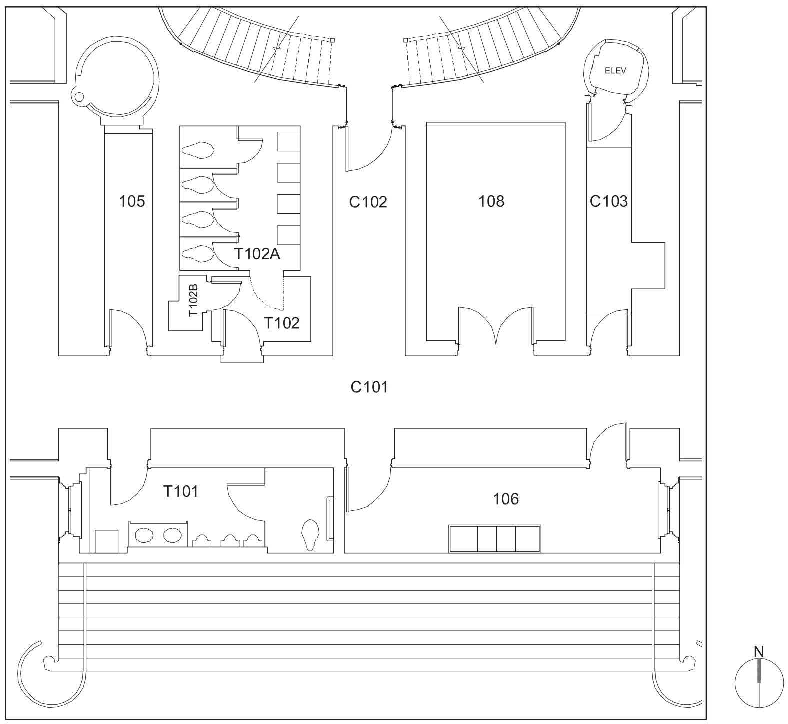
Floor: The floor is paved with bricks laid in a herringbone pattern, that continues from the adjoining passage (C101). The floor slopes up to the north.

Walls: The brick walls are finished with plaster. A recessed niche in the west wall is currently used to store folding chairs.

Ceiling: The ceiling is an original 1827 brick barrel vault. At the north end of the space, the vault is 9'-7" above the floor. A soffit near the elevator is 8'-2" above the north end of the floor.

Doors: The south doorway is trimmed by a small fascia with a flush bead along the inside edge. The north doorway, to the elevator, has a metal frame.

South door: The 2'-11 1/2" wide x 7'-2 1/2" high x 1-3/4" thick stile-and-rail door has six raised panels.




*Detail of the ground floor plan of the rooms below the south portico (cryptoporticus)(not to scale). [JGWA, 2007]*

Hardware: The door is hung on three 4-3/4" high butt hinges. Other hardware includes a 4-3/4" high mortise lockset with two brass knobs and oval keyhole escutcheons; and a 6" mortise “Corbin Russwin” deadbolt with a key cylinder (south face) and a turnkey (north face).

Elevator door: The 2'-9 3/4" wide x 6'-11 3/4" high x 1-3/4" thick metal door is curved to follow the curve of the elevator shaft, and has a small glazed safety panel.

Hardware: Hardware includes hinges in the base and top of the door; an electrical closer; a metal knob on the south face; and a push plate on the north face.

Lighting/electrical: The room is lit by two ceiling fixtures with globe shades. Other electrical elements include switches in the east and west walls, and a receptacle and electrical fittings on the west wall for the door closer.

Equipment: A fire alarm is mounted to the west wall; a sprinkler extends through the west wall.

***Men’s Toilet Room (T101)***

Originally, this room and room 106 formed a single long narrow space with small semicircular windows at each end, and a single doorway in the north wall. The current finishes reflect both the mid-1970s work and renovations carried out in 1999.

Floor: The floor is paved with quarry tiles, installed in 1999.

Walls: The east and south walls are concrete block, added in the mid-1970s; the south wall is furred out from the original masonry. The walls are finished with plaster above a mid-1970s ceramic tile wainscot made up of 4-1/2" high x 6" wide green ceramic tiles.

A ledge projecting from the west wall is finished with ceramic tiles. A black marble shelf on the top of the ledge was installed in 1999.

Ceiling: The plaster ceiling curves down from approximately 8'-2" above the floor at the north wall, to meet the south wall 4'-5" above the floor. The original 1827 brick structure of this ceiling supports the portico steps that were rebuilt in 1939.

Baseboard: The bottom course of tiles on the wainscot are slightly coved to meet the floor.

Doors: The doorway in the north wall, added in the mid-1970s, has a simple wood surround.

North door: The mid-1970s 2'-11 5/8" wide x 6'-11 3/4" high x 1-3/4" thick stile-and-rail door has six raised panels.

Hardware: The hardware includes three butt hinges; a mortise lockset with brass lever handles; a deadbolt; and a closer.

Window: The original 1827 semicircular window opening in the west wall has a plain wood surround, and a bullnosed sill. The hopper sash is glazed with textured glass. Hardware includes a pair of hinges on the bottom rail, and a latch at the top of the sash.

Lighting/electrical: A strip fluorescent fixture, probably dating to the 1999 work, is hung from the ceiling. Other electrical elements include a switch on the south wall.

Heating: A perforated stainless steel screen, installed in 1999, is mounted to the west ledge.

Plumbing: The plumbing fittings, all installed in 1999, are mounted to the south wall. At the west end of the room, there is a utility sink. To the east of the utility sink, a black marble counter with two ceramic lavatories is set between narrow, stainless steel privacy panels. There are three urinals to the east of the lavatories, and an accessible stall with a ceramic toilet at the east end of the room.

Furnishing and fittings: The room is equipped with paper towel dispensers on the west ledge; soap dispensers on the privacy screens; a mirror on the south wall, above the lavatories; and a mirror and clothes hook bar on the north wall.

***Women's Toilet Room and Vestibule (T102/T02A)***

The women's toilet room includes a vestibule (T102) and closet (T102B) in the south section, and the toilet room (T102A) in the north section. The three spaces are separated by concrete block walls, constructed in the mid-1970s.

Originally, this was a single large room with a doorway in the south wall to the corridor.

Floor: The floor is finished with 2" square green ceramic tiles. Drains are set in the floor of the toilet room.

Walls: The masonry walls are finished with plaster above a 4'-3 1/4" high ceramic tile wainscot, made up of 4-1/2" high x 6" wide green ceramic tiles. Concrete block walls were inserted in the mid-1970s to create the vestibule and closet. Within the toilet area, the east and west walls are concrete block, furred out from the original 1827 brick masonry.

Ceiling: The 1827 vaulted brick ceiling is finished with plaster. This structure supports the portico floor. In the vestibule, an acoustical tile ceiling has been inserted.

Baseboard: The bottom course of wainscot tiles are slightly coved where they meet the floor.

Doors: There are three doorways in the south vestibule: one in the south wall, one in the west wall, and one in the north wall. The south doorway has a plain wood frame; the other two openings have metal frames.

> South door: The 2'-11 1/2" wide x 6'-11 3/4" high x 1-3/4" thick stile-and-rail door has six raised panels.
>
> > Hardware: The door hardware includes three 4-1/2" high butt hinges; an 8" high “Emhart” mortise lockset with grip knobs and a key cylinder; and a closer.
>
> North door: This door has been removed from the opening. Remnants of the three 4-1/2" high butt hinges remain on the east jamb, indicating that the door opened into the vestibule.
>
> West door (to utility closet): The plain metal door is 2'-5 7/8" wide x 6'-11 1/2" high.
>
> > Hardware: The door hardware includes three 4-1/2" high butt hinges; and a mortise lockset with bronze knobs, oval keyhole escutcheon, and a key cylinder.

Lighting/electrical: The vestibule is lit by a fluorescent fixture in the acoustical tile ceiling. In the toilet room, strip fluorescent lights are hidden behind a metal enclosure that spans the east wall. Other electrical elements include switches on the south walls of the vestibule and toilet room.

Heating: There is a convector radiator recessed in the south wall of the vestibule.

Plumbing: Plumbing fixtures include four lavatories on the east wall, and four ceramic toilets on the east wall. The toilet stalls are enclosed with enameled steel partitions and doors.

Furnishings and fittings: The vestibule is fitted with a full-length mirror on the south wall, and a diaper changing station on the east wall.

In the toilet room, four mirrors and three soap dispensers are mounted to the east wall, above the lavatories, and there are paper towel dispensers on the north and east wall.

### *Utility closet (T102B)*

This was originally part of the larger room that included T102 and T102A.

Floor: The floor is covered with 1'-0" square vinyl tiles. There is a drain near the center of the floor.

Walls: The walls are brick, finished with plaster. In the northwest corner of the room, a chase is finished with plaster on metal lath.

Ceiling: The plaster ceiling is 7'-3 1/2" above the floor.

Baseboard: A vinyl baseboard trims the base of the north wall.

Door: The doorway in the east wall is trimmed with a plain metal frame.

Lighting/electrical: The room is lit by a small recessed ceiling fixture. Other electrical elements include a switch in the east wall; a "Westinghouse" switch on the south wall (for the hot water heater); and conduit extending from the switch through the chase.

Heating: There is a small ventilator in the ceiling.

Plumbing: The room is equipped with a hot water heater. Pipes extend from the heater into the chase.

Equipment: A sprinkler extends through the ceiling near the doorway.

### *Closet/Passage (105)*

This original passage provides access to a circular brick shaft that featured a wood stair that wound its way to the main floor and possibly to higher levels. The shaft may have housed the rope that controlled the original bell positioned on the roof.

Floor: The floor is paved with bricks laid in a herringbone pattern.

Walls: The bricks walls are laid up in a common bond, with four stretcher courses followed by a header course; ten courses are approximately 2'-5" high. The bricks are approximately 2-3/8" x 8" to 8-1/4."

Ceiling: The ceiling is an original 1827 brick barrel vault; at the north end of the room, the highest part of the vault is 10'-8" above the floor.

Door: The doorway in the south wall is framed by 2-1/2" wide symmetrical trim (a fascia with flush beads on each side). An iron lintel extends across the wall above the opening; a wood panel fills in the space below the lintel.

Door: The 2'-11 3/4" wide x 7'-1 1/2" high x 1-3/4" thick stile-and-rail door has six raised panels.

Hardware: The door is hung on three 4-1/2" high butt hinges. Other hardware includes a mortise lockset with two round knobs and an oval keyhole escutcheon; and a mortise deadbolt with a key cylinder on the south face, and a turnkey on the north face.

Stairwell: At the north end of the space is an original brick stairwell. The opening into the circular stairwell is 2'-8" above the closet floor; the sill of the opening is made up of new bricks set in portland cement. At the east side of the opening is a 7-3/4" thick charred framing member.

Within the stairwell, recesses in the brick walls remain from the stair, and indicate that the stair began at the south end of the space, and ascended clockwise. The recesses are 2-1/2" high and 1'-4" to 1'-5" wide; and are spaced 8" apart vertically (from top of tread to top of tread).

The ceiling that closes off the upper part of the well is finished with gypsum board, 8'-0" above the floor of the stair well.

Lighting/electrical: The space is lit by two lantern ceiling fixtures, and by a recessed fixture in the ceiling of the stairwell. A switch is mounted to the south end of the east wall.

***Catering Servery (106)***

This room and room T101 originally formed a single long, narrow space.

Floor: The floor is finished in 2" square green ceramic tiles.

Walls: The brick masonry walls are finished with plaster above a 4'-5 1/4" high tile wainscot, made up of 4-1/2" high x 6" wide green ceramic tiles. The west surface is of concrete block from the mid-1970s.

Ceiling: The original 1827 brick ceiling, finished with plaster, curves down from 8'-4" above the floor at the north wall, to meet the south wall 4'-5 1/4" above the floor. The structure supports the portico steps that were rebuilt in 1939.

Doors: There are two doorways in the north wall. The northeast opening was added in the mid-1970s. Each opening is trimmed by a small fascia with a flush bead along the inside edge.

Northwest door: The 2'-11 5/8" wide x 7'-1 1/4" high x 1-3/4" thick stile-and-rail door has six raised panels. This opening was the original access to the original larger room.

Hardware: The door is hung on three 4-1/2" high butt hinges. A 4-3/4" high "Union" mortise lockset marked "Parkes Willenhall England" has two knobs and oval keyhole escutcheons. A deadbolt has a key cylinder (on the north face) and a turnkey (on the south face).

Window: The original semicircular window opening in the east wall has plain wood trim and sits above a bullnosed sill. The hopper sash, glazed with a textured glass, opens into the room. Hardware includes a pair of butt hinges at the base of the sash, and a chain latch on the top rail.

Lighting/electricity: The room is lit by fluorescent strip ceiling fixtures. Other electrical elements include a switch on the north wall; receptacles on the south wall; and an electrical panel on the east wall.

Heating: A heating unit on the west wall is enclosed within a metal cover. A "Honeywell" thermostat is mounted to the north wall.

Plumbing: There is a two-basin, stainless steel sink on the north wall.

Equipment: The room is equipped with a refrigerator.

***Mechanical Room (108)***

This is an original 1827 room that survived the 1895 fire. The original function of the space is unknown.

Floor: The floor is finished with concrete.

Walls: The walls are brick, laid in a common bond. A niche in the east wall has been filled in with concrete block. Along the north wall, a 2'-8 1/2" high brick ledge projects 3-3/4" from the wall.

Ceiling: The ceiling is a brick barrel vault. At its highest point, the vault is 10'-9" above the floor; it meets the east and west walls 6'-9" above the floor. This surface supports the portico floor.

Door: The wide doorway in the south wall is framed by a plain fascia and bead trim.

Doors: The doorway is fitted with a pair of stile-and-rail doors. Each leaf is 2'-11 1/2" wide x 7'-1" high x 1-3/4" thick and has three raised panels.

Hardware: Each leaf is hung on three 4-1/2" high butt hinges. In the west leaf, there is a 6" mortise lockset with two knobs, an oval keyhole escutcheon and a key cylinder (on the south face), and a turnkey (on the north face). The east leaf has the keeper and a flush latch.

Lighting/electrical: The room is lit by fluorescent fixtures. Electrical panels and boxes along the north, east, and west walls supply the air handling equipment.

Heating: Air handling equipment fills the room.

Equipment: Equipment for the sprinkler fire suppression system includes a supply drain in the southeast corner, an "Automatic Deluge Valve" in the southwest corner, pipes extending between the equipment and to the north; and a fire alarm panel on the west wall. A fire extinguisher is mounted to the south wall.

A plywood panel on the west wall supports security panels; wiring and cables extend through the floor.

Two electronic communications panels are mounted to the west wall.

Furnishings and fittings: A small section of trim is embedded in the east wall.

*C101, looking east. [JGWA, 2007]*

*C102, looking north. [JGWA, 2007]*

*Elevator passage (C103), looking north. [JGWA, 2006]*

*Elevator passage (C103), looking north into elevator. [JGWA, 2006]*

*Men's Toilet Room (T101), looking northwest. [JGWA, 2006]*

*Men's Toilet Room (T101), looking southwest. [JGWA, 2006]*

*Women's Toilet Room vestibule (T102), looking south. [JGWA, 2006]*

*Women's Toilet Room (T102A), looking northeast. [JGWA, 2006]*

*Closet/Passage 105, looking north. [JGWA, 2006]*

*Closet/Passage 105, charred lintel at north opening. [JGWA, 2006]*

*Recesses for stair treads in stairwell of 105. [JGWA, 2005]*

*Catering Servery (106), looking west. [JGWA, 2006]*

*Mechanical Room (108), looking north. [JGWA, 2006]*

GROUND FLOOR: BELOW NORTH PORTICO

***Northwest Corridor (C110)***

This corridor dates to the work completed by McKim Mead & White in 1898. At that time, the passage extended, without divisions, to the doorway at the east end of corridor C112. In the mid-1970s, partitions and doors were inserted at the original long corridor’s midpoint to create three separate spaces.

Floor: The floor is covered with carpet. The 1939 Makielski floor plan indicates that this hall, and the rest of the corridor to the east, had an asphalt tile floor at that time.

Walls: The north, south, and west walls are 1898 brick masonry. The east wall is a mid-1970s framed partition. All four walls are finished with plaster.

Ceiling: The 1898 barrel vaulted masonry ceiling is 10'-9 1/2" above the floor at its highest point. The spring line at the north wall is approximately 8'-3" above the floor.

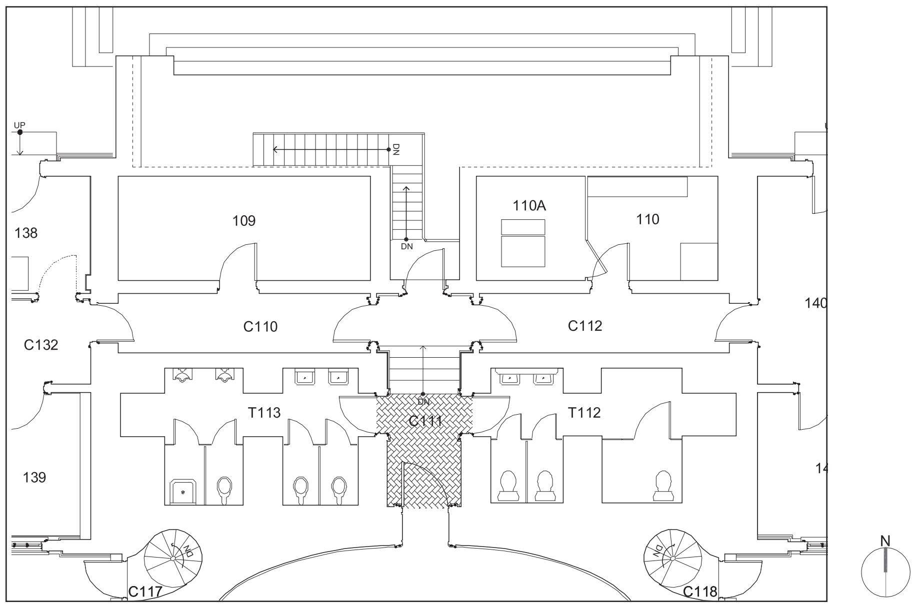
Baseboard: The walls are trimmed by a 7-1/2" high baseboard, typical of the mid-1970s trim.

Chair rail: The 3" high chair rail is typical of the mid-1970s trim.

Doors: The north and west doorways are original 1898 openings, and both are framed by original 1-1/4" wide ogee and fillet trims. The north doorway includes a three-light transom sash, and the arched west doorway has a five-light transom sash. Both sash are hinged at the base, and have latches and chains at the top.

The more recent east opening is framed by a 7" wide two-fascia architrave, typical of the mid-1970s door trims.

> West door: The 1898 stile-and-rail door is 2'-11 1/2" wide x 7'-2" high x 1-3/4" thick and has two recessed panels trimmed with thick, 2-1/4" wide ogee panel moldings.
>
>> Hardware: Original 1898 hardware includes three 5" brass butt hinges with ball tips, and a 9" high brass mortise lockset with 2-1/2" x 9" brass plates and ovoid knobs. Above the original lockset is a newer 4" high mortise deadbolt. There is also a recent closer.
>
> East door: The mid-1970s, 2'-11 5/8" wide x 6'-11" high x 1-3/4" thick, stile-and-rail door has six raised panels.
>
>> Hardware: The mid-1970s hardware includes three 4-1/2" butt hinges, and a 4-3/4" high “Union” mortise lockset marked “Parkes Willenhall England” with




*Detail of the ground floor plan of the rooms below the north portico (not to scale). [JGWA, 2007]* brass knobs and oval keyhole escutcheons. The door is also equipped with a 4-1/4" high mortise deadbolt and a closer.

Lighting/electrical: The corridor is lit by two ceiling fixture with round glass shades.

***Central corridor (C111)***

The upper corridor and the area at the bottom of the steps exist in the portion of the building completed in 1898 as an addition to the north side of the Rotunda. The doorway in the south wall is situated in the location of the rear north elevation of Jefferson's Rotunda. In 1827, the foundation and structure for the rear entrance porch and steps existed here.

Floor: The two-level floor is paved with 1970s brick laid in a herringbone pattern. Four risers step down 2'-3" to the north end of the corridor. The finish of the original 1898 floor surface is unknown. By 1939, asphalt tile may have been placed here.

Walls: The walls are 1898 brick masonry, with the exception of framed mid-1970s partitions at the north ends of the east and west walls. All of the walls are finished in plaster.

Ceiling: The ceiling is plaster on lath. At the south end of the corridor, the ceiling is 10' 0-1/2" above the floor. To the north, the shallow, barrel vaulted ceiling is 9' 11-1/4" at its highest point; it meets the east and west walls approximately 9'-0 5/8" above the floor.

Baseboard: The 7-1/2" high baseboard is typical of the mid-1970s trim.

Doors: There is one doorway in the south wall, two in the east wall, two in the west wall, and one in the north wall. Each opening is framed by a 7" wide two-fascia architrave (typical of the 1970s trim). The southeast and southwest doorways have three-light transom sash.

The south opening is the original 1827 doorway that provided access into the basement from the north side of the Rotunda.

South door: The mid-1970s, 3'-8 3/4" wide x 8'-3 1/2" high x 1-3/4" thick, stile-and-rail door has six raised panels.

Hardware: The door is hung on four 5" high butt hinges. Other mid-1970s hardware includes a 4-3/4" high brass mortise lockset with brass knobs and oval keyhole escutcheons; below this lockset is a 6" high mortised deadbolt.

Lighting/electricity: The corridor is lit by two recessed ceiling fixtures in the south portion, and by a ceiling fixture with a round glass shade in the north end. An electrical panel is set into the east wall.

Equipment: There is an exit sign above the north doorway, and a fire extinguisher mounted to the north wall.

***Northeast Corridor (C112)***

This is the east end of the long corridor situated below the north portico completed by McKim Mead & White in 1898. In the mid-1970s, the west partition and doorway were inserted in the corridor dividing it into multiple spaces.

Floor: The floor is covered with carpet. The 1939 Makielski plan indicates that the original hall had an asphalt tile floor at that time.

Walls: The north, south, and east walls are 1898 brick masonry. The west wall is a mid-1970s framed partition. All four walls are finished with plaster.

Ceiling: The 1898 barrel vaulted plaster ceiling is 10'-9" above the carpet at its highest point. The ceiling drops 11" near the west end of the corridor, and 1'-6" near the east end of the corridor.

Baseboard: The walls are trimmed by a 7-1/2" high baseboard, typical of the mid-1970s trim.

Chair rail: The 3" high chair rail is typical of the mid-1970s trim.

Doors: The north and east doorways date to 1898. Both doorways have a simple, 1-1/8" wide, ogee and fillet trim. The north opening includes a three-light transom sash; the west opening has a five-light fanlight transom sash.

The more recent mid-1970s west doorway is framed by a typical 6-1/2" wide two-fascia architrave.

East door: The 1898 stile-and-rail door is 2'-11 1/8" wide x 7'-3" high x 1-3/4" and has two recessed panels trimmed with thick, 2-1/4" wide ogee panel moldings.

Hardware: The door is hung on three mid-1970s 5" high butt hinges with ball tips. Other later hardware includes an 8" high “Corbin” polished brass mortise lockset with knobs and key cylinders; and a “Corbin” closer.

West door: The mid-1970s 2'-11 3/4" wide x 6'-11" high x 1-3/4" thick stile-and-rail door has six raised panels.

Hardware: Original mid-1970s hardware includes three 4-1/2" high butt hinges, a 4-3/4" high “Union” mortise lockset marked “Parkes Willenhall England” with brass knobs and oval keyhole escutcheons. The door is also equipped with a concealed closer.

Lighting/electrical: The corridor is lit by two ceiling fixtures with round glass shades.

***Women’s Toilet Room (T112)***

This space has functioned as a toilet room since its creation in 1898, and the 1939 Makielski plan indicates that it was the “Women’s Room” at that time. The space is situated beneath the portico completed as part of the McKim Mead & White reconstruction and expansion of the Rotunda. Originally there was a window opening in the east recess, but the 1939 plan shows a doorway in that location; the doorway has since been removed.

Floor: The floor is covered with 6" square quarry tiles. Brass drains are set into the tile.

Walls: The masonry walls are covered with plaster. Behind the finishes on the south wall is the original north face of the Rotunda.

Ceiling: The plaster ceiling is 10'-7" above the floor.

Doors: The 1898 doorway in the west wall is set deeply into a plastered arched opening in the masonry. A 2-7/8" wide single-fascia architrave (composed of a fascia with a flush at the interior edge and an ogee and bead at the exterior edge) frames the doorway. Above the door is a transom with a three-light fixed sash.

The 1939 Makielski plan shows a doorway in the east recess (in the original 1898 window opening); there is no longer an opening in that location.

Door: The mid-1970s 3'-0" wide x 6'-9 1/2" high x 1-3/4" thick door has six raised panels.

Hardware: Hardware from the mid-1970s includes three butt hinges; a 4-3/4" high brass “Union” mortise lockset, marked “Parkes Willenhall England” with small brass knobs and oval keyhole escutcheons; and a concealed closer in the transom bar.

Windows: In 1898, there was a window opening in the east recess.

Lighting/electrical: The room is lit by fluorescent ceiling fixtures. Other electrical elements include switches near the west doorway and in the niche in the east wall.

Heating: There is a three column, sixteen section, cast-iron radiator near the north wall. A ventilation grill is set in the east wall of the east niche.

Plumbing: The west section of the room is fitted with two “American Radiator & Standard Sanitary” lavatories on the north wall, marked “8-31-67 Baltimore P-4-300” and “9-12-67 Baltimore P-4-300.” Two stalls on the south wall have “American Standard” ceramic toilets. In the east section of the room, there is a stall with an “American Standard” ceramic toilet on the south wall. The stalls are enclosed with enameled steel partitions and doors.

Furnishings and fittings: A mirror and wood shelf are mounted to the north wall, above the lavatories. A full-length mirror is mounted to the east wall of the east niche.

***Men’s Toilet Room (T113)***

This space has functioned as the men’s toilet room since its creation as part of the restoration and expansion of the Rotunda by McKim Mead & White, completed in 1898. The room is situated beneath the platform of the north portico; the masonry forming the south wall is part of the original rear (north) elevation of Jefferson’s building. Originally, in 1898, there was a small window opening in the recessed area at the west end of the room. The 1939 Makielski plan shows a doorway in that location. The door opened to a short flight of steps that lead to the open passage and the west courtyard. The opening is now closed.

Floor: The floor is covered with 1'-10 1/2" square squares of rust, pink, and white terrazzo.

Walls: The masonry walls are finished with plaster above a 6'-1" high ceramic tile dado made up of 4-1/4" square glazed tiles.

Ceiling: The plaster ceiling is 10'-7" above the floor.

Baseboard: A 4" high terrazzo base trims the base of the dado.

Doors: The 1898 doorway in the east wall is set deeply into an arched opening in the masonry. The reveal is finished with plaster above the same 6'-1" high tile dado as the walls. A 2-7/8" wide single-fascia architrave (composed of a fascia with a flush at the interior edge and an ogee and bead at the exterior edge) frames the doorway. Above the door is a transom with a three-light fixed sash.

The 1939 Makielski plan shows a doorway in the original 1898 window opening in the west recess; there is no longer an opening in that location.

Door: The mid-1970s 3'-0" wide x 6'-9 1/2" high x 1-3/4" thick door has six raised panels.

Hardware: Hardware from the mid-1970s includes three butt hinges; a 4-3/4" high brass “Union” mortise lockset marked “Parkes Willenhall England” with small brass knobs and oval keyhole escutcheons; and a concealed closer in the transom bar.

Windows: In 1898 there was a window opening in the west recess; that opening has since been removed.

Lighting/electrical: The room is lit by two fluorescent ceiling fixtures.

Heating: There is a duct in the ceiling in the northwest corner of the room, and in the north wall of the west section of the room.

Plumbing: The east section of the room is fitted with two “Kohler” lavatories on the north wall, and two stalls with “Rockwell” ceramic toilets on the south wall. In the west section of the room, there are two “Standard” ceramic urinals on the north wall, and a “Rockwell” ceramic toilet and an enameled cast-iron mop sink in stalls on the south wall. The stalls are enclosed with enameled steel partitions and doors, marked “THE SANYMETAL PRODUCTS CO. CLEVELAND OHIO.”

Furnishings and fittings: There are two mirrors with chrome frames mounted to the north wall, above the lavatories.

***Storage (109)***

This unfinished store room is situated beneath the north exterior steps that were added to the Rotunda by McKim Mead & White.

Floor: The 1898 floor is concrete. A drain is centered in this surface.

Walls: All four walls are 1898 brick, laid in common bond.

Ceiling: The ceiling is made up of the 4-1/4" wide x 8" high I-beams and masonry supporting the steps of the north portico. At the south wall, the ceiling is 9' 8-1/4" above the floor. It slopes down to meet the north wall approximately 5'-1" above the floor. The current I-beams are later insertions from 1939. The original beam ends, cut off, can be seen in the top surface of the north wall.

Doors: The original 1898 doorway in the south wall is framed by a small, plain wood frame, and includes an original three-light transom.

South door: The 1898 door is 3'-1 3/4" wide x 6'-11" high x 1-3/4" thick and has two recessed panels trimmed with thick, 2-1/4" wide ogee panel moldings.

Hardware: Original 1898 hardware includes three 5" high brass butt hinges with ball tips, and a 7" high mortise lockset with 2-1/2" x 8" plates and ovoid brass knobs.

Lighting/electrical: The room is lit by incandescent porcelain utility fixtures on the east and south walls. Other electrical elements include a switch on the south wall; receptacles on the north, east and south walls; and conduits/cabling extending along the south wall into the adjoining spaces to the east and west.

Plumbing: A copper pipe extends through the north wall and into the floor drain.

***Storage/Janitor's Closet (110)***

This unfinished store room is situated beneath the north exterior steps that ascend to the north portico added by McKim Mead & White.

Floor: The 1898 floor is concrete, which slopes slightly to a drain near the west end of the room.

Walls: The north, east, and south walls are 1898 brick, laid in common bond. The east wall is a later concrete block partition. All four walls are finished in plaster.

Ceiling: The ceiling is made up of the concrete and iron/steel support framework for the north portico stairs, including an I-beam near the center of the room. At the south wall, the ceiling is 9' 8-1/4" above the floor. It slopes down to meet the north wall 5'-3" above the floor.

Doors: The original 1898 doorway in the south wall is framed by a small, plain wood frame, and includes an original three-light transom.

The more recent west doorway has a steel frame.

South door: The 1898 door is 3'-1 1/2" wide x 6'-10 1/2" high x 1-3/4" thick and has two recessed panels.

Hardware: Original 1898 hardware includes three 5" high brass butt hinges with ball tips, and a 7" high brass mortise lockset with 2-1/2" x 8" plates, ovoid knobs, a key cylinder on the south face, and a turnkey on the north face. There is also a "Corbin" deadbolt.

West door: The steel door is 2'-11 3/4" wide x 7'-0" high.

Hardware: The door is hung on three 4-1/2" butt hinges. Other hardware includes a mortise lockset with knobs and an oval keyhole escutcheon; a “Corbin” deadbolt; and a closer.

Lighting/electrical: The room is lit by a fluorescent ceiling fixture hung from the south end of the ceiling. Other electrical elements include rigid conduit extending from the light fixture to a switch on the west wall; an electrical panels on the west wall; a “Square D” switch on the east wall; and conduits and cables extending east/west through the north end of the room.

Plumbing: There is a fiberglass utility basin in the southeast corner of the room, with a faucet and a “Butcher’s Outpost” soap holder on the east wall.

Equipment: Two “Johnson Controls” panels are mounted to the west wall.

Furnishings/fittings: There are three tiers of wood shelving along the north wall. Two wood nailers are mounted to the south wall.

#### ***Elevator Machine Room (110A)***

The space to the west of room 110 houses elevator machinery. The finishes are similar to those of room 110. There is an electrical junction box on the north wall. Galvanized sheet metal and an acrylic glazing panel have been installed above the machinery and box to protect it from water damage.

### GROUND FLOOR: MECHANICAL ROOM (BELOW THE NORTH PORTICO STAIRS AND TERRACE)

The large mechanical room below the north portico stairs and terrace was created by McKim Mead & White. The large rectangular space opens to a narrower south passage that connects the space to the Rotunda ground level and to a pipe and duct shaft that runs north/south below the Rotunda.

Floor: A steel platform at the south doorway leads to a steel stair that descends to the concrete floor of the large mechanical room, approximately 16'-0" below the platform. Beneath the entrance platform, an intermediate concrete platform, 15'-0" above the floor, provides access to the pipe and duct tunnel. A steel ladder provides access to the platform.

Walls: The walls are brick masonry, with supplementary support framing. As noted in the structural report (see appendices), the space

> “is a dense mix of pipes, columns to support the roof and stairs above, struts to brace column supports, temporary shoring pipes and cross-bracing... Most likely the original design from the McKim Mead and White era had six 4-1/2” diameter steel pipe columns supported on 16" square concrete pedestals raised 13" above the slab height. There are two additional columns of the same size with raised rectangular pedestals placed off the column grid. The middle section of the ceiling appears to have been reconfigured at some point and extra columns were added. These columns are 2" in diameter and situated on piles constructed from 6x6 pieces of timber alternatively stacked... Furthermore there are two sets of 4-2" diameter aluminum shoring columns braced together.”

Ceiling: The ceiling is made up of the concrete slab and concrete-encase steel beams and girders that support the north stairs and terrace. In the large space below the terrace, the ceiling is approximately 16'-6 1/2" above the floor.

Doors: Doorways in the south wall of the south passage provide access to the ground level of the Rotunda and to the pipe and duct shaft. The openings have plain metal frames.

South door (to C110): The metal door is 3'-2" wide 7'-5 1/2" high x 2-1/4" thick.

Hardware: The door hardware includes a 2-1/4" “Schlage” chrome mortise lockset with a turnkey on the north face and a key cylinder on the south face, grips, push plates, and a pair of heavy duty hinges.

Windows: An 1'-6" square opening in the south wall, next to the doorway to the pipe/duct shaft, is lined with sheet metal. Pipes extend through the opening into the pipe/duct tunnel.

Stairs: An open riser steel stair descends nine risers from the entrance platform, north to a landing, then turns to descend fifteen risers west to the floor of the mechanical room. A pipe rail extends along the edge of the stair.

This stair, installed in the mid-1970s, replaced the 1898 stair. Marks on the floor and on the south wall of the mechanical room are evidence of the original steeper stair.

Lighting/electrical: The space is lit by fluorescent fixtures, suspended from the ceiling. There are numerous electrical fittings that service the mechanical systems housed in the space, including:

- a receptacle; a RMS Unipower CA-5403/RFI 3-2way splitter; “Square D” safety switches; “Reliance” panels; and a bathroom fan motor on the south wall;
- a metal electrical cabinet on the west wall;

- a receptacle; a “Kenney” electrical panel; a circuit breaker panel; a “Square D” safety switch; and four bays of large metal cabinets holding electrical panels and switches (including the main switch) on the north wall;
- and a series of switches; “Honewell” daytimer, relays, and boxes; four “Square D safety switches;” a “Murray” heater fuse panel; and a “Cutler-Hammer” safety switch on the east wall.

In the south passage leading to the duct/pipe shaft, there are a number of “Westinghouse” and “Square D” switches mounted to the east and west walls; and a tumbler switch and duplex receptacle on the west wall.

Heating: Chilled and hot water enter the building at the northwest corner of the space. The mechanical room houses air handling units, and massive pipes extend throughout the room.

***Pipe and Duct Tunnel***

This shaft extends below the ground floor, south from the north mechanical room.

Floor: The concrete floor slopes to metal drains.

Walls: The walls are concrete; the imprint of the plywood molds can be seen in the walls.

Ceiling: The concrete ceiling is approximately 8'-6" above the floor.

Door: The doorway in the north wall has a plain metal frame.

> Door: The plain metal insulated door is 1'-10" wide x 5'-0" high x 4" thick.
>
> > Hardware: Hardware includes two stainless steel strap hinges; pull grips; and a closer.

Windows: A 1'-6" square opening in the north wall, next to the doorway, is lined with sheet metal. Pipes extend through the opening into the mechanical room.

Lighting/electrical: The space is lit by fluorescent fixtures. Other electrical elements include An emergency pull box switch, receptacles; and “Johnson Controls” panels on the west wall; and two “Strand Lighting” panels on the east wall.

Heating: Pipes and metal ductwork extend north/south through the space.

Equipment: Network/communication panels are mounted to the west wall.

*Northwest Corridor (C110), looking west. [JGWA, 2006]*

*Northeast Corridor (C112), looking west. [JGWA, 2006]*

*Central Corridor (C111), looking south. [JGWA, 2006]*


*Central Corridor (C111), looking north. [JGWA, 2006]*

*Men's Toilet Room (T113), looking east. [JGWA, 2006]*

*Women's Toilet Room (T114), looking east towards original 1898 window. [JGWA, 2006]*

*Storage (110), looking southwest. [JGWA, 2006]*

*Storage (110), looking southeast. [JGWA, 2006]*


*Storage/Janitor's Closet (110), looking southwest. [JGWA, 2003]*

*Elevator Machinery Room (110A), looking northwest. [JGWA, 2003]*

*Mechanical Room below North Portico and terrace, looking northeast. [JGWA, 2003]*

*Mechanical Room below North Portico and terrace, looking east. [JGWA, 2003]*

## GROUND FLOOR: SOUTHWEST WING

This is one of the original flanking wings or terraces designed by Jefferson to join the Rotunda to the east and west covered walks and Pavilions flanking the Rotunda. As completed, and recorded by the 1825 Maverick plan drawn by John Neilson [*Figure 23*], the southwest wing was a large, rectangular covered spaced with arched openings in three walls. The north and west openings formed arcades, and the south openings were lunette windows at grade. This space was to serve as a gymnasium for the students, a covered area for recreation and other activities.

The Maverick plan records a rectangular structure that is nine bays long and three bays deep, exactly the condition that still exists. Accounts of the 1896 Rotunda fire indicate that the two terrace wings were blown up to prevent the spread of the fire, but post-fire photographs reveal that the brick arcades survived serious damage; only the roof and interior appear to have been partially destroyed.

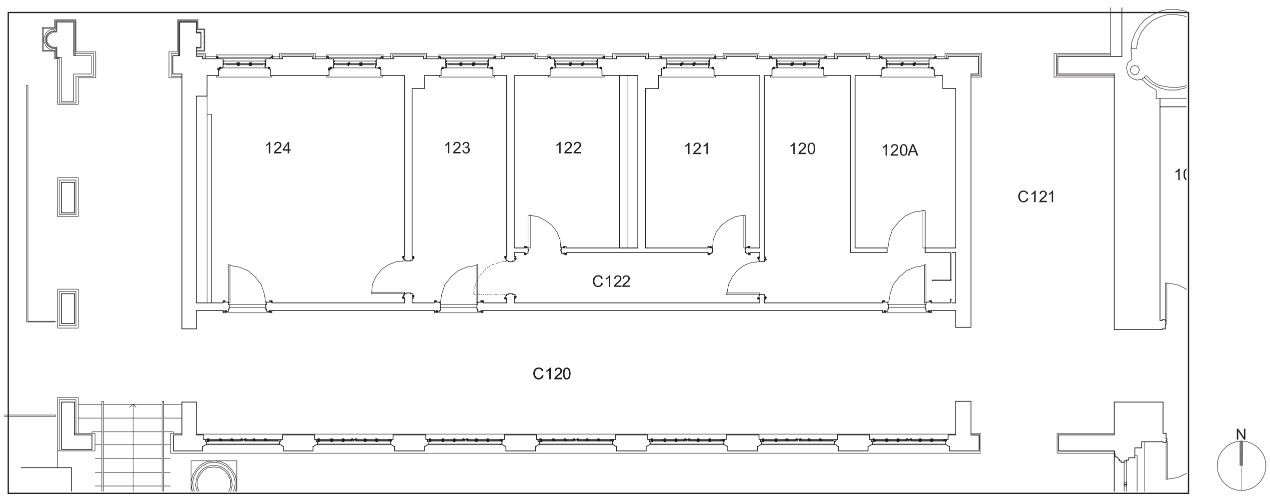
The original open interior space was modified in 1841, when it was enclosed to serve as a “Lecture room for the professor of Natural Philosophy & for the reception of the philosophical apparatus and of the objects of natural History &c bequeathed to the University by Mr. Jefferson.” It was probably at this time that brick walls were inserted at the east and west ends of the long space to create the still extant passages (C121 and the west passage). The west passage was extended by Stanford White to provide a connection to the northwest wing completed in 1898.

1841 may also be the date of the installation of the semicircular casement sash in seven of the nine original lunette openings in the south wall of the terrace. Window sash of some type must have been placed in the seven north arcade openings at the same time. Pre-fire photographs, and images taken immediately after the fire, record low hipped roofs, covered in sheet metal, rising above each terrace. The McDonald Brothers and McKim Mead and White plans seem to illustrate the conditions just described.

At an undetermined date, the large lecture room was divided into smaller spaces and 1902 and 1907 fire-insurance maps indicate that the southwest wing was used for offices.

The 1939 Makielski floor plan [*Figure 90*] illustrates six offices and a short corridor in the space north of the wide passage (C120) that extends along the south side of the wing. Three doorways from the corridor provide access to the offices, just as they still do.

Conditions as they now exist follow the Makielski plan, with the exception of the position of a partition in the northeast room (120).




*Detail of the ground floor plan of the southwest wing (not to scale). [JGWA, 2007]*

***Rooms 120-124 Typical Finishes (Vice President of Student Affairs offices)***

The plan as it now exists, except for room 120A, matches the conditions recorded by the 1939 Makielski drawings. At that time, the rooms were occupied by the Bureau of Public Administration.

The Vice President of Student Affairs and staff currently occupy this suite of offices. The rooms share typical finishes that are shown in the Makielski drawings, and match those found in the southeast wing.

Floor: The floors are covered with recent carpet. The 1939 plan shows asphalt tile throughout the wing.

Walls: The walls, which date to various periods, are typically masonry, finished with plaster. The north wall, formerly an open arcade, was part of the original 1827 gymnasium. The east and west walls are brick, and probably date to 1841 when the terrace was first enclosed. The other walls that enclose the offices and corridor are of terra cotta tile (as can be seen in room 124).

Ceiling: The ceilings are covered with dropped metal-framed acoustical tile systems, 8'-11" above the carpet. The ceiling and structure above this recent surface date to the rebuilding of the terrace surface in 1939.

Baseboard: The typical baseboard is a plain 5-3/4" high splashboard.

Chair rail: The typical chair rail is 4-3/4" high. The symmetrical profile consists of a fascia with ogee moldings at the top and bottom edges. The top edge is 2'-11 1/2" above the carpet. This material may date to the McKim Mead & White reconsruction.

Doors: The three south openings, as well as the interior doorways, are framed by 5-1/4" wide two-fascia architraves. Above the openings are three-light operating transoms. These conditions date to the work carried out in 1939; the Makielski drawings include an elevation drawing of this door type.

> Doors: Typically, the openings have 2'-11 3/4" wide x 6'-11" high x 1-3/4" thick stile-and-rail doors, each with six raised panels, dating to 1939.
>
> > Door hardware: The hardware varies slightly at each door, and will be discussed in the individual room descriptions.

Windows: Each of the window openings in the north wall have sash and trim installed in 1898 as part of the post-fire reconstruction. The typical 5" wide two-fascia architrave is composed of two fasciae trimmed with a flush bead at the inner edge and an ogee and fillet at the outer edge. The openings sit above 2-3/4" high bullnosed molded sills.

Each opening is fitted with an 1898 6/6 chain-hung wood sash and a 6-light fanlight. Typical original hardware includes pairs of flush brass sash lifts in the bottom rails, and brass thumblatches on the meeting rails.

Heating: Supply and return vents are integrated into the suspended ceiling.

Lighting/electrical: Each room is lit by fluorescent fixtures mounted to the suspended ceiling.

***Copy Room/Office (120)***

The partitions that enclose room 120A are a recent insertion. The 1939 Makielski plan records the installation of an east-west partition that divided the large space formed by 120 and 120A into north and south rooms.

Walls: Framed partitions finished with gypsum board divide off the northeast corner of the room to form an office (120A). The other earlier walls are of plaster on masonry.

Chair rail: There is a typical chair rail on the west wall.

Doors: The south and west openings have typical trim and transoms. The recent door to room 120A is framed by a plain metal surround.

> South door: This door is a typical six-panel door, dating to 1939.
>
> > Hardware: The door is hung on three original 4-1/2" butt hinges. Other hardware includes a later 8" high “Corbin Russwin” mortise lockset with polished brass plates, lever knobs, and a deadbolt.

Window: The north window opening has typical trim and sash from 1898.

Lighting/electrical: Besides the typical fluorescent fixtures, electrical elements include a switch in the west wall and in the partition enclosing 120A; receptacles in the south and west walls and in the partition enclosing 120A; and an electrical panel in the east wall, concealed behind a wood cabinet. Wiremold extends along the north wall.

Equipment: There is a network/communications receptacle on the north wall.

***Northeast Office (120A)***

This space is a recent creation.

Walls: The south and west walls are recent framed partitions, finished with gypsum board.

A chase in the northeast corner of the room has a small access panel on the west face, near the floor.

Chair rail: A typical chair rail extends along the east wall.

Door: The doorway in the south partition has a plain metal frame.

Door: The 2'-11 5/8" wide x 6'-11" high x 1-3/4" thick stile-and-rail door has six raised panels, and is contemporary with the opening.

Hardware: The door is hung on three “Stanley” polished brass butt hinges. Other contemporary hardware includes a 2-1/4" mortise, marked “PDQ”, with brass lever knobs.

Window: The window opening in the north wall has typical trim and sash from 1898.

Lighting/electrical: Besides the two typical fluorescent fixtures, other hardware includes a switch in the south partition; receptacles in the east and west walls, and wire mold extending along the north wall.

Equipment: There are network/communication outlets in the wiremold on the north wall.

***Office (121)***

This is one of the rooms included in the 1939 Makielski plan.

Walls: The north wall is part of the original 1827 brick arcade that enclosed the gymnasium. The other masonry walls are later insertions.

A chase projects from the northwest corner of the room. A small panel in the east face provides access into the chase.

Chair rail: There is no chair rail in this room.

Door: The doorway in the south wall is framed by typical trim.

South door: This door is a typical six-panel door from 1939.

Hardware: The original hardware includes three 4" high butt hinges, and a 5-1/4" brass mortise lockset with two brass knobs. Above that lockset is a later 4" stainless steel mortise lockset with a deadbolt (brass key cylinder on the south face, turnkey on the north face).

Window: The window opening in the north wall has typical 1898 trim and sash. The original latch has been replaced with a sweep thumblatch, but the original brass handgrips remain in the bottom rail.

Lighting: The room is lit by a typical fluorescent fixture. Other electrical elements include a switch in the south wall, receptacles in the east, west, and south walls; and wiremold extending along the north wall.

Equipment: There is a network/communication outlet in the wiremold on the north wall.

***Office (122)***

This is one of the offices included in the 1939 Makielski plan.

Walls: All four walls are of masonry, covered in plaster. The north wall dates to the completion of the southwest terrace in 1827.

Chair rail: There is no chair rail in this room.

Door: The doorway in the south wall is framed by typical 1939 trim.

South door: This door is a typical 1939 six-panel door.

Hardware: The original hardware includes three 4" high butt hinges, and a 5-1/4" brass mortise lockset with two brass knobs. Above that lockset is a later 4" brass mortise lockset with a deadbolt (brass key cylinder on the south face, turnkey on the north face).

Window: The window opening in the north wall has typical trims and sash from 1898. The original latch has been replaced, but the original brass handgrips remain in the bottom rail.

Lighting: Besides the typical fluorescent fixture, other electrical elements include a switch on the south wall; a receptacle in the west wall; and wiremold extending across the north wall.

Equipment: There is a network/communication outlet in the wiremold on the north wall.

Furnishings/fittings: A four-bay-wide built-in cabinet on the east wall has four pairs of doors in the lower section, and shelving above. Each door is hung on two small butt hinges, and opens with a small brass knob.

***Corridor (C122)***

This short corridor is included in the 1939 Makielski plan.

Walls: All four walls are masonry, finished with plaster.

Ceiling: The suspended acoustical tile ceiling drops down 1'-2 1/2" between the two north doorways.

Chair rail: There is no chair rail in this corridor.

Doors: The two doorways in the north wall, and the single openings in the east and west walls, have typical trims and transoms dating to 1939.

The west door has been removed; remnants of the hardware indicate that it opened into room 123 from the south jamb.

East door: This door is a typical six-panel door from 1939.

Hardware: The original hardware includes three 4" high butt hinges, and a 5-1/4" brass mortise lockset with two brass knobs. Above that lockset is a later 4" stainless steel mortise lockset with a deadbolt (brass key cylinders on both faces).

Lighting/electrical: The room is lit by typical fluorescent fixtures. Other electrical elements include switches and a receptacle in the north wall.

Equipment: There is a fire alarm on the south wall.

***Reception for Vice President of Student Affairs (123)***

This room is included in the 1939 Makielski plan.

Walls: All four walls are masonry, finished with plaster. The north wall dates to the original completion of the southwest terrace in 1827.

A chase projects from the northwest corner of the room. A small panel in the east face provides access into the chase.

Chair rail: There is a typical chair rail on all four walls; this may be a remnant from the McKim Mead & White reconstruction.

Doors: The single openings in the south, east, and west walls have typical 1939 trim and transoms. There is no door in the east opening; ghosts of hinges on the south jamb indicate that it opened into this space.

South door: This door is a typical 1939 six-panel door.

Hardware: The door is hung on three original 4-1/2" butt hinges. Other, later hardware includes an 8" high “Corbin Russwin” mortise lockset with polished brass plates, lever knobs, and a deadbolt; and a brass mail slot.

Window: The window opening in the north wall has typical 1898 trim and sash. The original latch has been replaced by a sweep thumblatch.

Lighting/electrical: The room is lit by typical fluorescent lighting. Other electrical elements include a switch on the south wall, a receptacle on the east wall, and wire mold extending across the north wall.

Equipment: There is a network/communications outlet in the wiremold on the north wall.

***Vice President for Student Affairs (124)***

This large office is included in the 1939 Makielski plan.

Walls: All four walls are masonry, finished with plaster. The north wall is part of the original brick arcade that enclosed the 1827 terrace.

At the west end of the south wall, an area of the masonry is exposed, revealing fire-resistant hollow terra cotta tiles. All of the office partitions shown on the 1939 plan may be laid up in this tile.

Chair rail: The chair rail in this room is only 2-1/2" high (as opposed to the 4-3/4" typical chair rail found other spaces in this wing). The profile is composed of a fascia with ogee moldings along the top and bottom edges. The top edge is 3'-0" above the carpet.

Doors: The single openings in the south and west walls have typical 1939 trim and transoms.

South door: This door is a typical 1939 six-panel door.

Hardware: The door is hung on three original 4-1/2" butt hinges. Other, later hardware includes an 8" high “Corbin Russwin” mortise lockset with polished brass plates, brass knobs, and a deadbolt (key cylinder exterior, turnkey interior).

East door: This door is a typical 1939 six-panel door.

Hardware: The door is hung on three 4" high butt hinges, and has a 5" high brass mortise lockset with two brass knobs. Above that lockset is a 4" polished brass mortise lockset with a deadbolt (key cylinder on east face, turnkey on west face). An additional bolt, above the deadbolt, has a turnkey. A coat rack is mounted to the west face.

Windows: The two windows openings in the north wall have typical 1898 trims. In the northeast opening, the upper sash has been replaced. The northwest sash are typical 1898 sash, and retain the typical original brass handgrips and latches.

Heating: A “Robert Shaw” thermostat is mounted to the east wall.

Lighting/electrical: The room is lit by typical fluorescent fixtures. Other electrical elements include a switch on the east wall; receptacles in the east, south, and north walls; and wire mold along the north wall.

Equipment: There is a network/communications outlet in the wiremold on the north wall.

Furnishings/fittings: A five-and-one-half-bay-wide floor-to-ceiling unit covers the east wall. The lower section of the cabinet has five pairs of doors and one single door, each with small brass hinges and knobs. Above the doors, each bay is filled with four to six tiers of shelving.

***South Exterior Passage (C120)***

This passage is situated along the south side of the original large, covered gymnasium completed in 1827. The east and west walls that form the ends of the passage may date to 1841. The north wall that forms the enclosed passageway dates to sometime after the 1898 reconstruction of the Rotunda and terraces; possibly as late as 1939, when the two south terraces were remodeled.

Floor: The floor is paved with brick pavers (3-1/2" to 3-3/4" x 8"), laid in a herringbone pattern, with a one-brick-wide border. Although this is not the original 1827 surface, that surface was likely also composed of brick.

Set into the brick surface at the east arched opening, a commemorative slate plaque, installed in 1993, reads: "In honor of/JAMES DINSMORE/(died May 13, 1830)/and/ JOHN NEILSON/(died June 24, 1827)/These natives of Ireland/served as master builders/for Thomas Jefferson at the/UNIVERSITY OF VIRGINIA/They first worked together at/MONTICELLO/for Thomas Jefferson and at/MONTPELIER/for James Madison/Among their many/independent works were/BREMO/by Neilson and/ ESTOUTEVILLE/by Dinsmore."

A commemorative slate plaque was installed in the brick paving of the west arched opening in 2007. It reads: "IN HONOR OF THE/SEVERAL HUNDRED/WOMEN AND MEN/BOTH FREE AND ENSLAVED/WHOSE LABOR BETWEEN/1817 AND 1826/HELPED TO REALIZE/THOMAS JEFFERSON'S/DESIGN FOR THE/ UNIVERSITY OF/VIRGINIA."

Walls: The masonry walls are parged and painted. The south brick wall dates to the original construction of the west terrace; the east and west brick walls may date to 1841. The most recent surface, the north wall appears to be laid up in terra cotta tile. That material is exposed in a small area of the south wall of room 124.

Ceiling: The ceiling is made up of recent plaster(?) panels, approximately 9'-10" above the floor.

Baseboard: An 11" high plain fascia board trims the base of the north and south walls.

Doors: The three doorways in the north wall are framed by 5" wide two-fascia architraves, and include three-light operating transoms from 1939. Each opening is flanked by a recent pair of two-panel louvered shutters; the shutters are hung on pairs of 3-7/8" high hinges. At the center and east doorways, small wood “ramps” lead to the concrete thresholds.

Plain arched openings in the east and west masonry walls (constructed in 1841) lead to the adjoining passages.

Windows: The seven lunette-type openings in the south wall date to the completion of the west terrace in 1827. The openings are set into the masonry above a 7-3/4" high plain sill; the sill is 6'-1" above the brick paving. The openings are framed by simple 1-1/2" wide surrounds composed of a small fascia with a flush bead around the inside opening.

Each opening is fitted with a pair of nine-light, lunette-form casement sash with radiating muntins. These sash may date to before the 1895 fire, or may be 1898 replicas of the original pre-fire sash installed in 1841. Identical sash can be seen in photographs taken before and immediately after the fire.

Typically, the west sash in each opening is hinged to open into the corridor. The sash hardware includes two small hinges and a variety of small knobs: in the first, third, and fifth openings from the east, the sash have original round knobs; the sash in the two west openings have later ovoid knobs. The knob is missing from the sash in the second opening from the east.

Lighting/electrical: The space is lit by recessed fixtures in the ceiling panels. There is a duplex receptacle in the north wall.

Plumbing: There are two capped-off pipes in the north wall, between the center and east doorways.

### *Southwest Wing East Exterior Passage (C121)*

This open passage at the east end of the southwest wing has arched openings in each wall. The west wall was inserted in 1841.

Floor: The floor is paved with bricks laid in a herringbone pattern.

Walls: The north, south and east walls are original 1827 brick masonry. The west wall is later, and may have been inserted in 1841.

Ceiling: The plaster ceiling is approximately 10'-11" above the brick paving.

Doors: The open archways in the north, west, and south walls are original 1827 features. An open archway in the west wall is contemporary with the construction of that surface.

Furnishings and fittings: A large wood recycling bin was installed in this space in 1993.

***Southwest Wing West Exterior Passage***

This open passage is the west bay of the original 1827 gymnasium space. The wall along the east side of the passage was probably inserted in 1841. The passage is one bay wide, and three bays deep.

Floor: The floor is paved with bricks laid in a herringbone pattern. At the south end of the passage, the floor steps up with eight risers to the walkway along the West Lawn.

Walls: Original 1827 arched openings spanning between brick piers form the north, west and south walls of the passage. The 1841 east wall is a plain masonry surface, parged and painted white.

Ceiling: The ceiling is finished in floating plaster panels, 10'-3" above the paving.

Door: An open archway in the east wall is contemporary with the construction of the wall in 1841.

Lighting/electrical: Three recessed fixtures are set in the ceiling panels.

*Southwest Wing, view from West Passage into South Corridor (C120), looking east. [JGWA, 2006]*

*Southwest Wing, East Passage (C121), looking northwest. [JGWA, 2006]*

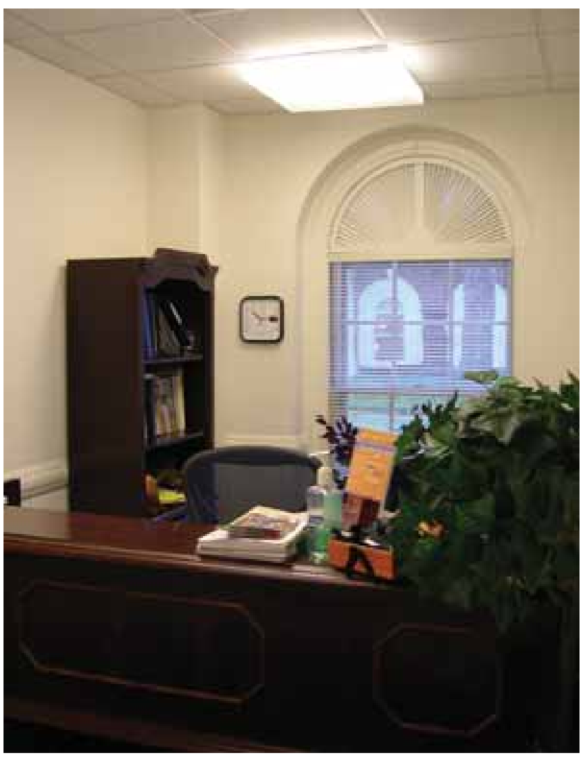
*Southwest Wing, 120, looking north. [JGWA, 2006]*

*Southwest Wing, 120, looking east. [JGWA, 2006]*

*Southwest Wing, 120A, looking north. [JGWA, 2006]*

*Southwest Wing, 121, looking northwest. [JGWA, 2006]*

*Southwest Wing, 122, looking southwest. [JGWA, 2006]*



*Southwest Wing, 123, looking northwest. [JGWA, 2006]*

*Southwest Wing, C122, looking west. [JGWA, 2006]*

*Southwest Wing, C122, looking east. [JGWA, 2006]*

*Southwest Wing, 124, looking west. [JGWA, 2006]*

*Southwest Wing, 124, looking northwest. [JGWA, 2006]*

*Southwest Wing, 124, looking southeast (top); section of exposed terra cotta tile in south wall of 124. [JGWA, 2006]*

GROUND FLOOR: SOUTHEAST WING

This is one of the two original flanking wings or terraces designed by Jefferson to join the Rotunda to the East and West Lawns. As originally completed, and as recorded by the 1825 Maverick plan drawn by John Neilson, the southeast wing was a large, rectangular, covered space with arched openings in all three walls. The north and east openings formed arcades, and the south openings were broad, arched lunette windows positioned at ground level.

This space and the matching space west of the Rotunda were to serve as gymnasia (covered areas for recreation and other activities) for the students.

The Maverick plan [*Figure 23*] records a rectangular structure that is nine bays wide and three bays deep, exactly the condition that still exists.

Although accounts of the 1895 Rotunda fire indicate that the two wings were blown up to prevent the spread of the fire, post-fire photographs reveal that the brick arcades were not seriously damaged, although the roofs and interiors appear to be partially destroyed.

The open space was modified in 1841, when it was enclosed and "fitted up" for "the general meetings of the University & as a place of religious worship —." It was probably at this time that the brick walls were inserted at the east and west ends of the long space to create the still extant passages (C151 and the east passage). The east passage was extended by Stanford White to provide a connection to the northeast wing completed in 1898.

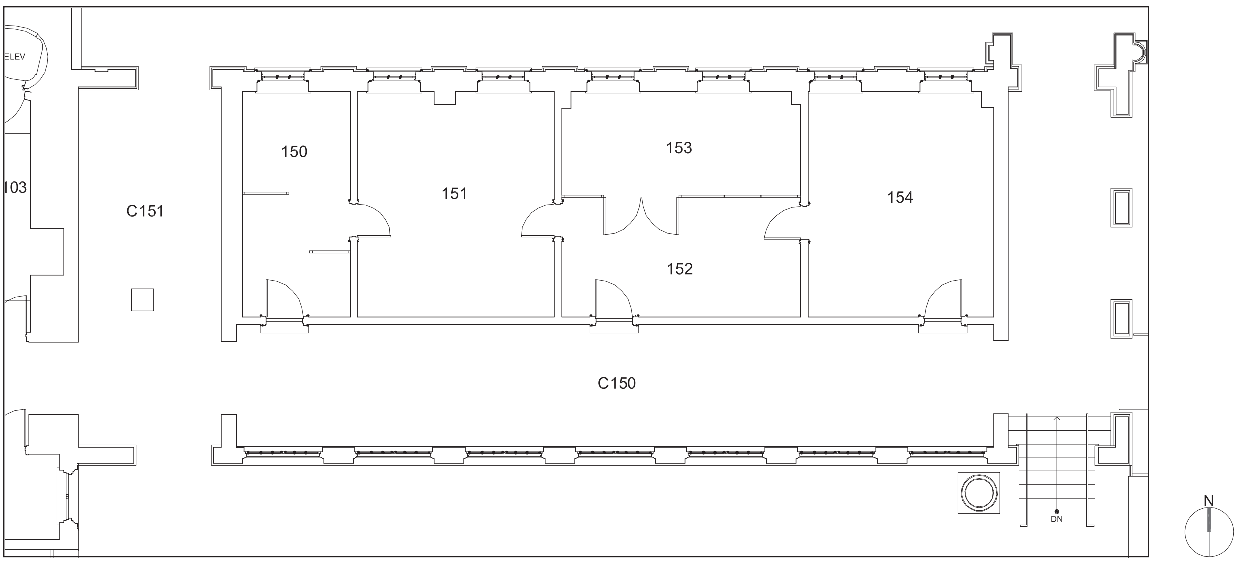
1841 may also be the date of the installation of the semicircular casement sash in seven of the nine original lunette openings in the south wall of the terrace. At the same time, sash of some type were inserted in seven of the north arcades. Pre-fire photographs, and images taken immediately after the fire, record low hipped roofs, covered in sheet metal, rising above each terrace; these roofs also date to 1841.

The McDonald Brothers' plans and the McKim Mead and White plans seem to illustrate the conditions created in 1841.

At an undetermined date, the large interior space was divided into offices. A 1902 fire insurance map indicates that this wing was then used for offices, and a 1907 map refers to classrooms in this location.

The 1939 Makielski plan [*Figure 90*] illustrated conditions that include an open passage (C150) along the south end of the wing and five offices and a lavatory positioned north of the passage. The plan shows three doorways positioned in the north wall of the corridor in the same position as the current doorways.

While the plan as it now exists, with the exception of the south passage (C150) differs from the 1939 plan, the various interior offices doors and transoms appear to date from




*Detail of the ground floor plan of the southeast wing (not to scale). [JGWA, 2007]* the 1939 renovation. It is possible that the 1939 arrangement was later modified, but made use of the earlier doors, trims, and transoms.

***South Exterior Passage (C150)***

This long corridor exists along the south side of the original large open gymnasium completed in 1827. At that time, the arched openings in the south wall likely had no sash. The construction of the masonry walls forming the east and west ends of the corridor may date to work carried out in 1841. The north masonry wall is of a later, undetermined date, possibly 1898 or soon after, or 1939 when extensive work was carried out.

Floor: The floor is finished with brick pavers (3-1/2" to 3-3/4" x 8"), laid in a herringbone pattern, with a one-brick-wide border. Brick pavers likely formed the floor surface of the original 1827 gymnasium; the date of the current surface is undetermined.

In the brick floor surface of the west arched opening, a commemorative slate plaque reads, “The preservation of this historic property began in 1984 under the guidance of the JEFFERSON RESTORATION ADVISORY BOARD.”

Walls: The masonry walls are parged and painted. The south wall is brick that generally dates to the 1827 completion of the terraces.

Ceiling: The ceiling is made up of recent plaster(?) panels, 9'-10" above the floor. The ceiling framing structure above the new surface dates to the extensive work carried out in 1939.

Baseboard: A plain fascia board ranges from 10-3/4" high at the west end of the corridor to 11-1/4" high at the east end of the corridor.

Doors: The three doorways in the north wall are framed by 5" wide two-fascia architraves, and include three-light operating transoms; these finishes date to 1939. The trim of the west opening retains evidence for hinges on the west jamb; a louvered or screened door was previously placed here.

At the center and west doorways, recent small wood “ramps” lead to the concrete thresholds.

Plain arched openings in the east and west masonry walls open to the adjoining corridors.

Windows: The seven original 1827 lunette openings in the south wall are positioned in the masonry above a 7-3/4" high plain sill; the sill is 6'-1" above the brick paving. The openings are framed by simple 1-1/2" wide surrounds composed of a small fascia with a flush bead around the inside opening.

Each opening is fitted with a pair of nine-light, lunette-form casement sash with radiating muntins. Only the west sash in each opening is hinged. These sash may have survived the 1895 fire, and are visible in the photographs taken before and after the fire. If this is the case, then the sash probably date to work carried out in 1841. In the second opening from the west, the west sash has been replaced.

Typically, the quarter-round west sash in each window opens into the corridor; the hardware includes pairs of original small hinges and later small, brass, ovoid knobs and latches. In the second opening from the east, the west sash has a what may be an original hollow brass knob.

Lighting/electrical: The space is lit by recessed fixtures in the ceiling panels. There is a duplex receptacle in the north wall.

***Rooms 150-154 Typical Finishes (University Architect offices)***

The University Architect currently occupies this suite of offices. The rooms share typical finishes.

Floor: The floors are covered with recent carpet. The 1939 floor plan indicates that asphalt tile was to be the floor finish.

Walls: The exterior walls are masonry. Although partially rebuilt after the 1895 fire, much of the north wall dates to 1827. The east and west walls may date to the work carried out in 1841.

The partitions that extend north/south are wood-framed. All of the walls are finished with plaster and/or gypsum board.

Ceiling: An acoustical tile suspended ceiling is 8'-9" above the floor. The ceiling and structure above this recent surface date to the rebuilding of the terrace surface in 1939.

Baseboard: The typical baseboard is composed of a 5-3/4" high plain splashboard, trimmed with a quarter-round shoe molding.

Chair rail: The 5" high typical chair rail is a simple fascia with a rounded top edge. At the top edge, the rail is 3'-0" above the floor.

Doors: The three south doorways are framed with 5-1/8" wide two-fascia architraves. Above each opening is a transom with a three-light hopper sash. The 1939 Makielski drawings include an elevation drawing of this door type.

> Typical south doors: The three south doorways in the suite each have a 2'-11 3/4" wide x 6'-11" high x 1-3/4" thick stile-and-rail door with six raised panels from 1939.

Hardware: The 1939 hardware at each of the south doors includes three 4-1/2" high butt hinges; a 7-3/4" mortise lockset with brass knobs and a deadbolt (turnkey interior, key cylinder exterior); and a brass mail slot.

The typical interior doorways are framed with 4-1/4" wide two-fascia architraves, and include three-light transoms. These appear to be the trims specified in the 1939 floor plans.

Interior doors: The typical 1939 interior stile-and-rail door is 2'-7 5/8" wide x 6'-11" high x 1-3/4" thick and has six raised panels.

Hardware: The door hardware varies slightly at each interior door (and will be described in more detail in the individual room descriptions).

Windows: Each of the original window openings in the north wall were originally (in 1827) part of an open arcade. Sash were first installed in 1841, when the gymnasium was enclosed. The current sash date to the post-fire reconstruction completed in 1898.

Each opening is framed with a 5" wide two-fascia architrave, composed of two fasciae trimmed with a flush bead at the inner edge and an ogee and fillet at the outer edge. The openings sit above 2-3/4" high bullnosed molded sills.

Each opening is fitted with a 6/6 chain-hung wood sash and a 6-light fanlight. Typical original 1898 hardware includes pairs of brass flush sash grips in the bottom rails, and brass latches on the meeting rails. Some of the 1898 latches have been replaced.

Heating: Typically, the rooms are heated by seven-column, fifteen-section cast-iron, “American Radiator” heaters. The units are positioned below the north window openings.

Air conditioning supply and return vents are incorporated into the suspended ceilings.

Lighting/electrical: The rooms are lit by fluorescent fixtures with parabolic diffusers, set into the suspended ceilings.

***Office (150)***

The 1939 floor plan shows a larger room in this location that includes the west half of room 151. In that larger room, there are a pair of arched doorways in the east partition.

Walls: A recent glazed metal partition projects from the east wall to screen off the southeast corner of the room; a similar partition screens of the northwest corner.

Baseboard: The baseboard on the east partition is more recent than the 1939 (or earlier) trim on the north, west, and south walls.

Cornice: A plain board trims the top of the walls.

Doors: There are two typical doorways in this space: one in the south wall, and one in the east wall.

Windows: The single window opening in the north wall has typical 1898 trims, sash, and hardware.

Lighting/electrical: Besides the three typical fluorescent fixtures, other electrical elements include switches in the south and east walls; duplex receptacles in the east and west walls; and a an electrical panel on the west wall concealed within a wood cabinet.

Equipment: There is a network/communications outlet on the east wall.

***Office (151)***

The 1939 floor plan shows a smaller room in the space that was positioned in the east half of the current room. The narrow room in that plan includes two arched doorways in the west partition and a single doorway in the north end of the east partition.

Walls: A chase projects from the center of the north wall; a small panel on the west face provides access into the chase.

Ceiling: At the south end of the room, the ceiling drops 1'-5 1/2" down to form a plenum.

Cornice: A plain board trims the tops of the walls.

Doors: The single doorways in the east and west walls have typical trims and transoms. These door types appear on the 1939 Makielski plans.

> East door: The 2'-7 7/8" wide x 6'-9 3/4" high x 1-3/4" thick stile-and-rail door has six raised panels.
>
> > Hardware: Original hardware includes three 4" high butt hinges, and a 5-1/4" mortise lockset with brass knobs and oval keyhole escutcheons.
>
> West door: The 2'-7" wide x 6'-10" high x 1-3/4" thick stile-and-rail door has six raised panels.
>
> > Hardware: Original hardware includes three 4" high butt hinges, and a 5-1/4" mortise lockset with brass knobs and oval keyhole escutcheons.

Windows: The two window openings in the north wall have typical 1898 trims and sash. The original flush brass grips have been removed from the northwest window sash. At both openings, the original latches on the meeting rails have been replaced with sweep thumblatches.

Lighting/electrical: Besides the typical fluorescent fixtures, the electrical elements include switches in the east and west walls; wire mold along the north wall; and duplex receptacles in the east, west, and south walls.

The chase on the north wall has a fourplex receptacle on the east face.

Equipment: There are network/communications outlets on the north and south walls.

***Reception (152)***

Prior to the installation of the north partition, this space and room 153 formed a single large area. The 1939 floor plan records a very different arrangement. In that plan, the larger space is divided into a narrow room in the west half, and a smaller room, closet, and washroom in the east half.

Floor: At the south doorway, the floor is covered with recent 1'-0" square slate pavers. The rest of the floor is covered with recent carpet.

Walls: A glazed metal partition screens off the north end of the room to create room 153.

Doors: The south, east, and west doorways have typical trim and transoms, which appear to be the type installed in 1939. An opening in the glazed metal partition to the north is fitted with a pair of glazed wood doors.

> North doors: Each leaf is 2'-11 1/2" wide x 6'-11 1/2" high x 1-3/4" thick and has one glazed panel.
>
> > Hardware: Each door is hung on three 4-1/2" high “MKC” stainless-steel butt hinges. Other hardware contemporary with the doors includes an 8" high “Valli & Valli” stainless steel mortise lockset with lever knobs and a deadbolt (turnkey in the north face, key cylinder in the south face); and a 5" high stainless steel keeper in the west leaf with similar knobs. There are flush latches in the lock rail of the west leaf.
>
> East door: The 2'-7 5/8" wide x 6'-11" high x 1-3/4" thick stile-and-rail door has six raised panels.
>
> > Hardware: Original hardware includes a pair of 4-1/2" high butt hinges, and a 5-1/2" high mortise lockset with brass knobs and an oval escutcheon on the west face. A brass hook is mounted to the west face.

Lighting/electrical: Electrical elements include switches and a receptacle in the south wall.

Equipment: There is a network/communications receptacle in the south wall.

### *Office (153)*

The 1939 floor plan records the north portions of two separate rooms in this location. The office is currently used by the University Architect.

Walls: A recent glazed metal partition divides this room from room 152 to the south. Chases project from the northeast and northwest corners of the rooms; small panels provide access into the chases.

Windows: The two north window openings have typical 1898 trims. In the northeast opening, the 1898 upper sash has been replaced, and the latch replaced with a sweep thumblatch. The original brass grips remain on the lower sash.

Lighting/electrical: The room is lit by two typical fluorescent fixtures and by a lantern is hung from the ceiling at the north end of the room. Other electrical elements include receptacles in the east wall and in wiremold extending along the north wall.

### *Office (154)*

This large room exists as shown on the 1939 floor plan, with the exception of a washroom, shown on the plan, that partially extended into the southwest corner of this space.

Cornice: There is a small 2-1/4" high board below the suspended ceiling.

Doors: The south doorway has a typical architrave and transom, of the type shown on the 1939 plans. The west doorway is also typical of the 1939 doors, but the trim is 5-1/4" wide.

Windows: The two openings in the north wall have typical 1898 trims and sash, and original brass hardware.

Lighting/electrical: The room is lit by typical fluorescent fixtures and by track lighting mounted to the suspended ceiling. Other electrical elements include receptacles on the south and west walls and in wiremold that extends along the north wall.

Equipment: There are network/communication receptacles on the north wall.

### *Southeast Wing West Exterior Passage (C151)*

This open passage at the west end of the southeast wing has arched openings in each wall. The east wall was inserted in 1841.

Floor: The floor is paved with bricks laid in a herringbone pattern. There is a 1'-9" square metal access panel in the floor, just south of the center.

Walls: The north, south and west walls are original 1827 brick masonry. The east wall may have been inserted in 1841.

Ceiling: The plaster ceiling is approximately 11'-0" above the paving.

Door: The open archways in the north, west and south walls are original 1827 features. An open archway in the east wall is contemporary with the construction of that surface.

Furnishings and fittings: A large wood recycling bin was installed in this space in 1993.

***Southeast Wing East Exterior Passage***

This open passage is the east end of the original 1827 gymnasium space. The wall along the west side of the passage was inserted in 1841. The passage is one bay wide and three bays deep.

Floor: The floor is paved with bricks laid in a herringbone pattern. At the south end of the passage, the floor steps up with eight risers to the walkway along the East Range. To the east, a brick accessibility ramp was installed in 1998.

Walls: Arched openings spanning between brick piers form the north, east and south walls of the passage. The 1841 west wall is a plain masonry wall, parged and painted white.

Ceiling: The ceiling is finished with floating plaster panels, 10'-3" above the paving.

Door: An open archway in the west wall is contemporary with the construction of the wall in 1841.

Lighting/electrical: Three recessed fixtures are set in the ceiling panels.

*Southeast Wing, C150, looking east. [JGWA, 2006]*

*Southeast Wing, C151, looking north. [JGWA, 2006]*

*Southeast Wing, East Passage, looking south. [JGWA, 2006]*

*Southeast Wing, 151, looking east. [JGWA, 2006]*

*Southeast Wing, 152, looking east. [JGWA, 2006]*

*Southeast Wing, 152, looking northeast. [JGWA, 2006]*

*Southeast Wing, 153, looking northwest. [JGWA, 2006]*

*Southeast Wing, 153, looking northeast. [JGWA, 2006]*

*Southeast Wing, 154, looking northeast (top) and southeast (bottom). [JGWA, 2006]*

GROUND FLOOR: NORTHWEST WING

The Northwest Wing was completed in 1898 as part of the reconstruction and restoration of the Rotunda carried out by Stanford White. At that time, the interior consisted of a single large lecture room flanked at each end (east and west) by open covered passages. The interior is now divided into eleven rooms and a central corridor, with the original open west passage remaining. Fire insurance maps from 1902 and 1907 indicate that this wing was used for classrooms at that time. The 1939 Makielski plan [*Figure 90*] reveals conditions similar to what now exists: the east passage is partially enclosed, and a central corridor flanked by offices fills the original large, open space of the wing. The rooms were occupied by the Bursar's Office at that time. The area is primarily occupied by the Office of the Board of Visitors. The Office of State Government Affairs and the Office of the Architect also use the space.

The following are the typical finishes for the Northwest Wing.

Floor: The floors are covered with carpet. There is no visible evidence for the floor finish in 1898. The 1939 floor plan records asphalt tile throughout the area.

Walls: The exterior walls are 1898 brick masonry; typically, the other walls are framed partitions. The walls are finished with plaster and/or gypsum board.

Ceiling: The ceiling finishes and heights vary.

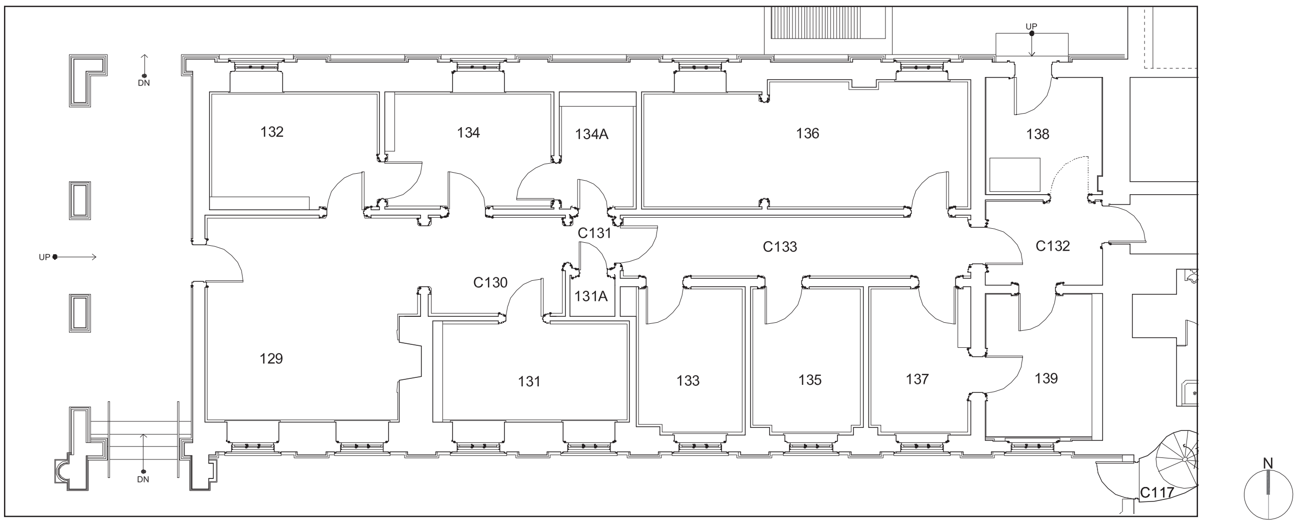
Baseboard: The typical 8" high wood baseboard includes a splashboard and a cap molding composed of (from top to bottom) a cavetto, bead, and ogee molding, similar to the 1970s trim in the Rotunda.

Chair rail: The typical 3-1/4" high wood chair rail is composed of a fascia with two beads and a cavetto at the bottom edge, and an ogee and fillet at the top edge. The top edge of the rail is typically 2'-10" above the carpet.

Doors: The doorways are typically framed by 6" to 7" wide two-fascia architraves.

> Doors: The typical doors are 2'-10 1/2" to 2'-11 3/4" wide x 6'-11 1/2" high x 1-3/4" thick and have six raised panels.

Windows: Each of the original 1898 window openings in the north and south exterior walls is framed with a 5" to 5-1/4" wide two-fascia architrave, composed of two fasciae trimmed with a flush bead at the inner edge and an ogee and fillet at the outer edge. The openings sit above 2-3/4" high bullnosed molded sills.




*Detail of the ground floor plan of the northwest wing (not to scale). [JGWA, 2007]*

Each opening is fitted with a 6/6 chain-hung wood sash and a 6-light fanlight. Typical original hardware includes pairs of flush brass hand grips in the bottom rails, and brass thumblatches on the meeting rails.

***Reception (129)***

The reception room can be entered directly from the exterior west arcaded passage. The formal appearance of the room results from the presence of the fireplace with its handsome mantelpiece, and the classically inspired cornice. This woodwork was installed sometime after the mid-twentieth century, possibly when the Rotunda was restored in the 1970s. The 1939 Makielski floor plan records a very different condition in this area (then occupied by the Bursar's Office). At that time, the west entrance opened to a centrally positioned public space, flanked by counters. The large room occupied the space that now includes Rooms 129 and 132.

Walls: The south and west walls are masonry, as is a chimney breast at the south end of the east wall; the south wall is furred out from the original 1898 brick masonry. The north and east walls (north of the chimney breast) are framed partitions.

Ceiling: The plaster-on-lath ceiling is 11'-5" above the floor.

Baseboard/chair rail: The walls are trimmed with a typical mid-1970s baseboard and chair rail .

Cornice: The 10-1/2" high wood cornice is composed of (from top to bottom) a cyma recta, fillet, fascia, ovolo, and cavetto, and is contemporary with the chair rail and baseboard.

Doors: There are three doorways in the room: an original 1898 exterior opening in the west wall; a doorway in the north wall; and an opening in the east wall (without a door). All three doorways are framed with typical two-fascia architraves.

West door: The 2'-11 3/4" wide x 6'-11 1/4" high stile-and-rail door has six raised panels.

Hardware: The door is hung on three 5" high butt hinges. Other hardware includes a polished brass mortise lockset with 2-1/4" x 7" polished brass plates, knobs, and deadbolt; a brass mail slot; and a closer.

Windows: The two original 1898 window openings in the south wall have typical trims, sash, and hardware.

Fireplace: A brick chimney breast projects from the south end of the west wall. The brick-lined firebox is painted black, as is the plain surround. The surround is bordered by a 7-1/4" wide two-fascia architrave (similar to the 1970s trim used in the Rotunda fireplace mantels). Above the architrave, a plain frieze extends up to a denticulated bed molding, which in turn supports a fascia, a crown molding, and a mantel shelf.

The hearth and firebox are paved with brick.

This fireplace does not function, and there is no external chimney. A 1976 floor plan called “Buildings and Grounds” records the outline of the space occupied by this fireplace, but it does not show the firebox or hearth.

Lighting/electrical: A pair of one-light sconces are mounted to the west wall; all other lighting is provided by portable lamps. Other electrical elements include switches on the west wall, and receptacles in all four walls and in the chimney breast.

Heating: Grilles are set into the two window sills; there is a small vent above the north doorway. A thermostat is mounted to the north wall.

Equipment: There is a network/communications receptacle on the south wall.

***Office (131)***

This room is included in the 1976 floor plan issued by the Office of Buildings and Grounds. In that drawing, the door is shown opening into the office, rather than into the hall as it currently does.

Walls: The south and west walls are masonry; the south wall is furred out from the original 1898 brick masonry. The east and north walls are later framed partitions.

Ceiling: The ceiling is covered by acoustical tiles, 11'-4" above the carpet.

Baseboard/chair rail: The walls are trimmed with the typical baseboard and chair rail.

Doors: The doorway in the north wall is framed by the typical two-fascia trim. The door opens outward into the hall.

Windows: The two original 1898 window openings in the south wall have typical trims, sash, and original hardware.

Lighting/electrical: Recessed fluorescent fixtures are set into the ceiling grid, but are not typically used. Instead, the room is lit by portable lamps. Other electrical elements include two switches in the north wall, and receptacles in the north, east and south walls.

Heating: A grill is set into the sill of the southwest window, along with an access panel to a thermostat.

Equipment: There is a network/communications receptacle on the north wall.

Furnishings/fittings: A three-bay-wide built-in bookcase extends across the west wall. The chair rail and baseboard continue across the unit. In the lower section, below the chair rail, there are two tiers of shelving in each bay. In the upper section, there are four tiers in each bay.

***Office (132)***

This small office occupies the northwest corner of the Northwest Wing. This was the north third of the larger room used in the public contact area of the Bursar's Office shown on the 1939 Makielski plan. The 1976 plan shows the room in its current form. The office is now occupied by the Special Assistant to The President and Secretary of the Board of Visitors.

Floor: The floor is covered with carpet. The 1939 floor plan shows asphalt tile in this area.

Walls: The north and west walls are 1898 masonry; the north wall is furred out from the original 1898 brick masonry. The south and east walls are later framed partitions.

Baseboard/chair rail: The walls are trimmed with the typical wood baseboard and chair rail.

Ceiling: The plaster ceiling is 11'-1 3/4" above the floor.

Doors: The two doorways (one in the south wall, and one in the east wall) are framed by the typical two-fascia architraves.

South door: The door is a typical six-panel door.

Hardware: The hardware includes three 5" high butt hinges and a 4-3/4" high "Union" mortise lockset marked "Parkes Willenhall England" with two brass knobs and keyholes with drop covers.

Window: The original 1898 window opening in the north wall has typical trim. The upper sash has been replaced; the lower 1898 sash still retains its original brass latch and hand grips.

Lighting/electrical: There are two fluorescent ceiling fixtures. Other electrical elements include a switch in the south wall, and receptacles in the north, east, and west walls.

Heating: Below the window sill there is an access panel with a ventilation grille.

Equipment: There is a network/communications receptacle in the north wall.

Furnishings/fittings: A three-bay-wide, built-in cabinet on the south wall extends up to the ceiling. The chair rail and baseboard continue across the cabinet. Below the chair rail, each bay has a pair of doors. The doors are hung on small brass butt hinges, and have small brass knobs. In the upper section, the center bay has six adjustable shelves, and the outer bays have seven adjustable shelves.

***Office (133)***

This small office exists as shown on the 1976 floor plan from the Office of Buildings and Grounds.

Walls: The south wall is original 1898 brick masonry; the other walls are later framed partitions.

A chase projects from the southwest corner of the room.

Ceiling: The ceiling is covered with acoustical tile, 10'-6 3/4" above the carpet.

Baseboard: The walls are trimmed with the typical wood baseboard.

Chair rail: There is no chair rail in this space.

Doors: The doorway in the north wall is framed by the typical two-fascia architrave.

> Door: The door is a typical six-panel door.
>
>> Hardware: The hardware, contemporary with the door, includes three 5" high butt hinges, and a 4-3/4" high "Union" mortise lockset marked "Parkes Willenhall England" with two brass knobs and a keyhole with a drop cover on the north face. Above that lockset is a 4" high mortise deadbolt with a key cylinder on the north face and a turnkey on the south face.

Windows: The original 1898 window opening in the south wall has typical 1898 trim, sash, and hardware.

Lighting/electrical: The room is lit by a fluorescent ceiling fixture. There is a switch on the north wall. Receptacles are set into a wire mold that extends along the east, south, and west walls.

Heating: A heating unit near the window is enclosed within a metal cover.

Equipment: There is a network/communications receptacle on the south wall.

Furnishings/fittings: A bookcase built into a recess at the north end of the west wall has five tiers of adjustable shelves. The baseboard continues across the bookcase.

There are two tiers of shelves on the west wall, two tiers on the north wall (east of the doorway), and one shelf on the east wall.

***Office (134)***

This small office exists as shown on the 1976 floor plan from the Office of Buildings and Grounds.

Walls: The north wall is masonry; the wall surface is furred out from the original 1898 brick masonry. The other three walls are later wood-framed partitions.

Ceiling: The ceiling is covered by acoustical tiles, 11'-4" above the carpet.

Baseboard/chair rail: The walls are trimmed with the typical baseboard and chair rail.

Doors: The single doorways in the east, south, and west walls are framed by typical two-fascia architraves.

> South and west doors: These doors are typical six-panel doors.
>
> > Hardware: Each door is hung on three 5" high butt hinges. The 6-1/4" high mortise locksets are marked “FONTAINE PARIS,” and each has two knobs and keyholes with drop covers.
>
> East door: There is no door in this opening. Evidence for hinges on the south jamb indicate that the door opened into this room.

Window: The original 1898 window opening in the north wall has typical 1898 trim, sash, and hardware.

Lighting/electrical: The room is lit by a fluorescent ceiling fixture, and by portable lamps. Other electrical elements include a switch in the south wall, and receptacles in the north, east, and south walls.

Heating: A grill is set into the sill of the window, along with an access panel to a thermostat. Another access panel has been inserted in the wall below the sill.

Equipment: There is a network/communications outlet on the north wall.

Furnishings/fittings: A two-bay-wide bookcase is built against the north end of the west wall. The chair rail and baseboard continue across the unit. In the lower section, below the chair rail, there are two tiers of shelving in each bay. In the upper section, there are four tiers in each bay.

*Office (134A)*

This very small windowless space was created in 1990 from the west half of a larger office shown on the 1976 floor plan as room 133. The remainder of that office now exists as the west end of the large office in room 136.

Walls: The north wall is masonry; the wall surface is furred out from the original 1898 brick masonry. The other later walls are framed partitions. The east partition was constructed in 1990 to form this space.

Baseboard/chair rail: The walls are trimmed with the typical baseboard and chair rail.

Chair rail: The typical chair rail extends along the north, west and south walls, but not on the recent east partition.

Doors: The single doorways in the south and west walls are framed by 4-3/4" wide single-fascia architraves. The door is missing from the west opening.

South door: The door is a typical six-panel door.

Hardware: The door is hung on three 5" high butt hinges. The 6-1/4" high mortise lockset, marked “FONTAINE PARIS,” has two knobs and keyholes with drop covers.

Lighting/electrical: The room is lit by a recessed fluorescent ceiling fixture, and by portable lamps. Other electrical elements include a switch in the south wall, receptacles in the east and west walls, and a clock receptacle in the south wall.

Furnishings/fittings: A two-bay-wide cabinet is mounted to the north wall. Each bay has a pair of doors with small butt hinges, brass pulls, and key-operated latches.

*Office (135)*

The 1976 floor plan from the Office of Buildings and Grounds reveals that this space and the adjoining office (137) were at that time a single large space that included the portion of the corridor (C133) immediately north. The 1976 plan indicates that a “staggered stud wall (24” oc) with insulation” was to be constructed to form a large office separate from the corridor.

Walls: The south wall is furred out from the original 1898 masonry. The other three later walls are framed partitions. The north partition was constructed in 1976; the east partition is more recent.

Chases project from the southeast and southwest corners of the room.

Ceiling: The ceiling is covered in acoustical tile, 10'-7" above the carpet.

Baseboard: The recent east wall is trimmed with a vinyl base. The other three walls have the typical 8" high baseboard.

Chair rail: There is no chair rail in this room.

Door: The doorway in the north wall has a typical two-fascia architrave, and dates to 1976 when the partition was construction.

North door: The door is a typical six-panel door.

Hardware: The door is hung on three 4-1/2" high butt hinges. Other original mid-1970s hardware includes a mortise lockset with 2-1/4" x 7-1/2" polished brass plates, knobs, a key cylinder on the north face, and a turnkey on the south face.

Window: The original 1898 window opening in the south wall has typical trim and sash.

Lighting/electrical: The room is lit by a fluorescent ceiling fixture. Other electrical elements include a switch on the north wall, and receptacles on the south and west walls.

Heating: A "Carrier" radiator is placed near the south window opening.

Equipment: There is a network/communications receptacle on the south wall.

Furnishings/fittings: A two-bay-wide bookcase built against the north wall has six tiers of shelving in each bay.

### ***Office (136)***

This large room was created in 1990, when the west partition was removed and the space was joined to the adjacent office (formerly room 133, according to the 1976 Buildings & Grounds floor plan).

Walls: The north and east walls are 1898 brick masonry, and the south and west walls are framed partitions. The west partition dates to 1990.

Near the center of the room, a partition that divided this space was partially removed in 1990. To the west of that partition, the north wall is furred out from the original 1898 brick masonry.

A chase projects from the north wall.

Ceiling: The acoustical tile ceiling is 10'-8" above the floor.

Baseboard/chair rail: The walls are trimmed with the typical baseboard and chair rail.

Doors: Near the center of the room, a partition that divided this space was partially removed in 1990 to form a large opening. That opening, and the doorway in the south wall, have typical two-fascia architraves.

Windows: The two original 1898 window openings in the north wall have typical trim. The upper sash in both openings have been replaced. One of the sash lifts is missing from the northeast sash; the other typical original hardware remains.

Lighting/electrical: The room is lit by four fluorescent ceiling fixtures. Other electrical elements include switches in the south and west walls, receptacles in the north and south walls, and wire mold with switches and receptacles extending around the chase on the north wall.

Heating: A "Carrier" radiator is placed near the northeast window. At the northwest window, there is an access panel with a ventilation grill in the wall surface below the opening. Small vents are placed in the south wall near the ceiling.

Equipment: There are network/communication receptacles at the west end of the north wall, and on the west face of the chase.

Furnishings/fittings: A four-bay-wide built-in cabinet extends across the east wall. The chair rail and baseboard continue across the unit. Below the chair rail, each bay has a pair of doors with small brass butt hinges and knobs. The upper section has seven adjustable shelves in each bay.

***Office (137)***

The 1976 floor plan from the Office of Buildings and Grounds reveals that this space and the adjoining office (135) were at that time a single large space that included the portion of the corridor (C133) immediately north. The 1976 plan indicates that a "staggered stud wall (24" oc) with insulation" was to be constructed to form a large office separate from the corridor.

Walls: The east wall is original 1898 brick masonry; the south wall is furred out from the original 1898 masonry. The north partition was constructed in 1976; the west partition is more recent.

A chase projects from the southwest corner of the room.

Ceiling: The ceiling is covered in acoustical tile, 10'-7" above the carpet.

Baseboard: The recent west partition is trimmed with a vinyl base. The other three walls have the typical 8" high baseboard.

Chair rail: There is no chair rail in this room.

Door: The doorway in the north wall has a typical two-fascia architrave, and dates to 1976 when the partition was constructed. The doorway in the west wall is framed by a typical two-fascia architrave.

North door: The door is a typical six-panel door.

Hardware: The door is hung on three 4-1/2" high butt hinges. Other original mid-1970s hardware includes a mortise lockset with 2-1/4" x 7-1/2" polished brass plates, knobs, a key cylinder on the north face, and a turnkey on the south face.

Window: The original 1898 window opening in the south wall has typical trim and sash.

Lighting/electrical: The room is lit by a fluorescent ceiling fixture. Other electrical elements include a switch on the north wall, and receptacles on the south and east walls.

Heating: A “Carrier” radiator is placed near the south window opening.

Equipment: There is a network/communications receptacle on the south wall.

***Vestibule (C131)***

This small space is shown on the 1976 plan.

Walls: All four walls are framed partitions.

Ceiling: The plaster ceiling is 10'-2 1/4" above the carpet.

Baseboard/chair rail: Because the door architraves extend to the corners of the vestibule, there are no baseboard or chair rail in this space.

Doors: There is one doorway in each wall. Each opening is framed by a 4-3/4" wide single-fascia architrave. There is no door in the west opening.

South door (closet): The door is a typical six-panel door.

Hardware: The door is hung on three 5" high butt hinges. A 6-1/4" high mortise lockset marked “FONTAINE PARIS” has two knobs, a keyhole with a drop cover on the north face, and a small keyhole escutcheon on the south face.

Lighting/electrical: The space is lit by a fluorescent ceiling fixture.

***Closet (C131A)***

This closet is shown on the 1976 plan.

Floor: The floor is covered with 9" square vinyl tiles.

Walls: All four walls are framed partitions.

Ceiling: The plaster ceiling is 10'-2 1/4" above the carpet.

Door: The doorway in the north wall is framed by a typical two-fascia architrave.

Lighting/electrical: The closet is lit by an incandescent ceiling fixture with a decorative molded glass shade. There is a switch on the east wall.

Furnishings/fittings: Four tiers of shelving extend along the east, south, and west walls. The shelves sit on metal brackets. On the south wall, there are two addition shelves above, set on wood cleats.

***Vestibule (C132)***

In 1898, this area was the center portion of the open passage situated at the east end of the northwest wing. The insertion of the south masonry wall in 1939, followed by the addition of the north partition, resulted in the creation of this space.

Walls: The east, west, and south walls are brick masonry; the north wall is a later framed partition.

Ceiling: The acoustical tile ceiling is 9'-4 1/4" above the carpet.

Baseboard: A plain 6-1/4" high concrete splash trims the east, west, and south walls. A typical mid-1970s 8" high molded wood baseboard trims the north wall, west of the doorway.

Chair rail: There is no chair rail in this space.

Doors: The north, west, and south doors have typical two-fascia architraves.

The original 1898 arched east opening is framed by a 5-1/4" wide two-fascia architrave, composed of two plain fascia and an outer ogee molding. Above the opening, a five-light fanlight transom fills the tympanum of the arch.

West door: The door is a typical six-panel door.

Hardware: The door is hung on three 5" high butt hinges. A 4-3/4" high “Union” mortise lockset marked “Parkes Willenhall England” has two knobs, an oval keyhole escutcheon on the east face, and a keyhole with drop cover on the west face.

Lighting/electrical: The space is lit by a fluorescent fixture in the acoustical tile ceiling. Other electrical elements include a switch in the west wall. On the south wall, a wood cabinet holds the electrical switches for an air handler and a heater, and a duplex receptacle. Conduits extend from the switches up into the ceiling and down through the floor.

Plumbing: There is a drinking fountain in the northwest corner of the vestibule.

Equipment: There is an exit sign and a fire extinguisher near the east door.

***Corridor (C133)***

The current form of this corridor is the result of the 1976 construction of a partition that encloses what are now office spaces 135 and 137. Only a short section of corridor existed west of the door to room 135 prior to that time.

Walls: The east wall is 1898 brick masonry, while the north, south, and west walls are framed partitions.

Ceiling: The ceiling is covered in acoustical tiles, 12'-8" above the carpet.

Baseboard: The walls are trimmed with the typical baseboard.

Chair rail: There is no chair rail in this corridor.

Doors: There are three doorways in the south wall, and one doorway in each of the other three walls. All of the openings are framed by typical two-fascia architraves.

West door: The door is a typical six-panel door.

Hardware: The door is hung on three 5" high butt hinges. The 6-1/4" high mortise lockset, marked “FONTAINE PARIS,” has two knobs and keyholes with drop covers. Additional hardware includes a closer, and a 4" high mortise deadbolt with key cylinders on both faces.

Lighting/electrical: The corridor is lit by two fluorescent ceiling fixtures. Other electrical elements include a switch in the west wall, and receptacles on the north wall.

Heating: There are thermostats on the west wall and north walls, and two vents in the north wall.

***Kitchen & Entrance Vestibule (138)***

As completed in 1898, this room, along with the adjoining corridor C132 and room 139, formed a single open passage with arched openings at the north and south ends. In 1939, a masonry partition was constructed across the passage (the wall that now includes the doorway to room 139), and the north arched opening was partially filled and a doorway inserted. These conditions are shown on the 1939 Makielski floor plan.

The new space functioned as an enclosed entrance vestibule. Later, probably in the 1970s, another partition was installed resulting in the creation of the current smaller vestibule.

Floor: The floor is covered with 9" square vinyl tiles, probably contemporary with the insertion of the south partition.

Walls: The north, east, and west walls are 1898 brick masonry. The framed partition to the south was added to divide this space from C132, probably in the 1970s.

A metal chase projects from the east wall.

Ceiling: The plaster-on-lath ceiling is 12'-4 1/4" above the floor.

Baseboard: A plain 7" high concrete splash trims the walls.

Chair rail: A 3-3/4" high chair rail extends from the metal chase, along the east wall, and on the north wall to the doorway. The rail is composed of (from top to bottom) a fillet, ogee, fascia, and flush bead; the top edge is 2'-11" above the vinyl tile flooring. A short section also exists at the center of the west wall.

Doors: The north entrance was originally (in 1898) an open arch, and was partially filled in 1939. The doorway is framed by a 1939, 5-1/4" wide, two-fascia architrave, and a fifteen-light fanlight fills the tympanum of the original arch.

The south opening is framed by a narrow, 3-1/2" wide single-fascia trim.

North door: The 2'-11 3/4" wide x 6'-9" high x 1-3/4" thick stile-and-rail door has six raised panels.

Hardware: The door is hung on three 5" butt hinges. Other hardware includes a 7-3/4" high mortise lockset with a 2-1/2" x 9" plate with knob and deadbolt on the exterior face, and a 2-1/4" x 7" plate with knob and turnkey on the interior face.

South door: The door has been removed from this opening.

Hardware: Remnants of the hinges and strike indicate that the door opened into this space from the west jamb.

Windows: Natural light is provided by the fanlight in the tympanum of the original north arched opening. The 1939 fifteen-light sash is hinged at the base; there is a latch and chain at the top.

Heating: A radiator in the northeast corner of the room is enclosed within a wood cover. There is a thermostat on the east wall.

Lighting/electrical: The room is lit by fluorescent fixtures mounted to the ceiling. Other electrical elements include receptacles in the east, west and south walls.

Furnishings/fittings: A built-in, three-bay-wide, wood cabinet at the west end of the south wall incorporates a stainless steel sink set in a plastic laminate countertop. The three doors are hung on butt hinges and have chrome pulls. There is a drawer with a chrome pull above the door in the east bay.

A wood cleat is mounted to the north end of the west wall.

***Office (139)***

This office exists in what was the south half of the original 1898 open passage that extended along the east end of the northwest wing. In 1939, a brick wall was constructed to separate this space from the north half of the passage. At that time, the space remained open through the south archway. A doorway was inserted in an original 1898 window opening in the east wall to provide access to the men's toilet room (T113).

In the 1970s, this space became an office with the insertion of a window opening in the south archway.

Walls: The south, east and west walls are 1898 brick masonry. The north masonry infill wall dates to 1939. More recent masonry infill in the original south archway dates to the 1970s.

Ceiling: The ceiling is covered with acoustical tiles, 11'-11 1/4" above the carpet. The ceiling drops down to form a soffit along the east wall.

Baseboard: The walls are trimmed with a 3-1/2" high concrete splash.

Doors: The doorway in the west wall is framed by a typical two-fascia architrave; the doorway in the north wall is framed by a 3-1/4" wide single-fascia architrave from the 1970s.

North door: The 1970s 2'-11 3/4" wide x 6'-10 3/4" high x 1-3/4" thick stile-and-rail door has six raised panels.

Hardware: The door is hung on three 4-1/2" high butt hinges. Other hardware includes a mortise lockset with 2-1/4" x 7-1/2" polished brass plates, knobs, and an integral deadbolt (key cylinder on the north face, turnkey on the south face).

West door: This door is largely obscured by the furniture in the room. It appears to be a typical six-panel stile-and-rail door.

Window: The window opening in the south wall was created when the original arched opening was enclosed in the 1970s. The opening is framed with a 4-3/4" wide single-fascia architrave above a 2-3/4" high sill. The 6/6 rope-hung wood sash sits below a 6-light fanlight; the sash has a sweep thumblatch on the meeting rails.

Lighting/electrical: The room is lit by two fluorescent ceiling fixtures. Other electrical elements include a switch and receptacle on the south wall. A large rigid conduit extends from the soffit to a box on the north wall.

Equipment: There is a network/communications outlet on the south wall.

Furnishings/fittings: Four bays of built-in bookcases cover the east wall.

***Vestibule (C130)***

The plan of this area as it now exists is the same as that shown on the 1976 Buildings & Grounds plan. The 1939 Makielski floor plan has the corridor (C133) continuing through this area to the partition and opening.

Walls: All four walls are framed partitions.

Ceiling: The plaster ceiling is 10'-2 1/4" above the floor.

Baseboard/chair rail: The walls are trimmed with the typical baseboard and chair rail.

Doors: There is a door opening in each wall. All of the doorways are framed by typical two-fascia architraves. There are no doors in the east and west openings; the 1976 plan shows a door in the east opening.

South door: The door is a typical six-panel door.

Hardware: The door is hung on three 5" butt hinges. A 4-3/4" high “Union” mortise lockset marked “Parkes Willenhall England” has two knobs and keyholes with drop covers.

Lighting/electrical: A fluorescent ceiling fixture is not typically used; instead, the room is lit by portable lamps. Other electrical elements include two switches in the north wall, and receptacles in the north, west and south walls.

Heating: There is a small ventilation grill in the south wall, near the ceiling.

Equipment: There is a network/communications receptacle on the south wall.

***Northwest Wing West Exterior Passage***

This open passage was designed to connect the lecture room in the Northwest Wing with the west colonnade. The passage is one bay wide and three bays deep.

Floor: The floor is paved with bricks laid in a herringbone pattern. At the south end of the passage, the floor steps up with four risers to the paving of the west colonnade.

Walls: Arched openings spanning between brick piers form the north, west and south walls of the passage. The west masonry wall of the original lecture room is finished with parging and painted white. A 2'-2 1/2" to 2'-5" high ledge, aligning with the base of the piers, projects from the base of the wall.

Ceiling: The plaster ceiling is 13'-2 1/4" to 13'-4 3/4" above the paved floor.

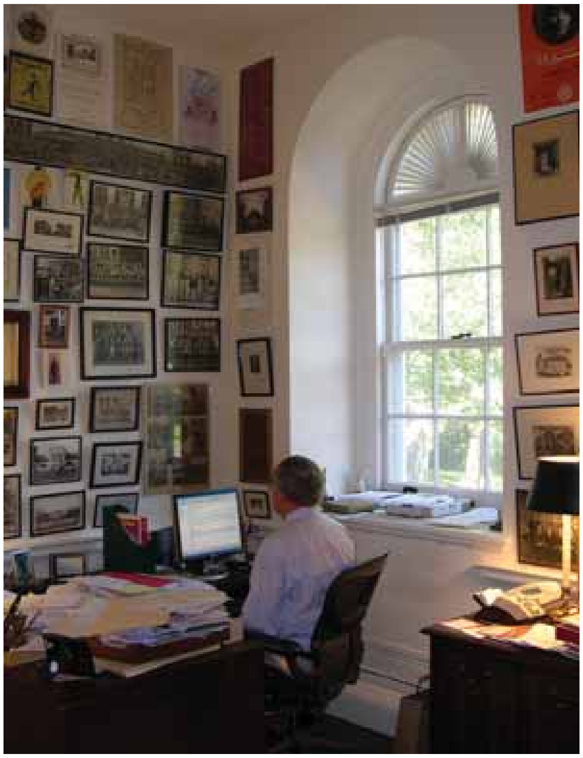
Door: The doorway in the west wall of the original lecture room is trimmed with a 5-1/8" wide two-fascia architrave. Flanking the doorway are two-paneled louvered shutters, held back with “S” holdbacks in the masonry.

Lighting/electrical: A lighting fixture is mounted to the ceiling.

Equipment: A bolt is mounted to the north end of the west wall of the original lecture room.

*Northwest Wing, 129, looking west (top) and southwest (left). [JGWA, 2006]*

*Northwest Wing, 131, looking west (top) and southwest(left). [JGWA, 2006]*



*Northwest Wing, 132, looking northwest. [JGWA, 2006]*

*Northwest Wing, 133, looking south. [JGWA, 2006]*

*Northwest Wing, 134, looking southwest (top) and west (left). [JGWA, 2006]*

*Northwest Wing, 136, looking northeast (top) and northwest (left). [JGWA, 2006]*

*Northwest Wing, 137, looking south. [JGWA, 2006]*

*Northwest Wing, C130, looking east. [JGWA, 2006]*

*Northwest Wing, C133, looking west. [JGWA, 2006]*

*Northwest Wing, C132, looking west. [JGWA, 2006]*


*Northwest Wing, C132, looking east. [JGWA, 2006]*

*Northwest Wing, 138, looking north. [JGWA, 2006]*

*Northwest Wing, 139, looking south (top) and southeast (left). [JGWA, 2006]*

GROUND FLOOR: NORTHEAST WING

The Northeast Wing was completed in 1898 as part of the reconstruction, restoration, and expansion of the Rotunda. At that time, the interior consisted of a single large lecture room flanked at each end (east and west) by open passages. The 1939 Makielski plan [*Figure 90*] shows two small rooms situated at the east end of the large room, and a room formed from the north end of the original open west passage. In the plan, the east passage remains open. The lecture room is now divided into eight rooms and a connecting corridor.

***Office/Administrative Area (140)***

As completed in 1898, this room and the adjoining space (141) formed a single open passage with arched openings at the north and south ends. This room was created in 1939 from the north half of that space.

Floor: There is no visible evidence for the finish of this surface in 1898; the Makielski floor plan indicates that asphalt tile was to be placed here. The floor is currently covered with carpet.

Walls: The north, east, and west walls are 1898 brick masonry, finished with plaster. The south wall was added in 1939, when this space was converted from an exterior passage. At that time, the arched opening in the north wall was partially filled in and a doorway was created.

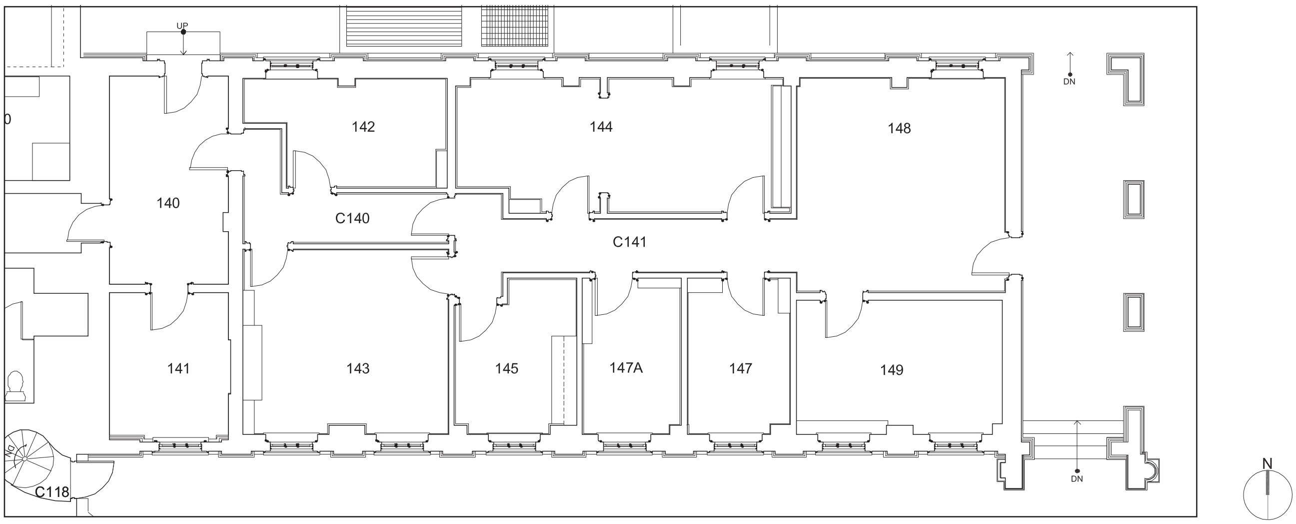
Ceiling: The plaster (gypsum board?) ceiling is 12' 3-1/2" above the carpet. At the south end of the room, the ceiling drops 2'-8 1/2". A panel in the southwest corner provides access above the dropped ceiling; four small doors along the north side provide access to a storage space above this area.

Baseboard: The plain splashboard is 6-1/12" high (above the face of the carpet).

Chair rail: The 5-1/4" high chair rail (possibly installed in 1939) is made up of a plain fascia above a small ogee molding; the top of the rail is 2' 11-1/2" above the face of the carpet. There is no rail on the wall surface north of the east doorway

Cornice: The walls are trimmed with a 1-3/4" high crown molding, composed of a quarter-round over a cavetto molding.

Doors: There are four doorways, one in each wall of the room. The 1898 arched west opening is framed by a 5-1/8" wide two-fascia architrave; the doorway is set below a five-light fanlight. The east opening has a 5-1/4" wide single-fascia architrave.




*Detail of the ground floor plan of the northeast wing (not to scale). [JGWA, 2007]*

The north entrance was originally (1898) an open arch, and was enclosed in 1939. The doorway is framed by a 5-1/8" wide two-fascia architrave. A 1939 fifteen-light fanlight fills the tympanum of the original arch.

The south doorway is the most recent opening in this space. It was inserted in the 1939 partition when room 141 was created; its trim is similar to the later trim of the opening to room 142.

North (exterior) door: The 2'-11 3/4" wide x 6'-7 1/2" high x 1-5/8" thick, stile-and-rail door has six raised panels. This door replaced the 1939 door, which had an upper six-light glazed panel.

Hardware: The door is hung on three 5" high butt hinges with ball tips. Other hardware contemporary with this door includes a 7-3/4" high “Corbin” mortise lockset with brass/bronze knobs and a deadbolt with a key cylinder (on the exterior face), and a turnkey (on the interior face). A smaller, 4" high, mortise lockset above the “Corbin” lockset includes a deadbolt with similar features.

East door: The original 1898 opening matched the extant opening in the west wall. The door was hinged to open into corridor 140.

The more recent 2'-11 3/4" wide x 6'-11 1/4" high x 1-5/8" thick, stile-and-rail door has six raised panels.

Hardware: The door is hung on three 5" high stainless steel butt hinges. Other hardware includes two 2-/4" “Baldwin” polished brass mortise locksets: one with round knobs, and one with a deadbolt (key cylinder on the west face; turnkey on the east face).

Window: Natural light is provided by a fanlight in the north wall, in the original arched opening. The 1939 fifteen-light sash is hinged at the base; there is a latch and chain at the top.

Storage: There is a storage unit along the north face of the dropped ceiling in the south end of the room. Four plain wood doors, each with small butt hinges and painted wood knobs, provide access to the space.

Heating: A metal screen encloses the heater and air conditioning unit in the northeast corner of the room. Other equipment includes a “Honeywell” box on the south wall.

Lighting/electrical: The room is lit by two fluorescent ceiling fixtures and by a five-light chandelier. Other electrical elements include a switch on the east wall, and receptacles in the east, west, and south walls. There is a “Westinghouse” panel and a “Square D” switch panel at the east end of the south wall; conduits from these panels extend up into the dropped ceiling and are enclosed within a plenum.

Plumbing: A valve and a capped-off pipe project from the north faced of a plumbing plenum on the east wall.

Equipment: Communications equipment includes exposed cabling, and communication/networking receptacles on the east and west walls. A fire extinguisher is mounted to the north wall, near the doorway.

***Office (141)***

This room exists at the south end of the 1898 open passage. In 1939, the north arched opening was enclosed, and a partition was inserted, forming room 140. The south archway remained open, and an original 1898 window opening was converted into a doorway, to provide access to the women's toilet in room T112.

More recently, the south opening was filled in with a window and room 141 was created. At the same time, the door opening in the west wall was closed up.

Floor: The floor is covered with carpet. The nature of the floor surface under the carpet remains unknown.

Walls: All four walls are brick masonry, finished with plaster (sheetrock?). The north partition was added in 1939 in the original open passage, and at that time an original arched opening in the south wall was bricked in and a window inserted.

The shallow, 8'-8 1/2" high arched recess in the east wall was originally (in 1898) a doorway with transom, opening to the original lecture room. A matching arched opening existed in the east wall of room 140, where the current modified doorway now exists.

Ceiling: An acoustical tile dropped ceiling is 10'-6" above the carpet. The ceiling extends down 1'-0" at the north end of the room.

Baseboard: A plain 5-1/4" high fascia board is trimmed with a flush bead at the top edge.

Chair rail: The 3-3/4" high chair rail is composed of a fascia with a flush bead at the bottom edge and an ogee molding and fillet at the top. The top edge of the rail is 2'-11 1/4" above the carpet.

Doors: The more recent north doorway, inserted in the 1939 north partition, is framed with a 5-1/4" wide two-fascia architrave. This is the most recent trim type found in the Northeast Wing.

Originally there were doorways in the west wall (to toilet room T112) and in the east wall (into what is now room 143).

North door: The 2'-11 7/8" wide x 6'-11 1/2" high x 1-5/8" thick stile-and-rail door has six raised panels.

Hardware: The door is hung on three 4-1/2" high butt hinges. Other hardware includes a 7-1/2" high bronze mortise lockset with 2-1/4" x 9" face plates, knobs, and a deadbolt with a “Corbin” key cylinder on the north face, and a turnkey on the south face.

Window: The window opening in the south wall was created when the original arched opening was enclosed. The opening is framed with a 5" wide single-fascia architrave above a 4" high sill. The 6/6 chain-hung wood sash sits below a 6-light fanlight. An air conditioning unit has been installed in the upper sash.

Lighting/electrical: The room is lit by a fluorescent ceiling fixture. Other electrical elements include a switch in the north wall, and receptacles in the north, east, and south walls.

Plumbing: A large pipe in the southwest corner extends through the north wall and the ceiling.

Equipment: Communications/networking equipment includes a receptacle on the north wall. An access panel in the east wall is screwed into place.

***C140 (Corridor) through Room 149: Typical Finishes***

These spaces were inserted in the large lecture room created in 1898 and later (1939) housing the Registrar’s offices.

The following finishes are typical of the office suite in the Northeast Wing.

Floor: The floor is covered with carpet. The 1939 Makielski plan shows asphalt tile in these spaces.

Walls: The exterior walls are brick masonry; the other walls are wood-framed partitions. All are finished with plaster and/or gypsum board.

Ceiling: The original ceilings are covered with dropped metal-framed acoustical tile ceilings.

Baseboard: The typical 5" baseboard is composed of a plain fascia trimmed with a flush bead at the top edge.

Chair rail: The typical 3" high chair rail is composed of (from top to bottom) a fillet, ogee, fascia, quarter-round, and cavetto. The top edge of the rail is 2'-6 1/4" above the face of the carpet.

This profile matches the chair rails installed in the Rotunda in 1976.

Doors: Typically, the doorways in the Northeast Wing are framed with 5-1/2" wide single-fascia architraves, composed of a fascia trimmed with a flush bead at the inner edge and an ogee and fillet at the outer edge.

Typical doors: The typical 2'-11 3/4" wide x 6'-11 1/2" high x 1-3/4" thick stile-and-rail door has six raised panels.

Hardware: Each door is hung on three 4-1/2" high butt hinges, and has an 8" high polished bronze “Corbin” mortise lockset, with knobs and a deadbolt.

Windows: Each of the original 1898 window openings in the north and south exterior walls is framed with a 5" wide two-fascia architrave, composed of two fasciae trimmed with a flush bead at the inner edge and an ogee and fillet at the outer edge. The openings sit above 2-3/4" high bullnosed molded sills.

Typically, each opening is fitted with an original 1898 6/6 chain-hung wood sash and a 6-light fanlight. Typical original hardware includes pairs of flush brass sash grips in the bottom rails, and brass thumblatches on the meeting rails.

Lighting/electrical: The dropped ceilings are equipped with fluorescent fixtures.

Heating: Heating units, positioned below the window openings, are encased within metal covers. Conduit concealed in wiremold extends from each unit to a thermostat.

***Corridor (C140)***

This corridor was created from the south end of an earlier, larger room 142, which in turn was created when the original 1898 lecture room was divided into several office spaces.

Walls: The north partition that divided up room 142 is more recent than the other walls.

Ceiling: The acoustical tile dropped ceiling is 9'-7 1/4" above the carpet.

Doors: There is one opening in each wall. The east, west, and south openings are typical doorways. Hinge evidence on the north jamb of the west opening indicates that the door originally opened into this space.

The north doorway is a later addition, contemporary with the north partition; the trim is similar, but has a narrow, rounded fascia instead of the ogee molding.

Lighting/electrical: Besides the typical fluorescent ceiling fixture, other electrical elements include switches in the northwest and northeast corners of the corridor, and a duplex receptacle in the west wall.

Heating: There is a thermostat on the south wall.

Equipment: A panel in the west wall, providing access into the plenum/chase in room 140, is trimmed with a simple panel molding that matches the trim of the north doorway.

***Corridor (C141)***

This corridor is contemporary with the creation the adjacent rooms. At the west end, the space widens to provide access to the two large rooms at that end of the wing: room 143 and C140 (originally part of room 142).

Ceiling: The acoustical tile dropped ceiling is 9'-11" above the carpet.

Lighting/electrical: There is a switch in the south wall.

***Office (142)***

When originally created, this room included the space now located in C140.

Ceiling: The acoustical tile dropped ceiling is 10'-7" above the carpet.

Chair rail: There is no chair rail in this space.

Door: The doorway in the south wall is framed by a 5-1/2" wide single-fascia architrave with a rounded fascia instead of an ogee.

> South door: The door and its hardware is similar to the typical doors in this suite, but are of more recent origin.

Window: There is one window opening in the north wall. The upper sash has been replaced; the muntin profile is simpler than the profile used in the 1898 window sash. The latch is also a replacement; the original brass hand grips remain.

Heating: There is a small vent in the east wall.

Lighting/electrical: The room is lit by the typical fluorescent ceiling fixtures. Other electrical elements include a switch in the south wall, and receptacles in the north and east walls.

Equipment: There is a networking receptacle on the north wall.

Furnishings/fittings: A built-in bookcase at the south end of the east wall is two bays wide, and has five adjustable shelves. The baseboard wraps around the bookcase; the top of the unit is trimmed with a small ogee molding.

***Vice President for Research and Graduate Studies (143)***

This large office is one of the original areas created when the 1898 lecture room was divided into several spaces. The doorway in the north wall formerly opened into the original larger room 142.

Ceiling: The acoustical tile dropped ceiling is 10'-7" above the carpet.

Doors: There are two door openings in this room: one in the north wall; and one in the east wall. Both openings have typical trims and doors. Originally, in 1898, there was a door opening in the west wall, behind the current built-in cabinetry. That arched opening included a fanlight above the door.

Windows: There are two window openings in the south wall. In the southwest opening, the upper sash has been replaced; the muntin profile is simpler than the profile used in the 1898 window sash. The lower sash retain the original brass latches and hand grips.

Lighting/electrical: The room is lit by the typical fluorescent ceiling fixtures. Other electrical elements include a switch in the east wall, and receptacles in the north and south walls.

Heating: The thermostat is mounted to the west wall. There is a small vent in the west wall.

Furnishings/fittings: A built-in unit on the west wall consists of a desk topped by a three-bay-wide shelving unit, and flanked by single-bay cabinets. The flanking cabinets have shelving set above pairs of doors. The unit is trimmed with a small crown molding.

***Senior Vice President for Development and Public Affairs (144)***

This room was created when two smaller rooms (144 to the west and 146 to the east) were combined.

Walls: The masonry wall that divided the two rooms now has a large opening that is framed by a 6-1/4" wide two-fascia architrave.

A chase projects from the northwest corner of the room.

Ceiling: The acoustical tile dropped ceiling is 10'-7" above the carpet.

Doors: There are two door openings in the south wall. Both openings have typical trims and doors and original hardware.

Windows: The two original 1898 window openings in the north wall have typical trims, sash, and original hardware.

Heating: The thermostat is mounted to the south wall. There is a small vent in the south wall, above the southwest doorway.

Lighting/electrical: The three typical fluorescent fixtures in the ceiling are not in use; rather, portable lamps light the space. Other electrical elements include switches in the south wall, and receptacles in the north, west, and south walls.

Equipment: There is a network/communications receptacle on the west wall.

Furnishings/fittings: A four-bay-wide floor-to-ceiling unit covers most of the east wall. The lower section of the cabinet has four pairs of doors, each with small brass hinges and knobs. Above the doors, each bay has six adjustable shelves.

A built-in bookcase in the southwest corner of the room has seven tiers of shelves.

The baseboard continues around both units.

***Copy Room (145)***

This small office is one of the original rooms along the south side of the central corridor (C141).

Ceiling: The acoustical tile dropped ceiling is 10'-6 1/4" above the carpet.

Chair rail: There is no chair rail in this space.

Doors: The doorway in the north wall has typical trim and door.

Windows: The original 1898 window opening in the south wall has typical trims, sash, and original hardware.

Heating: The thermostat is mounted to the west wall. There is a small vent in the north wall.

Lighting/electrical: The room is lit by the typical fluorescent ceiling fixtures. Other electrical elements include a switch near the north doorway, and receptacles in the east and west walls.

Equipment: There are network/communication receptacles on the east and south walls.

Furnishings/fittings: A three-bay-wide cabinet at the south end of the east wall has a three pairs of doors, each with small brass hinges and knobs. Above the unit, three bays of shelving are mounted to the wall.

### *Office (147A)*

This small office is one of the original rooms along the south side of the central corridor (C141).

Ceiling: The acoustical tile dropped ceiling is 10'-8" above the carpet.

Chair rail: There is no chair rail in this space.

Doors: The doorway in the north wall has typical trim and door.

> Hardware: The mortise lockset is newer, and from a different manufacturer, than the typical Corbin-Russwin lockset.

Windows: The original 1898 window opening in the south wall has typical trims and sash; the lower sash retains its original brass hand grips; the sweep thumblatch on the meeting rails is more recent.

Lighting/electrical: The room is lit by the typical fluorescent ceiling fixtures. Other electrical elements include a switch in the north wall, and receptacles in the east, west, and south walls.

Heating: The thermostat is mounted to the west wall.

Equipment: There is a network/communications outlet on the east wall.

Furnishings/fittings: A two-bay-wide shelving unit on the west wall has five adjustable shelves in each bay. A single-bay unit on the north wall has six adjustable shelves.

### *Office (147)*

This small office is one of the original rooms along the south side of the central corridor (C141).

Walls: A chase projects from the southeast corner of the room.

Ceiling: The acoustical tile dropped ceiling is 10'-8" above the carpet.

Chair rail: There is no chair rail in this space.

Doors: The doorway in the north wall has typical trim and door.

Windows: The original 1898 window opening in the south wall has typical trims and sash; the lower sash retains its original brass hand grips; the sweep thumblatch on the meeting rails is more recent.

Heating: The thermostat is mounted to the east wall.

Lighting/electrical: The room is lit by the typical fluorescent ceiling fixtures. Other electrical elements include a switch in the north wall, and receptacles in the east and west walls.

Equipment: There is a network/communications receptacle on the west wall.

Furnishings/fittings: There are built-in bookshelves on the west end of the north wall, and at the north end of the east wall. The northwest unit five adjustable shelves; the northeast unit has six adjustable shelves.

***Reception (148)***

This large room serves as the reception area for the suite of offices in this wing. Access is through the original doorway in the east wall that opens to the exterior covered passage.

Walls: The north and east walls are typical exterior masonry walls, and the west wall is a framed partition. The south wall is masonry, finished with plaster.

A chase projects from the north wall.

Ceiling: The acoustical tile dropped ceiling is 10'-9" above the carpet.

Doors: The south doorway is typical of the Northeast Wing. The exterior doorway in the east wall is framed with a 5" wide two fascia architrave, trimmed with an ogee and fillet molding on the outer edge.

> East door: The recent 2'-11 1/2" wide x 6'-10 1/2" high x 1-3/4" thick stile-and-rail door has six raised panels. This door replaced an 1898 or 1939 door.
>
> > Hardware: The door is hung on three 4-1/2" high butt hinges. Other hardware contemporary with the door includes an 8" high “Corbin” bronze mortise lockset with 2-1/4" wide x 7-1/2" plates, knobs, and a key cylinder (on the exterior face); a bronze mail slot; and a closer.

Windows: The original 1898 window opening in the north wall has typical trims and sash and original brass hardware.

Heating: A thermostat is mounted to the west wall. There is a small vent in the west wall.

Lighting/electrical: The four typical fluorescent fixtures in the ceiling are not in use; rather, portable lamps light the space. Other electrical elements include switches in the east and south walls, and  receptacles in the east, west, and south walls.

Equipment: There is a network/communications receptacle on the west wall.

*Conference Room (149)*

The 1939 Makielski plan shows a small room that corresponds to the east half of this space. That plan also shows a matching small room in the northeast corner of room 148.

Ceiling: The acoustical tile dropped ceiling is 10'-9" above the carpet.

Doors: The doorway in the north wall has typical trim and door.

Windows: The two original 1898 window openings in the south wall have typical trims and sash and original brass hardware.

Heating: The thermostat is mounted to the north wall. There is a small vent in the north wall, above the doorway.

Lighting/electrical: The room is lit by the typical fluorescent ceiling fixtures. Other electrical elements include a switch in the north wall, and receptacles in the north, east, and west walls.

Equipment: There is a network/communications receptacle on the west wall.

Furnishings/fittings: A three-bay-wide bookshelf at the west end of the south wall has two tiers of shelving. The baseboard wraps around the unit.

*Northeast Wing East Exterior Passage*

This open passage was designed by Stanford White to connect the lecture room in the Northeast Wing with the east colonnade. The passage is one bay wide, and three bays deep.

Floor: The floor is paved with bricks laid in a herringbone pattern. At the south end of the passage, the floor steps up with four risers to the paving of the east colonnade.

Walls: Arched openings spanning between brick piers form the north, east and south walls of the passage. The east wall of the original lecture room is brick, finished with parging and painted white. A 2'-2 1/2" to 2'-3 1/2" high ledge, aligning with the base of the piers, extends along the base of the wall.

Ceiling: The plaster ceiling is 13'-8" to 13'-9" above the paved floor.

Door: The doorway in the west wall to the original lecture room is trimmed with a 5-1/4" wide two-fascia architrave.

Equipment: A pipe protrudes through the south end of the east wall of the original lecture room.

*Northeast Wing, 140, looking north. [JGWA, 2006]*

*Northeast Wing, 140, looking south. [JGWA, 2006]*

*Northeast Wing, 141, looking south. [JGWA, 2006]*

*Northeast Wing, C140, looking west. [JGWA, 2006]*

*Northeast Wing, 143, looking south. [JGWA, 2006]*

*Northeast Wing, 143, looking southeast. [JGWA, 2006]*

*Northeast Wing, 144, looking east. [JGWA, 2006]*

*Northeast Wing, 144, looking west. [JGWA, 2006]*

*Northeast Wing, 145, looking south. [JGWA, 2006]*

*Northeast Wing, C141, looking east. [JGWA, 2006]*

*Northeast Wing, C141, looking west. [JGWA, 2006]*

*Northeast Wing, 148, looking east. [JGWA, 2006]*

*Northeast Wing, 148, looking northeast. [JGWA, 2006]*

*Northeast Wing, 149, looking southeast. [JGWA, 2006]*

## MAIN (SECOND) FLOOR

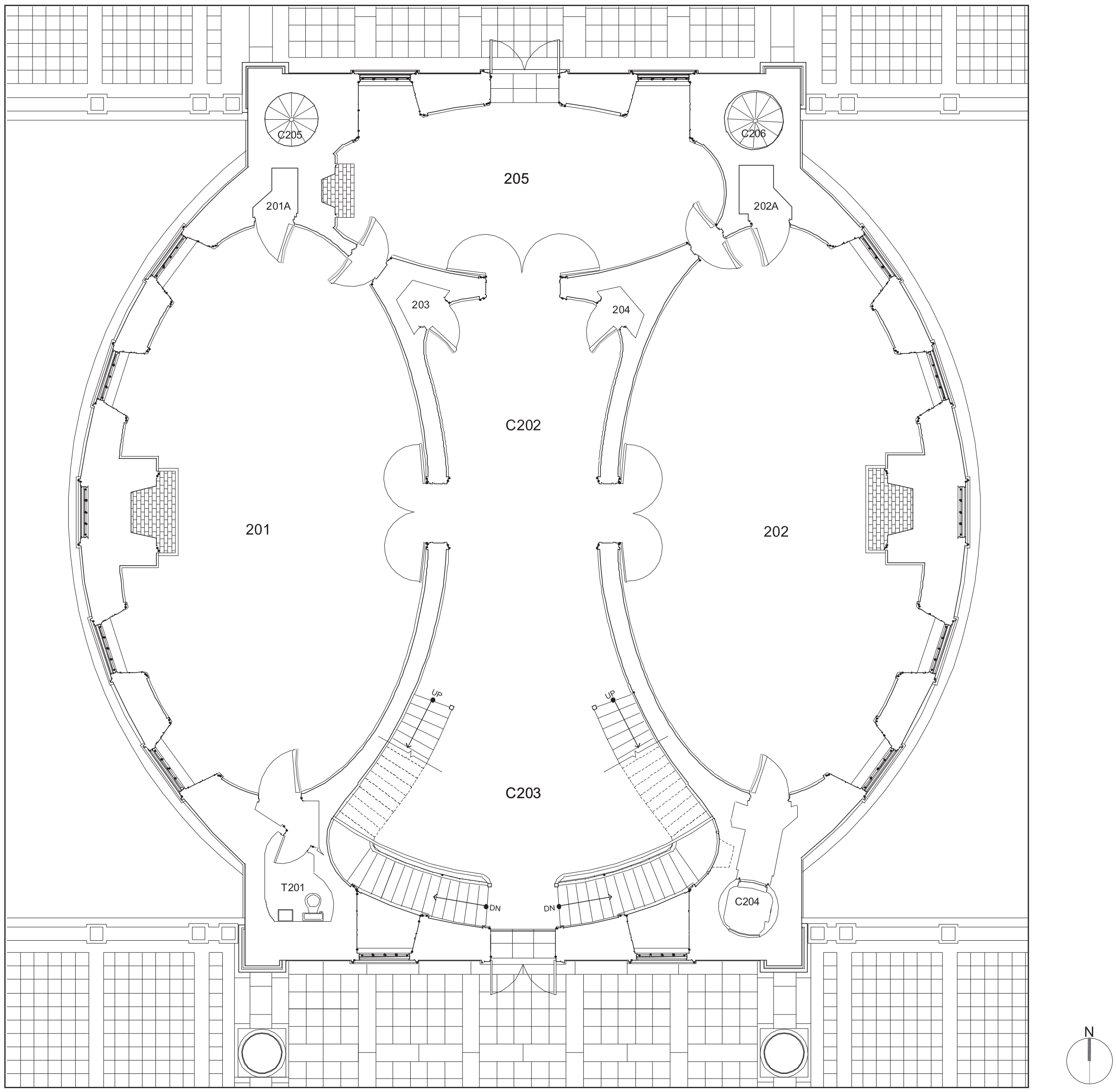
The floor plan as it now exists was created in the mid-1970s based on the circa 1819 plan from Jefferson's hand [*Figure 6*]. That carefully drawn but undetailed plan defines all of the conditions as they now exist but for a few exceptions. Even the curved wall surfaces at the north end of the unusually shaped central hall are visible upon close examination of the Jefferson document. Window openings, doorways and fireplaces are exactly positioned as shown by Jefferson.

Significant differences today include the greater width of the door openings into the two large oval or elliptical rooms. Jefferson's openings are only about 3'-0" wide, indicating a single leaf door rather than the pair of doors created in the mid-1970s. The pair of matching stairs that ascend to the Dome Room level duplicate those drawn by Jefferson. Unfortunately, the circa 1821 plan does not record Jefferson's intent for the configuration of the stairs leading to the ground floor, nor is there a comparable plan of that level. Finally, Stanford White added a single course of brick to the inner surface of the walls at this level, increasing the overall wall thickness by about 4".

The stairs to the lower level as constructed in the mid-1970s duplicate those that ascend above them, but this arrangement seems unlikely. This arrangement constricts the area at the main entrance opening from the portico and makes access to the two south windows difficult. Since the ground floor has a lower ceiling height, it is likely that the stairs to that level were fit neatly beneath the lower runs of the main floor stairs. The basement stairs may have been enclosed, since the ground floor rooms were to be used by the professors of chemistry and natural philosophy. The odors resulting from experimentation and demonstrations would necessarily need to be separated from the upper classrooms and the library so that enclosed stairs, with doors at top or bottom, seems likely.

Jefferson's intent for the main floor finishes is generally unknown, but it is possible that molding profiles, door configurations and stair details would relate to those found in the Pavilions. This assumption was made when the rooms were recreated in the mid-1970s. Evidence for the level of finishes is provided by drawings given to William Coffee for work to be carried out in the Rotunda. Coffee provided prices for a Corinthian cornice that was to be ornamented with husks, leaves, rosettes, and ox sculls, but it is not known if this work was carried out.

An unique feature of Jefferson's plan for which evidence was found and which is now restored is the small fireplace on the landing of the southeast stair. It is unlikely that this functioned as an open fireplace; more likely a coal grate was placed in the firebox, resulting in a more controlled fire and a safer situation.




*Detail of the main floor plan (not to scale). [JGWA, 2007]*

The following are the typical mid-1970s finishes found in the main floor of the Rotunda. No evidence was actually found in the Rotunda for the detailing used in these features.

Floor: Random-width, heart pine floorboards are laid east-west. The east-west direction of these boards was based on a pre-fire photograph fo the dome room that shows the floorboards at that level placed in this manner. The Ballou and Justice drawings of August 25, 1972 show the floor structure to be poured concrete over steel joists.

Walls: The brick masonry and concrete block walls are finished with plaster.

Ceiling: The plaster-on-lath ceilings are 15'-1 1/2" above the floor.

Baseboard: The typical 7-3/4" high baseboard includes a splashboard and a cap molding composed of (from top to bottom) a cavetto, bead, and ogee molding.

Chair rail: The 3-1/4" high chair rail is composed of a fascia with two beads and a cavetto at the bottom edge, and an ogee and fillet at the top edge; this profile is the same as that of the chair rail used in the ground floor rooms. The top edge of the rail is 2'-10" above the carpet.

Doors: The doorways into each room are framed by 7-1/4" wide two-fascia architraves (same profile as the architraves used on the ground floor). Each reveal is lined with four tiers of raised panels that align with the door panels.

Blind doorways to closets, toilet rooms, and connecting passages are framed with 2-1/2" wide flush fascia surrounds trimmed with interior flush beads.

Doors to oval rooms: The doorways to the oval rooms are fitted with pairs of doors, slightly curved to follow the curve of the elliptical rooms' walls. Each leaf is approximately 2'-6" wide x 9'-1" high x 2-1/4" thick and has four raised panels.

Hardware: Typically, each door is hung on four 5" high butt hinges. The locks vary slightly at each door.

Blind doors: The blind doors are plain, flush doors, curved on one side and trimmed with the chair rail and baseboard moldings to blend in with the wall surfaces of the stair hall and oval rooms. Each door is 6'-11 1/2" high; the widths of the doors vary.

Hardware: The blind doors are hung on concealed pivot hinges at the top and bottom edges. Typically, each door has a 4-3/4" high "Union" mortise lockset marked "Parkes Willenhall England" with brass knobs; and a 6" high mortise lockset with a key cylinder and a turnkey.

Windows: The original window openings are set deeply into the masonry walls with paneled lintels and reveals, and framed with 7-1/4" to 7-1/2" wide two-fascia architraves. The bullnosed sills sit above paneled aprons (each with three raised panels). The wythe of brick added to the wall surfaces in 1898 increased the depth of the reveal by about 4".

Each of the 12/12 chain-hung sash have a pair of flush sash lifts on the bottom rails, and a thumblatch on the meeting rail. The sash and hardware date to the reconstruction carried out by McKim Mead & White, completed in 1898.

***Center Stair Hall (C202/203)***

The plan of the hall as it now exists is the result of the extensive reconstruction carried out in the mid-1970s. It is based on the circa 1819 floor plan from Jefferson's hand. That plan includes the curved north wall as very faint lines added to the boldly delineated plan. The only evident differences that now exist are the wider door openings into the large oval rooms and the two closet spaces; Jefferson shows narrower openings and no closets.

Floor: The random-width, heart pine floorboards range from 3-1/4" to 6-1/4" wide.

Walls: The curved east and west walls and the north wall are reconstructions dating to the mid-1970s. The south wall is part of the original structure completed in 1827 that survived the 1895 fire and subsequent reconstruction. The plaster is applied directly to masonry, except at the curved surfaces at the north end of the room where it is applied to expanded metal lath. The addition in 1898 of brick to the inside face of the outer wall surface slightly changed the position of the curved south wall and increased the depth of the window and door reveals by 4".

Baseboard/chair rail: The mid-1970s baseboard and chair rail are typical. Jefferson's intentions for these finishes is unknown, but the Pavilions do include such features in the halls.

On the east and west walls, the chair rail terminates near the stairs. Beneath the stairs, the rails extend from the stair carriages to the railing that edges the opening for the ground floor stairs.

Cornice: The 2'-9 1/4" high plaster entablature, installed in the mid-1970s, was based on the moldings used in the main floor spaces of the Pavilions. The entablature begins with a two-fascia architrave. Above the architrave, the plaster surface of the wall is used as a frieze. A cavetto and cyma recta bed molding support a plain corona; and the cornice meets the ceiling with a fillet, cyma recta, and fillet cymatium.

The type of entablature Jefferson may have intended for the entrance hall is undocumented.

Doors: The south entrance, and the doorways to the North, East, and West Oval Rooms (201, 202, 205) are framed by typical 7-1/4" wide two-fascia architraves. In the south entrance, the depth of the paneled reveal as it now exists is greater than the historic condition, due to the brick wythe placed against the walls in 1898. The threshold of the south entrance is paved with marble.

All of these openings are in locations shown on Jefferson's floor plan, but the current width of the east and west openings (6'-0") is greater than that shown by Jefferson (3'-0"). He likely intended single door leaves in these openings.

Blind doorways to the closets in the northeast and northwest corners of the hall have typical 2-1/2" wide flush fascia trims. The Jefferson plan does not provide for closets in these locations.

South entrance door: The original 1827 opening is fitted with a pair of mid-1970s stile-and-rail doors. Each leaf of the wood doors is 2'-11 3/4" wide x 10'-8" high x 3" thick, and has four raised panels.

The Jefferson era doors were hinged in the same location, but the doors opened inward. For code compliance, the restoration doors open outward.

Hardware: Each leaf is hung on four 6" high iron butt hinges. On the east leaf, there is an antique English 7" x 11-3/4" brass rim lock with 1-3/4" diameter brass knobs and an oval brass key escutcheon; an 8" mortise lockset with a "Corbin Russwin" key cylinder on the exterior face and a push lever knob on the interior face; a small hook-and-eye; and an eye for a holdback hook (removed).

The west leaf has the keepers for the locks. The brass keeper for the antique lock has an added extension to accommodate the outward swing of the doors. In normal and historic practice, the rim lock would be positioned on the interior face of the door (as it is here) but the door would open into the interior.

The wood doors are kept open during the daytime; a set of glazed doors have been placed in the opening to allow visitors to view the Lawn from the hall. The glass doors have stainless steel pivot hinges, push plates, and latches.

Northeast and Northwest doors (to closets 203 and 204): The typical blind doors are 2'-10" wide.

Hardware: Both doors have typical hardware.

Windows: The two original 1827 window openings in the south wall have typical mid-1970s trims and McKim Mead & White sash. The floors in the window reveals are finished with heart-pine floorboards, which are bullnosed at the edge of the openings (in the stairwells). Below the bullnosed edge, each opening is trimmed with a two-fascia architrave.

Stairs: The mid-1970s stairs from the ground floor arrive near the south entrance. The openings in the floor for the stairs are edged with railings that match the stair handrail and balusters.

Each of the two mid-1970s open-stringer staircases that ascend to the Dome Room (301) begin with fifteen risers ascending south to a landing. Fourteen risers then wind up along the curved wall to arrive at the south end of the Dome Room (301). The risers are 7" high and the treads average 1'-1" deep. The wood surfaces conceal a fully functional structural steel stair, visible from inside the understair closet.

At each stair, the area beneath the first nine treads is enclosed with a paneled partition. The south face of each enclosure functions as an access door supported by a brass piano hinge and secured by small cylinder locks.

In plan the stairways to the Dome Room, as constructed for the mid-1970s restoration, duplicate conditions shown on Jefferson’s circa 1819 floor plan. Details of the original stairs’ construction and appearance remain unknown, but likely would relate to contemporary stairs found in the Pavilions. The stair to the basement probably was situated directly beneath the lower run of the main floor stair, and did not exist in front of the windows and the area next to the front door. The basement stair was probably fully enclosed, with a door at the head of the stair. Whether two stairs or a single stair extended to the ground floor is unknown.

Fireplace: An original small fireplace is set into the southeast wall at the southeast stair landing. The brick-lined firebox is painted black, as is the plain plaster surround. The surround is bordered by a mid-1970s 3-1/4" wide wood molding composed of an ogee and bead. Jefferson’s circa 1819 floor plan includes this unusually positioned fireplace. Evidence for the firebox was revealed during the mid-1970s restoration.

Lighting/electrical: Two large mid-1970s brass and glass lanterns are suspended by chains from the ceiling. Each lantern includes a two-tier electric candle fixture. The lanterns were designed by E. R. Steinmetz of Horsham, Pennsylvania and produced by the Wibes Manufacturing Company of Plumsteadville, Pennsylvania. The placement of these lanterns was probably influenced by the common practice of using lanterns with small oil lamps in hallways during the first half of the eighteenth century.

Other electrical elements include recessed ceiling fixtures near the stairs, and duplex receptacles in the baseboards.

Heating: There are four grilles set high in the walls above the northeast and northwest closets and near the stairs; and thermostats near the north doorway. The only evident original heat source for this hall is the small fireplace posiitoned at the landing of the southeast stair to the second floor.

Furnishings and fittings: There are no known images of the hall, no documentation, and no surviving original surfaces that could provide evidence for objects placed here in the nineteenth century.

A feature sometimes found in a nineteenth-century entrance hall, in both private and public buildings, was a coat rail. A narrow horizontal wood board was positioned on the plaster wall surface, and wood pegs or metal hooks were attached to it for the placement of coats and other garments. Such a practical feature may have been installed here and in the ground floor hall; the ground floor hall walls should be probed for evidence of such a feature.

Some sort of seating (benches or chairs) was likely used here.

Since the mid-1970s restoration, the marble statue of Jefferson by Alexander Galt has been prominently displayed at the north end of the hall. Prior to the 1895 fire, this important artifact was displayed in the library (Dome Room).

***Closets (203, 204)***

The closets were created as part of the mid-1970s restoration. There is no evidence that such features existed in the Rotunda as completed in 1827.

The wood floorboards of the stair hall continue into these spaces. The curved walls, and the walls furred out from the North Oval Room (205) are wood-framed partitions; all the walls and both ceilings are finished in plaster. Narrow wood moldings, 2-1/2" wide, trim the door openings.

***President's Reception Room/Upper West Oval Room (201)***

The mid-1970s reconstruction of the plan of this large oval room is based on Jefferson's floor plan from circa 1819. Significant differences that exist today include the blind doorways at the north and south ends of the room (which Jefferson did not show) and the greater width of the doorway to the hall. Jefferson's opening was shown as about 3'-0" wide, an indication that a single-leaf door was intended for the opening.

In 1824, the Board of Visitors officially decided that this room and the east oval room, referred to as the "larger elliptical rooms," were to be used for annual examinations, lectures, and for religious worship. However, in 1825 Jefferson talks Brockenbrough out of the religious services. The smaller north oval room was to be used for instruction in drawing and music.

Floor: The random-width floorboards range from 3-1/2" to 6-1/2" wide and appear to be antique heart pine. Variations in the staining on the floorboards indicate the previous locations of rugs near the east doorway and in the center of the room.

Walls: The curved wall surface is of plaster applied to masonry. The west portion survives from the original construction completed in 1827, but the east half is laid up in concrete block from the mid-1970s. The position of the west wall was changed by about 4" when a new brick wythe was added in 1898.

Cornice: The 2'-10 1/4" high entablature, installed in the mid-1970s, is based on the Doric entablature that Jefferson used in the original second-floor parlor in Pavilion VI; there is no documentation for its placement here originally. A Corinthian cornice, to include ox skulls, was proposed for the museum room (the small oval north room), an indication of the level of finish intended by Jefferson for the primary spaces. The entablature begins (at the base) with a two-fascia architrave that includes the guttae and taenia (base) of the triglyphs. The metopes are ornamented with “female heads” above ribbon ornaments. The cornice includes a denticulated bed molding that supports the projecting corona and crown molding/cymatium (composed of a fillet, cyma reversa, fillet, cyma recta, and fillet).

At Pavilion VI, the masks (of terra cotta) and the ribbons (of cast lead) were supplied to Jefferson by William Coffee of New York City. The “female heads” supplied by Coffee in 1822 cost 46 cents each at that time.

Doors: The mid-1970s doorway in the east wall is framed with the typical two-fascia architrave. As it now exists, the east opening is wider than the approximately 3'-0" wide opening shown in the Jefferson floor plan.

Three blind doorways lead to a closet to the north (201A), a toilet room to the south (T201), and to a northeast connecting passage to the North Oval Room (205); all three of these openings have the typical flush fascia trim.

East doors: The opening is fitted with a pair of typical mid-1970s four-panel doors.

Hardware: Besides the typical hinges, the hardware on the north leaf includes an antique English 4-3/4" x 8" iron rim lock with brass knobs and an oval brass keyhole escutcheon; and a 4-1/4" high mortise lockset with “Corbin Russwin” key cylinders. The south leaf has the keepers for the locks, and flush latches; the iron keeper for the rim lock has an applied brass strike edge and a piece of tape affixed inside is marked with “B15.”

North and south doors (to T201 and closet 201A): The typical mid-1970s blind doors are 3'-5 3/4" wide. The Jefferson plan did not include these doors.

South door hardware: The door has typical hardware.

North door hardware: Hardware includes typical pivot hinges; a 6" high mortise lockset with a “Corbin” key cylinder and a turnkey; and a push latch.

Northeast door (to 205): The typical mid-1970s blind door is 3'-1 1/2" wide. The Jefferson plan did not include this door.

Hardware: The door is hung on concealed pivot hinges, and opens with a magnetic push latch marked “Invisible Latch Pat# 1898363 Glynn-Johnson Corp. Chicago.” There is no hardware on the room face of the door.

Windows: The four window openings in the west wall have typical trims from the mid-1970s and sash surviving from the McKim Mead & White construction. A fifth window opening, complete with sash, exists behind the reconstructed mid-1970s chimney breast. The reveals are about 4" deeper than the historic condition, due to the brick added to the wall surface in 1898.

Fireplace: A mid-1970s concrete block chimney breast projects 3'-2 5/8" from the west wall. The brick-lined firebox is painted black, as is the plain plaster surround. The surround is bordered by a 7-1/4" wide two-fascia architrave. Above the architrave, a plain frieze extends up to a denticulated crown molding that supports the mantel shelf. While similar in style to the Pavilion fireplace mantels, the profile and moldings are slightly different in this mantel reconstruction.

The firebox and hearth are paved with brick.

The Jefferson floor plan includes a fireplace in this location with a blind window on the exterior. The post-fire (1895) reconstruction did not restore the chimney breast and fireplaces, but instead exposed the window opening. Generally, the 1970s reconstruction of this fireplace and the others in the Rotunda duplicated the size of the firebox as shown on the circa 1819 Jefferson floorplans, but the current chimney breasts are much wider than those shown on the plans.

Lighting/electrical: The room is lit by two fifteen-light chandeliers, and by two recessed fixtures near the chimney breast. The reproduction brass and glass chandeliers are two of the five chandeliers designed by E.R. Steinmetz of Horsham, Pennsylvania, based on the Argand fixture used in the House of Representatives in the national capital (recorded in an 1822 painting of the chamber by Samuel F. B. Morse.) The reproductions were manufactured by the Wibes Manufacturing Company in Plumsteadville, Pennsylvania in 1976.

It is unlikely that such an elaborate and expensive fixture (at that time) would have been used here, and certainly not two fixtures of this type.

Other electrical elements include switches near the east and northeast doorways; receptacles in the baseboard; and two floor receptacles near the center of the room.

Heating: Three thermostats are mounted to the south face of the chimney breast. There are four grilles in the east wall, near the ceiling, and grills near the floor in the north and south faces of the chimney breast.

Originally, the fireplace heated the room, but this proved inadequate and in 1828 the faculty requested that heating stoves be placed in each room.

Equipment: The room is equipped with network/communications receptacles in the baseboard.

Toilet room vestibule: The blind door at the south end of the room opens to a small triangular vestibule, created in the mid-1970s. The wood floorboards from the West Oval Room continue into this space. The walls and ceiling are finished with plaster. The north doorway surround is a 2-1/2" wide molding; the south doorway (to the toilet) has a typical two-fascia architrave.

The space is lit by a recessed ceiling fixture. On the south wall, a recessed metal cabinet houses a telephone panel.

***Robe Closet (201A)***

This small area was created as part of the mid-1970s restoration. The Jefferson floor plan shows no space in this location.

Floor: The random-width floorboards continue into this space from the West Oval Room (201).

Walls: The brick masonry walls are finished with plaster.

Ceiling: The plaster ceiling is 8'-0 1/4" above the floor.

Baseboard: The walls are trimmed with a 5-1/8" high fascia splashboard.

Door: The doorway in the south wall is framed by a 1-1/4" wide molding.

Lighting/electrical: The closet is lit by a recessed ceiling fixture, operated by a switch on the west wall.

Furnishings/fittings: A clothes rod extends along the east wall.

***Toilet Room (T201)***

This small toilet room was created in the mid-1970s in space that was originally part of a circular shaft that housed the rope that controlled the 1826 bell. Later, it was occupied by a circular stair created by McKim Mead & White to provide access to the library galleries. The existing conditions are contemporary with the creation of the toilet room.

Floor: The floor is finished in 2" square green ceramic tiles.

Walls: The masonry walls are finished in plaster above a ceramic tile wainscot made up of 4-1/2" high x 6" wide rectangular ceramic tiles. The tiles used in the curved corners are narrower.

The south wall is concrete block, furred out from the circular brick wall.

Ceiling: The plaster ceiling is 8'-0" above the floor.

Base: The bottom tiles of the wainscot are slightly coved at the floor.

Door: The opening in the northeast wall is framed by a simple 2-5/8" wide fascia molding.

> Door: The 2'-5 3/4" wide x 6'-11 3/4" high x 1-3/4" thick stile-and-rail door has six raised panels.
>
> > Hardware: The hardware includes three butt hinges and a mortise lockset.

Lighting: The room is lit by a fixture mounted to the south wall, above the lavatory. There is a duplex receptacle in the curved wainscot in the southwest corner.

Heating: There is a convector radiator recessed in the west wall, and a small vent in the south wall.

Plumbing: The toilet room is equipped with a vitreous china toilet and lavatory on the south wall The lavatory is set into a wood cabinet with a plastic laminate counter and two paneled doors.

Furnishing/fittings: A mirrored medicine chest, a paper towel holder, and soap holders are mounted to the south wall. There is a toilet paper holder on the east face of the lavatory cabinet, and a towel bar and shelf on the west wall.

***Board of Visitors Room/Upper East Oval Room (202)***

The mid-1970s reconstruction of the plan of this large oval room is based on Jefferson's floor plan from circa 1819. Significant differences that exist today include the blind doorways (not shown by Jefferson) and the greater width of the reconstructed doorway to the hall. Jefferson's opening was shown as about 3'-0" wide.

In 1824, the Board of Visitors decided that this room and the west oval room were to be used "for annual examinations, lectures and for religious worship;" however, in 1825 Jefferson dissuaded Brockenbrough from including the religious services. Today the Board of Visitors meets in this room.

Floor: The random-width, heart-pine floorboards range from 3" to 6-1/4" wide and appear to be antique heart pine.

Walls: The curved wall surfaces are finished in plaster applied to masonry. The east brick masonry survives from the original 1827 construction but was covered by additional brick in 1898; the west half is laid up in concrete block from the mid-1970s.

Cornice: The 3'-0" high Corinthian entablature, installed in the mid-1970s, seems to have been derived from Palladio's drawing of the Pantheons' portico entablature (Book IV, plate LVI). The entablature begins (at the base) with a three-fascia architrave and a plain frieze. Above the frieze, the cornice includes a bed molding composed of a bead, cyma reversa, fillet, corona, bead, and egg-and-dart molding. Acanthus scroll brackets support the projecting corona (ornamented with rosettes) and cymatium (fillet, cyma recta, fillet).

There is no documentary or physical evidence for the placement of this entablature here. The Corinthian cornice proposed by William Coffee for one of the second floor oval rooms was to include husks, leaves, rosettes, and ox scull ornamentation.

Doors: The mid-1970s doorway in the west wall is framed with the typical two-fascia architrave.

As it now exists, the west opening is wider than the approximately 3'-0" wide opening shown on the Jefferson floor plan.

Three blind doorways lead to a closet to the north (202A), an elevator to the south (C204), and to a northwest connecting passage to the North Oval Room (205); all three of these openings have typical flush fascia trim.

West doors: The opening is fitted with a pair of typical mid-1970s four-panel doors.

Hardware: Both leaves are hung on typical 5" high butt hinges. The south leaf has an antique English 5-1/2" x 9-1/4" iron rim lock with brass knobs and an oval brass keyhole escutcheon; and a 4-1/4" mortise lockset with “Corbin” key cylinders.

The west leaf has flush latches and the keepers for the locks. The iron keeper for the rim lock has an applied brass strike edge.

South door (to elevator): The typical blind door is 3'-5 1/2" wide. There is a ventilation grille in the lower section of the door.

Hardware: In addition to the typical hardware, the door has a “Horton Automatic” electric operator.

North door (to closet 202A): The typical blind door is 3'-5 1/2" wide.

Hardware: Hardware includes typical pivot hinges; a 6" high mortise lockset with a “Corbin” key cylinder and a turnkey; and a push latch.

Northwest door (to 205): The typical blind door is 2'-11 3/4" wide.

Hardware: The door has typical hardware, including a 4-3/4" high “Union” mortise lockset marked “Parkes Willenhall England.”

Windows: The four original Jefferson-era window openings in the east wall have typical mid-1970s trims and sash from the McKim Mead & White reconstruction. A fifth original opening, complete with 1898 sash, exists behind the mid-1970s chimney breast. The reveals are approximately 4" deeper due to the brick added to the wall surface in 1898.

Fireplace: The mid-1970s concrete block chimney breast projects 3'-2 5/8" from the east wall. The fireplace and mantel mirror those of the West Oval Room (201): the brick-lined firebox is painted black, as is the plain plaster surround. The surround is bordered by a 7-1/4" wide two-fascia architrave. Above the architrave, a plain frieze extends up to a denticulated crown molding that supports the mantel shelf. The firebox and hearth are paved with brick.

The Jefferson floor plan includes a fireplace in this location with a blind window on the exterior. The post-fire (1895) reconstruction removed the chimney breast and fireplace and exposed the window opening. The chimney breast is wider than shown on the 1819 plan.

Lighting: The room is lit by two 1976 fifteen-light chandeliers (like those in the West Oval Room) that were designed by E. R. Steinmetz and produced by the Wibes Manufacturing Company.

Other electrical elements include two recessed fixtures near the chimney breast; switches near the west and northwest doorways; and receptacles in the baseboard.

Heating: Originally, the fireplace heated the room, but this proved inadequate and in 1828 the faculty requested that heating stoves be placed in each room.

Currently, three thermostats are mounted to the north face of the chimney breast. There are four grilles in the east wall, near the ceiling, and grills near the floor in the north and south faces of the chimney breast.

Equipment: The room is fitted with network/communications receptacles in the baseboard.

***Closet (202A)***

This small space was created as part of the mid-1970s restoration. The Jefferson floor plan does not show a space in this location.

Floor: The random-width floorboards continue into this space from the East Oval Room (202).

Walls: The brick masonry walls are finished with plaster.

Ceiling: The plaster ceiling is 8'-0 1/4" above the floor.

Baseboard: The walls are trimmed with a 5-1/8" high fascia splashboard.

Door: The doorway in the south wall is framed by a 1-1/4" wide molding.

> Door: The 3'-3 3/4" wide x 6'-11 1/2" high x 3-5/8" thick door is curved on the south face to match the curve of the West Oval Room wall surface. The chair rail and baseboard continue across the south face. The interior, or north, face of the door is plain.
>
> > Hardware: Door hardware includes concealed hinges in the top and bottom edges of the door; a 6" high brass mortise deadbolt with a key cylinder on the south face, and a turnkey on the north face; brass knobs; and a push latch.

Lighting/electrical: The closet is lit by a recessed ceiling fixture, operated by a switch on the east wall.

***Elevator Passage (C204)***

The mid-1970s elevator is located in the circular brick shaft that is shown on Jefferson's floor plan and which housed the weights for the Simon Willard clock installed in 1826; the clock was destroyed in the 1895 fire.

Floor: The random-width floorboards continue into this space from the East Oval Room (202).

Walls: The brick masonry walls are finished with plaster.

Ceiling: The plaster ceiling is 7'-10 1/2" above the floor.

Baseboard: The walls are trimmed with a 5" high fascia splashboard.

Door: The doorway in the north wall is framed by a 1-1/4" wide molding. The south doorway, to the elevator, has a plain metal frame.

South door (elevator): The metal door has a glazed safety panel.

Hardware: The door is hung on concealed pivot hinges. Other hardware includes a stainless steel knob and an electric closer.

Lighting: The room is lit by a recessed ceiling fixture, operated by a switch in the east wall.

Heating: There is a grille in the west wall, near the floor.

Equipment: The button panel for the elevator is placed to the west of the doorway. A fire extinguisher is mounted to the east wall.

***Upper North Oval Room (205)***

The mid-1970s reconstruction of this room is based on Jefferson's circa 1819 floor plan. At that time, the north doorway opened to an exterior marble tile platform with stairs descending east and west to grade. This was to be the museum room, but that function was moved to the ground floor oval room directly below. In 1824, the Board of Visitors decided that this room would be used "by schools of instruction in drawing, music or any other of the innocent and ornamental accomplishments of life."

Floor: The random-width, antique, heart pine floorboards range from 2-11/16" to 5-1/2" wide.

Walls: The masonry walls are finished in mid-1970s plaster. The curved north brick surface survives from Jefferson's original building; the south surface is a mid-1970s reconstruction laid up in concrete block. Additional brick was added to the north wall in 1898.

Cornice: The 2'-4" high entablature, installed in the mid-1970s, is based on tthe one that Jefferson used in what is now the master bedroom of Pavilion I. The entablature begins (at the base) with a three-fascia architrave. Above the architrave, the frieze is ornamented with bucrania and putti connected by garlands. The cornice includes a denticulated bed molding that supports the projecting corona and crown molding/cymatium (composed of a fillet, cyma reversa, fillet, cyma recta, and fillet). William Coffee provided prices for a Corinthian cornice for the museum room. The molding was to inlcude ox skulls, husks, leaves, and rosettes.

Doors: The doorways in the north and south walls are framed with typical two-fascia architraves from the mid-1970s. The threshold of the north entrance is paved with marble.

The north opening survives from the Rotunda as completed in 1827; the south opening is a mid-1970s reconstruction based on Jefferson's circa 1819 floor plan. The plan shows a wide opening that would have featured a pair of door leaves.

Two blind doorways in the southeast and southwest corners of the room provide access to connecting passages to the West and East Oval Rooms (201, 202); both openings have typical flush fascia trim. Jefferson did not include openings in these locations on his floor plan.

North doors: The original 1827 opening is fitted with a pair of mid-1970s stile-and-rail doors. Each leaf is 2'-10 1/2" wide x 10'-9" high x 3" thick, and has four raised panels.

Hardware: Each leaf is hung on four 6" high iron butt hinges. On the west leaf, there is an antique English 7" x 1'-0" brass rim lock with 2-1/8" diameter brass knobs and an oval brass key escutcheon. The brass keeper is attached to the east door leaf.

South doors: The opening is fitted with a pair of typical mid-1970s four-panel doors.

Hardware: Both leaves are hung on typical 5" high butt hinges. An the east leaf there is an antique English iron 5-1/2" x 8" "Carpenter & Co." rim lock with brass knobs and an oval brass keyhole escutcheon. Below the rim lock is a brass mortise lockset with "Corbin" key cylinders on both faces.

The west leaf has flush latches and the antique keeper for the rim lock.

Carpenter patent locks were not available when the Rotunda was completed in 1826, so the use of this lock type is inappropriate.

Southwest door (to 201): The typical blind door is approximately 3'-1 3/4" wide.

Hardware: The door is hung on the typical concealed pivot hinges. There is no hardware on the 205 face of the door.

Southeast door (to 202): The typical blind door is approximately 2'-11 1/2" wide.

Hardware: The door has typical hardware.

Windows: The two original 1827 window openings in the north wall have typical mid-1970s trims and sash from the McKim Mead & White reconstruction completed in 1898.

Fireplace: At its deepest point, a fireplace projects 1'-3 3/4" from the curved west wall. The brick-lined firebox is painted black, as is the plain plaster surround. The surround is bordered by a 3-1/2" wide ogee molding. Above the molding, a plain frieze extends up to a denticulated crown molding that supports the mantel shelf (with profiles matching the mantels in the West and East Oval Rooms (201, 202). The firebox and hearth are paved with brick.

All of these features were reconstructed in the mid-1970s. Jefferson’s circa 1819 floor plan seems to show the firebox recessed into a flat wall surface at the west end of the narrow oval room, unlike the curved surface that now exists. There is no Jefferson precedent for the unusual form of this mantelpiece.

Lighting/electrical: The room is lit by a fifteen-light chandelier like those in the west and east oval rooms (201, 201). Two recessed ceiling cans near the north wall appear to have held spotlights for the fireplace mantel. Other electrical elements include switches in the south wall; receptacles in the baseboard; and two receptacles in the mantel shelf.

Heating: There are two “Johnson Controls” thermostats on the south wall, and grilles in the north wall.

Originally the fireplace heated the room, but this proved inadequate and in 1828 the faculty requested that heating stoves be placed in each room.

Equipment: The room is equipped with network/communications outlets in the baseboard.

*Center Stair Hall (C202/203), looking south. [JGWA, 2006]*

*Center Stair Hall (C202/203), looking north. [JGWA, 2006]*

*Center Stair Hall (C202/203), southwest stair. [JGWA, 2003]*

*Upper West Oval Room (201), looking north. [JGWA, 2006]*

*Upper West Oval Room (201), looking south. [JGWA, 2006]*

*Upper West Oval Room (201), looking northeast. [JGWA, 2006]*

*Upper West Oval Room (201), looking southwest. [JGWA, 2006]*

*T201, looking south. [JGWA, 2006]*

*Upper East Oval Room (202), looking south. [JGWA, 2006]*

*Upper East Oval Room (202), looking northeast. [JGWA, 2006]*

*Upper East Oval Room (202), looking northwest. [JGWA, 2006]*

*Elevator Passage (C204), looking south. [JGWA, 2006]*

*Upper North Oval Room (205), looking west. [JGWA, 2006]*

*Upper North Oval Room (205), north entrance. [JGWA, 2006]*

***Dome Room (301)***

Jefferson's floor plan of the Dome Room was begun in 1818 and completed by March 29, 1819 [*Figure 8*]. Inspection of the drawing reveals that Jefferson made a significant change to the plan as his design evolved: the paired columns shown on the drawing were preceded by single larger diameter columns in the same general locations. The plan shows a circular room that is 74' in diameter, but as constructed it was not a perfect circle.

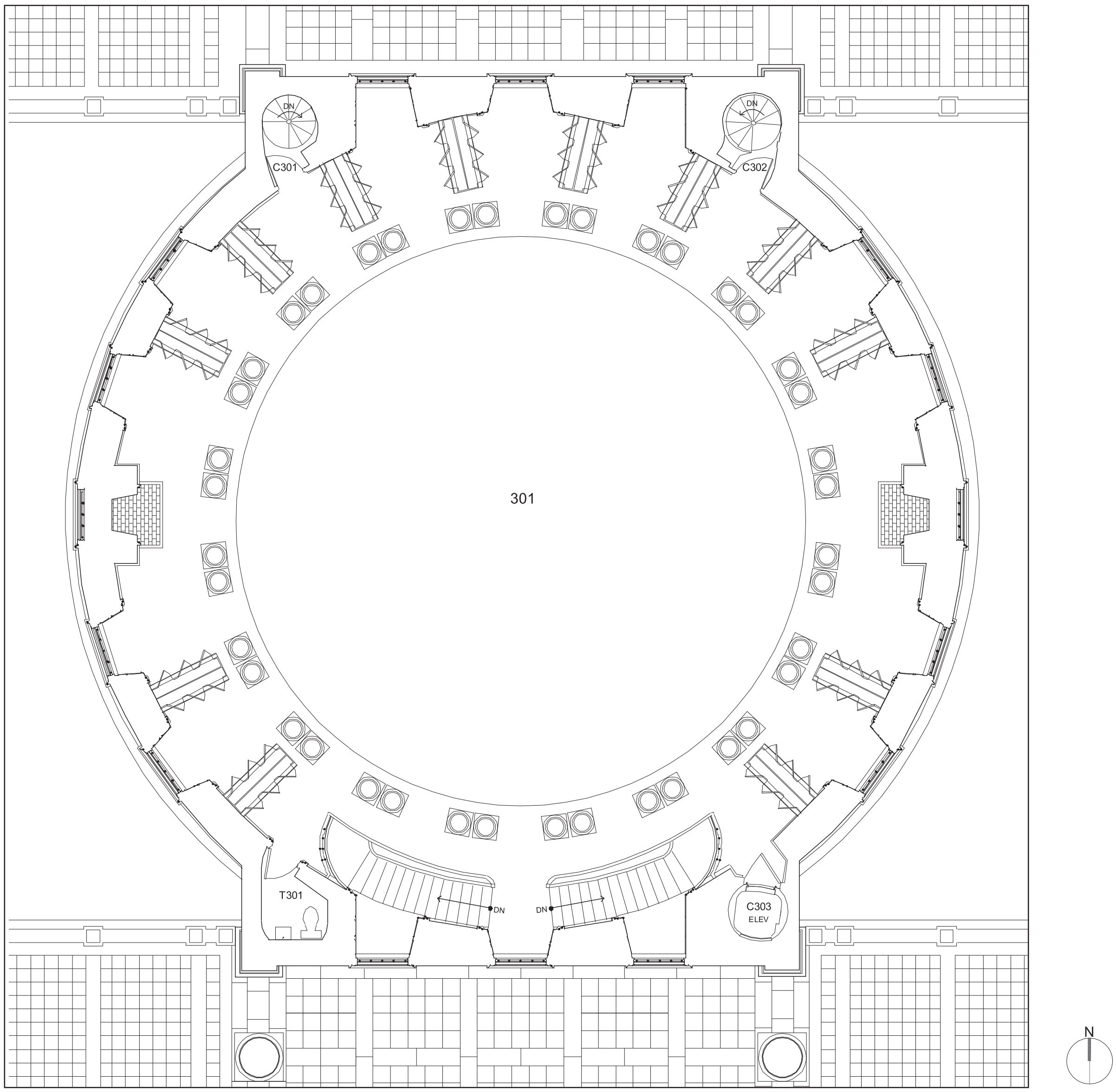
The drawing is detailed enough to include representations of the false windows positioned in the exterior face of the curved walls surfaces behind the fireplace, but curiously omits other important features. The plan shows no window openings in the flat north and south elevations. It is as if Jefferson wanted to preserve some of the curved wall area for bookcases. Significantly, all of the plans drawn by John Neilson (November 1821 and 1822) also omit openings in these locations. For the main floor plan, Jefferson and Neilson include these openings in both the north (rear) and south (front) elevations, where they flank wide doorways. The omission of these windows in the Dome Room seems to be a purposeful decision by Jefferson.

At some point, a decision to place openings in these locations was likely made by Jefferson or some other involved party. Jefferson, in his August 10, 1823 letter to Brockenbrough, stated, "I have omitted to place a door in front, opening under the Portico... it should be of the width of the main door below." Jefferson went on to request that the opening should have "a folding sash door so as to give light when shut. its bottom to be closed by an open pannel either Chinese or iron." This "pannel" would be an exterior railing across the lower portion of the opening.

On August 11, 1823 Brockenbrough informed Jefferson that he has already prepared a stone sill and window frame for the proposed door location, and that he thought that it would answer better than a door. The same day, Jefferson responded to Brockenbrough, "I think a door greatly preferable to a window both as to appearance & use, exactly such as in my parlour, except that the bottom panels had better be of wood." Clearly Jefferson wanted a doorway in that location.

Whether a door was placed in the opening is unknown, but the earliest photograph of the front of the Rotunda in 1868 clearly shows twelve-over-twelve sash in the three openings above the portico entrance doors and windows.

Later interior photographs of the library (Dome Room) record three window openings in the north wall of that space [*see Figures 44-48*]. A careful probing of the masonry openings in the north and south walls of the Dome Room will be necessary to determine




*Detail of the Dome Room plan (not to scale). [JGWA, 2007]* if the openings are original features, or possibly insertion made after the construction of the brick walls.

Jefferson’s floor plan includes a pair of stairs, at the south side of the room behind the paired columns, that descend to the main floor. Unlike the current stair opening configurations as created in the mid-1970s, Jefferson does not show the curved returns of the railings as they extend and attach to the wall plane. The current curved condition reflects the curve of the wall surface below, but the number of risers (fourteen descending to the landings) provide ample clearance so that the rails could return to the wall in a right angle as the Jefferson plan indicates. This plan would have allowed for more wall surface for bookcases.

The Jefferson Dome Room floor plan does not show any indication of spaces, circular or otherwise, in the four corner areas of the north and south elevations. In fact, there was a circular, tubelike space in the southeast area that was intended for the weights of the Willard clock, and was indicated on his plan of the lower floor. Investigations in the mid-1970s revealed that the four corner spaces in these locations did originally exist. The southeast shaft contained the clock weights, and the southwest shaft held the bell rope; the north spaces were not used at this level. For the reconstruction, McKim Mead & White inserted gallery stairs in the four shafts. After the mid-1970s restoration, the two north shafts housed circular steel stairs that descend from the lower gallery of the Dome Room to the exterior at grade, where doors open to the east and west courtyards. The southeast shaft (originally used for clock weights) now houses the elevator, and the southwest space is now a toilet room.

If Jefferson did not use one or more of these corner shafts to house stairs to the library galleries, then the stair or stairs to those levels were situated somewhere within the Dome Room itself. Looking at Jefferson’s plan, it seems likely that the gallery stairs were situated directly over the two stairs that ascend from the main floor, an obvious and simple solution. All of the known images of the pre-fire Dome Room look towards the north (to record the statue of Jefferson), and so the stairs are never seen.

Many, if not all, of the bookcases were in place in the Dome Room in late 1826, and they can be seen in the pre-fire photographs, which show the bookcases, with their glazed doors, positioned on the Dome Room floor below the lower balcony [*Figure 48*]. Cases are also seen lining the walls below the lower balcony and on that balcony [*Figure 50*].

The bookcases, as constructed in the mid-1970s, appear to accurately duplicate what can be seen in the pre-fire photographs, but wall units need to be installed to truly create the ambiance of the original library space.

Floor: The floor is finished with random-width, heart-pine, antique floorboards, ranging from 3" to 6" wide. The boards are laid east-west based on an 1890 Kenneth Brown photograph acquired during the mid-1970s restoration [*Figure 45*].

Frederick Nichols described the structure of the floor as poured concrete over steel joists. Two-by-four sleepers were nailed to the concrete; the voids were filled with insulation as a sound-deadening measure. The sleepers were covered with a plywood subfloor, and the finish floorboards installed above the subfloor.

In the southeast corner of the floor, near the elevator shaft, the floor is covered with vinyl tiles.

Walls/columns: The perimeter walls are plaster on brick masonry. The massive outer wall surface is the original brick wall surface that survived the 1895 fire. At the time of the reconstruction by McKim Mead & White, an inner surface of two layers of brick, approximately 8" thick, was installed against the 1827 surface to help support the Gaustavino tile dome.  This condition explains why no early evidence is visible on the brick wall surfaces that were exposed during the 1970s restoration.

Twenty pairs of non-structural wood columns with cast-plaster Corinthian capitals are set approximately 8'-8" from the perimeter walls. The columns are approximately 1'-6" in diameter at the base, and 1'-3 1/2" in diameter below the capitals. The 2'-1 1/4" square wood plinths support wood Corinthian bases. The 3-1/4" high plinths are taller than those that appear in pre-fire photographs, and the horizontal openings at the bottoms of the plinths are not historic details.

The original capitals were of carved wood with crisp detailing, and of slightly different proportions than the current plaster replicas. They were carved of white pine from Maine in 1825.

The columns extend up to a 2'-11 3/8" high plaster entablature; according to the 1973 drawings, the plaster is applied to metal lath. The entablature begins with a two-fascia architrave that supports a frieze and a bed molding (from top to bottom, a fillet, ovolo, cyma reversa, fascia). Above the bed molding, modillions are set below a corona and a cymatium/crown molding (cyma reversa, fillet, cyma recta, fillet).  Metal slots for air supply are hidden behind the corona. A wood balustrade extends along the edge of the upper gallery.

In each pair of columns, one of the columns holds a 5" diameter hollow steel pipe column. Chord beams extend from the perimeter walls to the steel columns to support the middle and upper galleries.

Ceiling: The dome that rises above the room is constructed of the Guastavino tiles installed in 1896. As part of the mid-1970s work, an acoustical ceiling of perforated aluminum panels was installed over the tiles.

The dome rises to a central oculus fitted with a glazed skylight. The opening is trimmed with an torus molding flanked by fillets; within the opening, there is a cyma reversa molding at the base, and a cymatium/crown molding at the top. All of these moldings are plaster. The extruded aluminum skylight frame has twenty-eight sections, each with double glazing. These conditions replaced the metal and glass skylight installed by McKim Mead & White. The diameters of that skylight and the current feature are slightly greater than the approximately 16' diameter of the Jefferson opening.

The plaster ceiling surface below the middle gallery is 8'-7 3/4" above the floor. According to the Ballou & Justice drawings, the plaster is applied to metal lath.

Baseboard: The 7-3/4" high baseboard (typical of the mid-1970s work) includes a splashboard and a cap molding composed of (from top to bottom) a cavetto, bead, and ogee molding.

Cornice: The walls beneath the middle gallery are trimmed with a 3-3/4" high ogee molding.

Doors: The doorways leading to the stairwells in the northeast and northwest corners of the room, and the southeast opening to the elevator, are trimmed with plain metal frames. The southwest doorway, to the toilet, has a typical 7" wide two-fascia architrave. These openings were first created as part of the McKim Mead & White reconstruction to provide access to the stairs continuing to the second balcony level. Evidence seen in the mid-1970s revealed that Jefferson did not use the spaces beyond these doorways for stairways.

There were no doorways in the dome room as completed by Jefferson. The only reference to a door opening at this level is found in two 1823 letters from Jefferson to Brockenbrough in which he makes known his wish to have a folding sash (glazed) door in the center opening in the south wall.

> Door to elevator shaft (C303): The 2'-9 1/2" wide x 6'-11 1/2" high metal door has a glazed safety panel.
>
> > Hardware: The door is hung on concealed pivot hinges, and has a stainless steel knob and a “Horton Automatic” electric operator.

Windows: There are three window openings in the north wall, three in the south wall, and four each in the east and west walls. Each opening is set deeply into the masonry walls with mid-1970s paneled reveals and a paneled lintel (four tiers of paneling per reveal). These reveals must be deeper than the original Jefferson condition, due to the addition of the brick that was added to the wall surface by McKim Mead & White. The openings are framed by mid-1970s 7" wide two-fascia architraves, and sit above bullnosed sills which are raised approximately 4-1/4" above the floor.

The McKim Mead & White 12/12 chain-hung sash have latches on the meeting rails and flush sash lifts in the bottom rails.

Original window openings also exist behind the chimney breasts constructed in the mid-1970s. Jefferson intended that these be false windows, as they are now.

Jefferson's circa 1821 plan shows only the openings in the west and east walls. No openings are shown in the north and south surfaces. Later, in two letters dated to 1823, he makes clear his desire to have an opening (a window/door) placed in the center of the south wall. Whether Jefferson decided to place window openings in these locations, or another person made by the decision, is undetermined.

Some of the window reveal panels are fitted with small access panels; hardware includes small concealed hinges and brass flush ring pulls.

Fireplaces: The mid-1970s concrete block chimney breasts project 2'-0" from the east and west walls. Small areas that form the north and south extensions of the chimney breasts are hollow and are constructed of plaster on metal lath over a frame wall. The brick-lined fireboxes are painted black, as are the plain plaster surrounds. Each surround is bordered by a 3-1/4" wide wood ogee and bead molding.

The appearance of the pre-fire mantels or surrounds is not known, but Jefferson's plan shows a chimney breast that is 8' wide and 3' deep.

Stairs: Along the south end of the room, the stairwells for the staircases from the main floor are edged with railings that match the stair handrail and balusters.

Jefferson's circa 1819 plan of the Dome Room shows stairs in these locations, but the openings are not shown with curved ends as they were recreated in the mid-1970s. The stairs shown on that plan may also represent the stairs that would have provided access to the two tiers of the galleries.

Lighting/electrical: The spaces beneath the gallery are lit with recessed square ceiling fixtures. Other electrical elements include receptacles near the elevator, flanking the fireplace mantels, and near the doorways; and receptacles in the bookcase east of the central north window for the podium. Lighting control panels are hidden in small access panels within the window reveals.

There is no documentation concerning the artificial lighting used in the Dome Room prior to the installation of gas in 1874. Pre-fire photographs show a ring of utilitarian vertical gas fixtures at the top edge of the entablature, as well as a series of simple inverted "T"-shaped pendants suspended in front of the entablature from the same ring. Original lighting may have included an oil chandelier, possibly suspended below the oculus and/or wall brackets and lamps. Oil lamps may have been placed on the large curved tables made for the room in 1827.

Heating: The air conditioning and heating system is integrated into the architectural features of the dome room. Supply air is ducted through the floor of the upper gallery into slots in the entablature (behind the corona). Return grilles are placed in the ends of four of the bookcases. Radiant heat is provided along the perimeter of the floor.

Originally the large room was heated by the two relatively small fireplaces, but by 1828 the faculty requested that heating stoves be installed in the various rooms of the Rotunda. Stoves were certainly used here, probably positioned out in the space beyond the galleries with the stove pipes extending to the chimney breasts.

Equipment: There are network/communication receptacles in the bookcase east of the central north window, in the northwest window reveal, and near the toilet room doorway. Exit signs are mounted about the stairwell, and above the doors to the northeast and northwest stairwells.

Furnishings and fittings: In the north half of the space, double-sided bookcases extend behind the eight pairs of columns to the perimeter walls. Four similar bookcases are centered behind the four column pairs that flank the stairwells in the south half. Each bookcase is three bays wide, with shelving enclosed behind glazed doors on both sides of the unit. The 3-3/4" high ogee molding that trims the walls beneath the gallery trims the top of the bookcases as well; at the base, the units are trimmed with plain fascia boards.

The glazed doors (four-light doors in the lower bays, and six-light doors in the upper bays) are hung on pairs of 3" high butt hinges and fasten with key-operated latches.

These cabinets are based on evidence seen in the various pre-fire photographs of the Dome Room and the original 1820s construction correspondence that includes mention of bookcases with glazed doors. The photographs reveal that additional bookcases existed against the curved wall surfaces that now feature the doorways to the northeast and northwest stairs, and also along the wall surface of the lower gallery.

A significant extant furnishing that existed here prior to the 1895 fire is the marble statue of Jefferson by Alexander Galt that was placed in the Rotunda in 1861. The tall pedestal upon which the statue rested was not removed at the time of the fire, but it can be seen in various photographs. An elaborate wood and iron “fence” surrounded the statue’s base.

Other significant furnishings revealed in the various photographs include several large, slightly curved, rectangular tables that were made for the room and placed here in 1827. The curved tabletops would allow for the placement of the tables around the room in front of the columns.

The images also reveal that by the late nineteenth century, the Dome Room was filled with numerous oil portraits in various sizes, from small head and shoulders likenesses to large, life-size full body images. They were suspended in front of the paired columns, as well as on the lower surfaces of the dome at the upper balcony level.

The last images of the room prior to the 1895 fire record the placement of a small clock (circular face against a square support) on the front edge of the middle gallery, directly in front of the central north window.

***Toilet Room (T301)***

This small toilet room was created in the mid-1970s in space formerly occupied by a circular stair created by McKim Mead & White to provide access to the library galleries. At that time, this area and doorway were at the second tier gallery of the Library space created in 1898. The existing conditions are contemporary with the creation of the room.

The original circular shaft in this location housed the bell rope. The bell was positioned on the edge of the roof, immediately south of the dome.

Floor: The floor is finished in 2" square green ceramic tiles.

Walls: The masonry walls are finished in plaster above a ceramic tile wainscot made up of 4-1/2" high x 6" wide rectangular ceramic tiles. The tiles used in the curved corners are narrower.

Ceiling: The plaster ceiling is 8'-0" above the floor.

Base: The bottom tiles of the wainscot are slightly coved at the floor.

Door: The opening in the northeast wall is framed by a simple 2-5/8" wide fascia molding.

> Door: The 2'-5 1/2" wide x 6'-11 3/4" high x 1-3/4" thick stile-and-rail door has six raised panels.
>
> > Hardware: The hardware includes three butt hinges and a mortise lockset with a lever handle.

Lighting: The room is lit by an incandescent fixture mounted to the south wall, above the lavatory. Other electrical elements include a duplex receptacle in the west wall.

Heating: There is a convector radiator recessed in the west wall, and a small vent in the south wall.

Plumbing: The toilet room is equipped with a vitreous china toilet and lavatory on the south wall.

Equipment: A fire extinguisher is mounted to the west wall.

Furnishing/fittings: A mirrored medicine chest and a soap dispenser are mounted to the south wall, near the lavatory. There is a toilet paper holder on the east wall, and a paper towel dispenser on the west wall.

*Dome Room (301), looking north. [JGWA, 2006]*

*Dome Room (301), looking south. [JGWA, 2006]*

*Dome Room (301), looking east. [JGWA, 2006]*

*Dome Room (301), looking west. [JGWA, 2006]*

*Dome Room (301) column capitals and entablature. [JGWA, 2006]*

*South end of the Dome Room (301), looking east. [JGWA, 2006]*

*Dome Room (301), window reveal at southeast side. [JGWA, 2006]*

*Dome Room (301), typical bookcase. [JGWA, 2006]*

***Middle Gallery (C401)***

This mid-1970s gallery is in the same position as the middle gallery designed by Jefferson and seen in his section drawing of the Rotunda from circa 1819 [*Figure 9*]. This is also the same approximate position for the McKim Mead & White third tier gallery that surrounded the 1898 rotunda space. The current space is unused, but originally Jefferson had bookcases installed against the curved wall surfaces around the entire gallery, except along the south area where the access stairs were likely situated.

Floor: The floor was covered with carpet; that finish was removed in December 2006, revealing the plywood subfloor.

According to the Ballou & Justice drawings, beneath the subfloor, the floor is finished with wood floorboards. Beneath the wood floor the poured concrete floor is supported by chord beams that extend to the 5" diameter steel pipe columns in the Dome Room wood columns. Radial beams span between the chords.

Walls: The perimeter brick wall is finished with plaster, laid over brick installed as part of the McKim Mead & White reconstruction. That wythe covers the original outer brick wall. The wall curves up slightly to support the base of the Guastavino tile dome.

The Dome Room columns and capitals define the interior edge of the gallery. A simple 3'-0" high iron railing follows the edge of the floor behind the columns; the rail is attached to the columns with horizontal iron bars. Although a railing in this location cannot be seen in the pre-fire photographs of the library, it is very likely that a railing did exist. An 1827 payment for "wire work" for the library may refer to some sort of wire mesh railing.

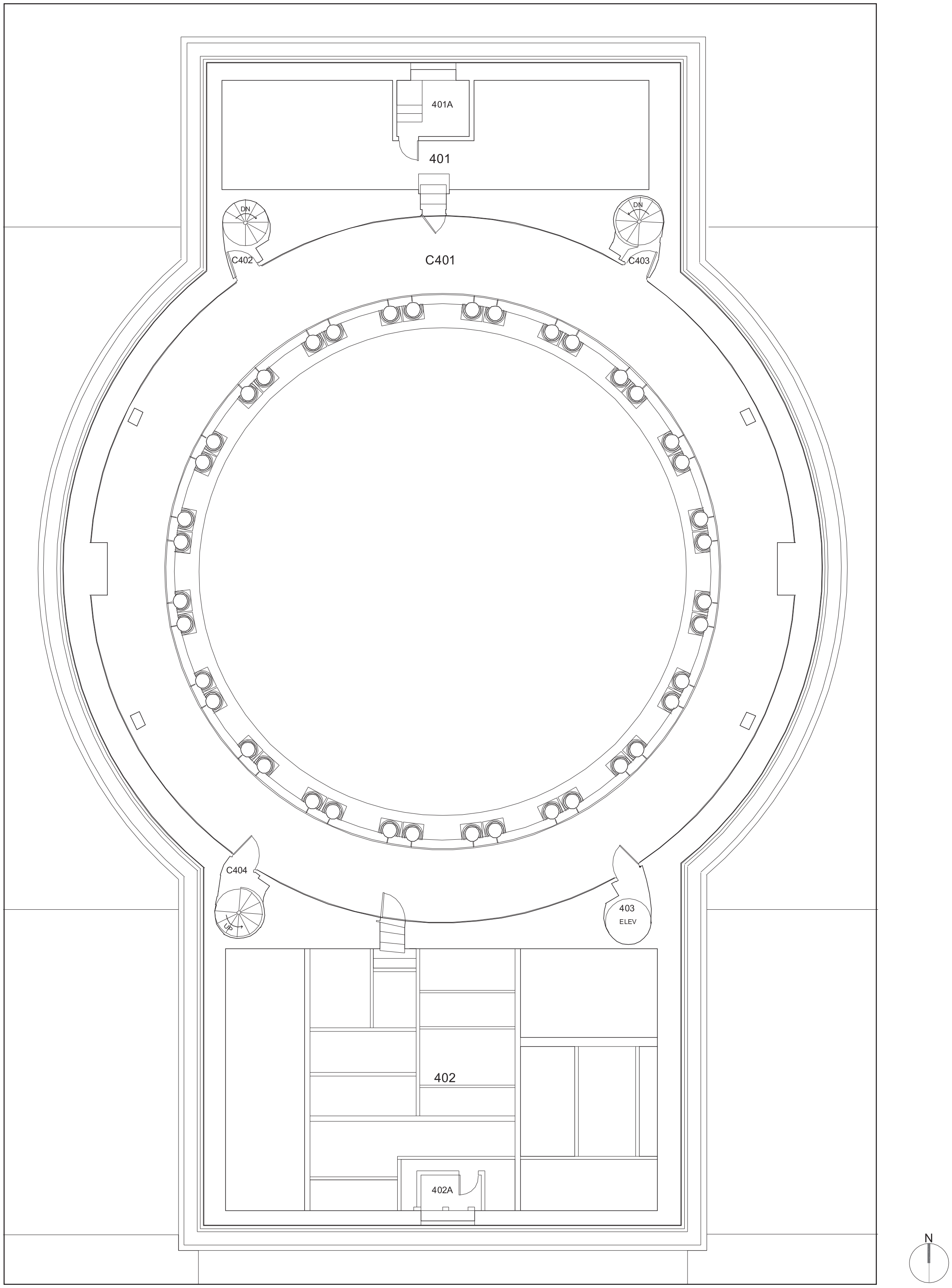
Ceiling: The plaster ceiling is 6'-10" above the carpet.

Baseboard: A 4" high fascia board trims the base of the perimeter wall.

Doors: There are six door openings at the middle gallery level: a doorway to the north attic (401) that was first created to provide access to the attic above the 1852 Mills addition; a doorway to the south attic (402), probably the original access to the space within the original 1827 pediment; doorways to the northwest, northeast, and southwest stairwells (C402, C403, C404); and a doorway to the elevator shaft (403) in the southeast corner. All six doors have plain metal frames.

The thresholds of the attic openings are set high above the Middle Gallery floor: at the north attic doorway, the threshold is 2'-8" above the floor; the south opening is 1'-1 1/2" above the floor.

> Door to North Attic (401): The flush door is 2'-3 1/4" wide x 4'-3" high x 1-3/4" thick.




*Detail of the middle gallery, north portico attic, and south portico attic plan (not to scale). [JGWA, 2007]*

Hardware: The door is hung on two 4-1/2" high butt hinges. Other hardware includes a mortise lockset with knobs and an oval escutcheon; and a mortise deadbolt with a key cylinder and turnkey.

Door to South Attic (402): The flush acoustical door is 3'-0 1/2" wide x 5'-08" high x 2-1/4" thick.

Hardware: The hardware includes two heavy-duty hinges; a mortise with a key cylinder and turnkey; grips; and a stainless steel push plate (on the south face).

Door to Southwest Stairwell (C404): The flush door is 2'-7 3/4" wide x 6'-7 3/4" high x 1-3/4" thick.

Hardware: The hardware includes three butt hinges, a 4-3/4" high mortise lockset with knobs and an oval keyhole escutcheon, and a closer.

Door to Elevator Shaft (403): The flush door is 2'-7 1/2" wide x 6'-7 3/4" high x 1-3/4" thick.

Hardware: The hardware includes three butt hinges; a 4-3/4" high "Union" mortise lockset marked "Parkes Willenhall England" with knobs and an oval escutcheon; and a 6-1/4" high mortise lockset with a key cylinder and turnkey.

Stairs: Wood open-riser stairs, providing access to the upper gallery, drop down from ceiling openings in the east and west ends of the gallery. Each set of stairs has eleven steps.

Prior to the 1895 fire, stairs probably ascended from the Dome Room floor at the south end of the room to provide access to both gallery levels.

Lighting/electrical: The gallery is lit by recessed ceiling fixtures. Other electrical elements include switches in the walls near the attic doorways.

Heating: Chimney masses project from the east and west sides of the perimeter wall.

Freestanding, flat-seam metal return ducts are located in the northeast, northwest, southeast, and southwest corners of the gallery. The ducts extend down to bookcases in the Dome Room.

Furnishings and fittings: The pre-fire photographs reveal that bookcases were positioned against the curved wall surface of the gallery. In the 1894 R. H. Laughlin drawing published in "Corks and Curls," the cases and books are clearly shown [*Figure 51*].

***Elevator Shaft (403)***

The elevator was installed in the mid-1970s in the circular brick shaft that was originally constructed to house the weights of the Willard clock. The clock was ordered just prior to Jefferson's death in 1826. After the 1895 fire, the shaft housed one of the gallery access stairs created by McKim Mead & White.

Floor: The floor is poured concrete at the doorway, with a rough opening for the elevator.

Walls: The walls are a combination of brick and terra cotta fire tiles. Concrete bricks (installed in the mid-1970s) enclose a flue in the northwest corner of the space.

The elevator hoist beam extends northeast to southwest across the space.

Ceiling: The ceiling is finished with plaster.

Door: A doorway in the north end of the shaft has a plain metal frame. Two 1-1/2" diameter pipe rails extend across the opening.

Lighting/electrical: The space is lit by a recessed ceiling fixture, operated with a switch west of the doorway. Rigid conduit extends from the switch up through the ceiling.

*The Middle Gallery (C401), looking northeast towards the north attic doorway. [JGWA, 2006]*

*The elevator shaft (403). [JGWA, 2006]*

***Upper Gallery (C501)***

Jefferson's section drawing of the Rotunda from circa 1819 shows this gallery at about 17'-0" above the Dome Room floor. He indicates a balustrade or railing that is 3'-0" tall, but the pre-fire photographs reveal that a much taller railing was actually constructed. Access to the original gallery was probably from a continuation of the stair system at the south side of the Dome Room. The balustrade created in the mid-1970s closely replicates what can be seen in the early photographs; there may be some slight differences in proportion and profiles.

Floor: The floor is covered with 1'-0" square vinyl tiles.

According to the 1973 drawings, beneath the tiles the poured concrete floor is supported by chord beams that extend to the 5" diameter hollow steel pipe columns in the Dome Room columns/capitals. Radial beams span between the chords.

Walls: The gallery is built along the lower portion of the dome. The wood railing that extends along the inner edge (Dome Room side) of the gallery is 4'-5 3/4" high. The railing is more intricately molded on the Dome Room face than on the gallery face.

On the Dome Room face, the base of the railing begins with a fascia, bead, cyma, fillet, and ogee molding; on the gallery face, a higher fascia is capped with a bead and cavetto molding.

Above the base, 2-3/8" square and turned balusters are grouped between 1'-2 1/2" wide plain panels. The sets of balusters alternate between sets of two (with half-balusters against the panels) and fourteen (with half-balusters against the panels). The intricately turned balusters are 2'-6 3/4" high and are spaced approximately 1-3/4" apart. They are similar in design to the balusters of the stairs. Jefferson supplied the drawing for the baluster design in June 1825.

A comparison of the profile of the current baluster with the ones seen in the pre-fire photographs reveals only a slight variation in the character of the turning of the upper part of the shaft.

The top rail, on the Dome Room face, begins with a fillet, cyma reversa, and fillet bed molding, then continues with an ovolo, a fillet, dentils, a bead, a cyma recta, and then coves deeply back to the top face of the railing. The interior face is a fascia trimmed at the top and bottom with cavetto and bead moldings.

Along the perimeter of base of the dome, a plywood enclosure hides the ductwork for the mechanical systems. The front face of the enclosure, curved to follow the radius of the gallery, extends up 8" above the top surface to create a "parapet" masking the ambient lighting fixtures. The 1973 drawings show that this was to have been a paneled wood structure.

The 1896 Guastavino tiles forming the dome are visible inside of the enclosure.

Lighting: Lighting fixtures were installed in the mid-1970s along the top of the enclosure to create ambient lighting on the dome. The flourescent fixtures were removed in 2006; floodlights remain in place to light the dome. Rigid conduit for the lighting extends throughout the enclosure.

Pre-fire photographs record an interconnected ring of simple gas light fixtures positioned in the cornice at the base of the railing.

Heating: Ductwork extends through the plywood enclosure, and beneath the floor of the upper gallery to the supply slots in the Dome Room entablature. Grilles are set into the top of the enclosure, and into the vertical face of the enclosure.

Furnishings and fittings: The pre-fire photographs do not show bookcases in this location, at least on the north side of the gallery that is recorded by the images. There are numerous framed objects (probably portraits) of various sizes positioned on the lower surface of the dome.

*Dome Room, entablature railing. [JGWA, 2003]*

*Dome Room Upper Gallery, drop-down access stair and duct enclosure. [JGWA, 2006]*

*The Guastavino tile dome is visible within the Upper Gallery duct enclosure (left). Below, the outer dome is visible through a hole in the inner dome. [JGWA, 2006]*

### *North Portico Attic (401)*

In this utilitarian attic space located in the north pediment is preserved a portion of the original north facade of Jefferson's Rotunda. The brick wall surface that forms the south wall in this room was only exposed to the exterior from 1827 to 1852 and briefly after the 1895 fire. The bricks and the mortar joints retain their original appearance, and there is evidence of the original north cornice and its related flashing.

This attic space is the location for the south end of the attic of the Mills addition.

Floor: The irregular floor surface is a combination of brick and the Guastavino tile vaults above the north portico ceiling.

In the south doorway, the original 1896 concrete steps descend in three risers to the threshold of the door; the risers are approximately 1'-0" high. From the top step (approximately 2" to 4" above the attic floor), bricks form a rough ramp down to the floor.

The original 1852 opening was lowered in the mid-1970s so that it would access the middle gallery. Originally, the doorway opened directly to the top tier of Jefferson's gallery.

Walls: The walls are brick masonry.

The south wall is made up of bricks laid in a Flemish bond. This is the original upper (attic) portion of the north facade of Jefferson's Rotunda. It was exposed until the Mills wing was constructed in 1852. The original character of the brick and mortar joints is preserved here. Benjamin Borden was paid for oiling the brick and penciling the mortar joints in 1824. At the base of the wall surface there are the evenly spaced vertical nailing locations for the original north cornice. The vertical recesses that held the wood nailing surfaces do not extend upward as far as those seen in the post-fire photographs of the east and west elevations. This face, and other evidence seen in the 1896 photographs, indicates that Jefferson placed a full pediment on the north attic story.

Fragments of rusted iron in a horizontal brick joint above the cornice location survive from the original flashing.

Above the doorway in the south wall, a section of the wall has been filled in with concrete block to decrease the size of the opening that originally opened to the upper gallery in the Dome Room.

The north wall that forms the McKim Mead & White pediment is laid in a common bond, with four to five courses of stretchers between single courses of headers. At the roof rake, the bricks are corbelled.

The east and west knee walls are laid in stretcher bond.

Against the north wall, vertical tongue-and-groove boards fastened to wood framing form an enclosure for the clock mechanism (402A).

Ceiling: The vaulted ceiling is made up of Guastavino tiles laid east-west above 1'-6" deep curved brick ribs supported by 2-3/4" wide steel plates. The closely-spaced ribs are approximately 4" wide.

Doors: The south doorway is set deeply into the south wall with parged reveals and a plain metal frame. This opening was modified (moved downward) as part of the post-fire reconstruction. The original 1852 opening connected to the upper gallery in the Dome Room.

The north doorway, to the clock room, has a plain wood surround.

> North door to clock room: The 1'-11 3/4" x 6'-5 7/8" wide x 1-3/8" thick stile-and-rail door has five horizontal raised panels.
>
> > Hardware: The door is hung on a pair of 3" high butt hinges. Other hardware includes a 5-1/8" high mortise lockset with brass rectangular plates and round knobs; and a "Corbin" surface-mounted deadbolt.

Lighting/electrical: Three fluorescent fixtures hang from the ceiling. Other electrical elements include a receptacle, a large distribution box, electrical boxes, and two "Kenney" electrical panels on the south wall; a "Strand" lighting panel on the north wall; and a junction box and pull box for the clock on the east partition of the clock room. Rigid conduit is laid along the center of the floor; flexible conduits extend from the rigid conduit down to the fixtures in the North Portico ceiling.

Heating: There is a thermostat on the east wall of the clock room.

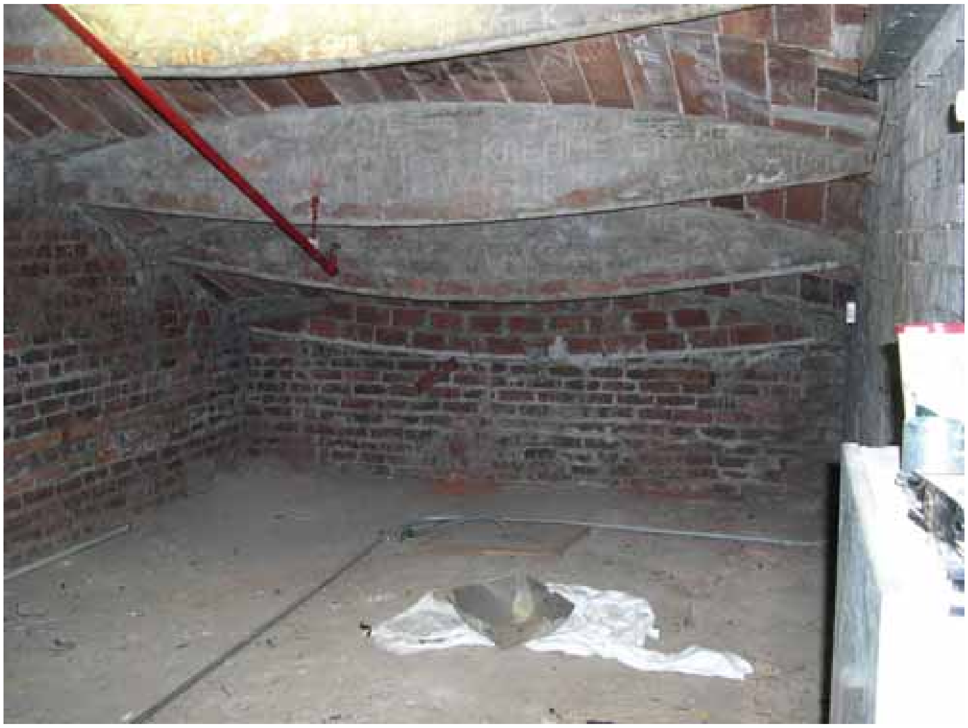
Equipment: Sprinkler pipes extend through the space. A fan is hung from the ceiling near the south doorway. There is a fire extinguisher mounted to the south wall.

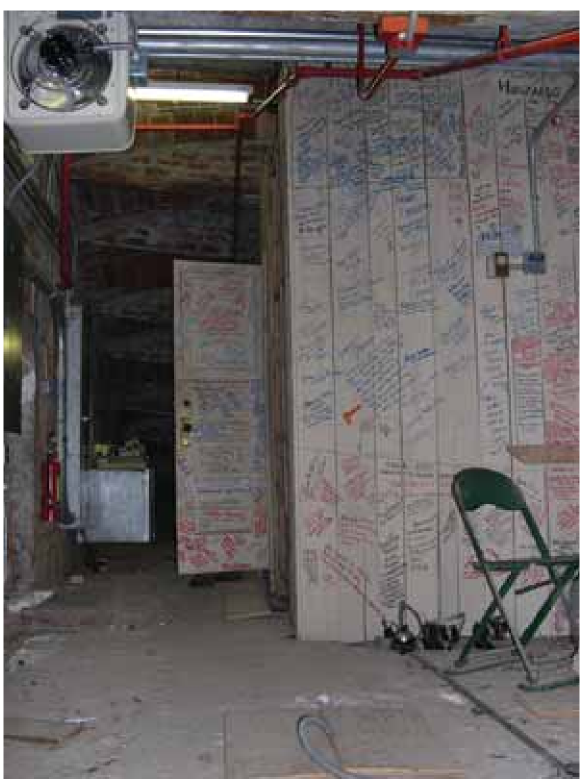
***Clock room (401A)***

The floor of the clock room is made up of wood boards, approximately 6" above the floor of the attic. The bases of the tongue-and-groove partitions are trimmed with a plain fascia board. The ceiling is 8'-2" above the floor.

The clock face is set in a round opening in the north wall, and its mechanism sits on a wood post that has lath marks on the south face. The mechanism is labeled "Bodene Electrical Company" "Fractional Horsepower Gearmotor;" there is a nearby "Cutler Hammer Switch."

The room is lit by a fluorescent fixture hung from the ceiling.





*North Portico Attic (402), looking east (top) and looking west towards the clock room (402A). [JGWA, 2006]*

***South Portico Attic (402)***

In its current form, this large attic space dates to the reconstruction of the Rotunda carried out by McKim Mead & White. This fireproof structure replaced the wood frame pediment destroyed in 1895. A remarkable photograph dated October 23, 1895 records the south front of the Rotunda and this area after the fire. Only the ten columns that supported the pediment and the north brick wall that it abutted survived the fire; the rest of the pediment, the roof, and the ceiling of the portico were destroyed. In the photograph, the triangular outline of the pediment can be seen at the top of the brick facade, and a tall doorway centered in the wall that would have opened to the upper gallery of the original Dome Room is clearly shown.

The Willard clock was housed in this space, but the evidence of plaster and paint indicate that the large space also had other functions. The bell purchased in 1827 was positioned above the portico roof, possibly on the ledge of the south facade immediately in front of the dome. The 1856 Bohn view [*Figure 33*] shows a small, box-like object in this location,and the 1868 photograph [*Figure 34*] definitely shows the bell in that position.

Floor: The floor is made up of 1898 brick jack vaults that extend east/west. The vaults are approximately 1'-6 1/2" wide (on center). At the north end of the room, concrete steps descend to the north doorway.

When this space became a mechanical room in the mid-1970s, a structural steel frame with a concrete slab floor was installed approximately 1'-10" above the jack vaults to hold the mechanical equipment.

Walls: The walls are brick masonry.  The north surface is the original upper portion of the front facade of Jefferson's Rotunda. An October 23, 1895 photograph of the front of the Rotunda clearly shows this wall with a white finish (paint and/or plaster) that existed within the outline of the original pediment. The photograph shows three openings in the wall surface: the tall central opening, a shorter doorway to the shaft housing the bell rope and possibly a narrow circular stair, and a small rectangular opening to the east that opened to the shaft for the clockweights. The other brick surfaces date to the McKim Mead & White reconstruction.

Against the south wall, the clock room is enclosed with vertical tongue-and-groove boards fastened to wood framing; according to the 1973 drawings, the north partition was moved 2'-3" to the south to provide room for the air handling equipment.

Ceiling: The ceiling is made up of three bays of Guastavino tile vaults, extending east/west between iron beams encased in brick. The beams slope down to rest on 8" to 8-1/2" wide piers projecting from the east and west walls.

Doors: The 1970s north doorway is set deeply into the north wall with parged reveals and a plain metal frame. The original opening was positioned immediately east of this opening.
The south doorway, to the clock room (402A), has a plain wood surround.

South door to clock room: The 1'-11 3/4" wide x 1-3/8" thick stile-and-rail door was originally 6'-6" tall, with five horizontal raised panels; the door was cut down to include only the lower three panels so that it could fit underneath a duct.

Hardware: The door is hung on a pair of 3" high butt hinges. Other hardware includes a 5-1/8" high mortise lockset with brass rectangular plates and round knobs; and a surface-mounted deadbolt.

Lighting/electrical: The room is lit by fluorescent fixtures. There are numerous electrical fittings to service the mechanical equipment. Duplex receptacles are mounted to the south partition of the clock room, and to the north wall near the doorway.

Heating: The attic space is filled with the air handler equipment servicing the Dome Room. Massive ductwork extends through the attic and into the floor (to a grille in the ceiling of the south portico) and the north wall (into the ducts within the Upper Gallery floor).

Equipment: Sprinkler pipes extend throughout the space. A fire extinguisher is mounted to the north wall, near the doorway.

***Clock Room (402A)***

The floor of the clock room is made up of wood boards, approximately 1'-9 1/2" above the floor of the attic. The bases of the tongue-and-groove partitions are trimmed with a plain fascia board. The ceiling is 7'-8" above the floor.

The clock face is set in a round opening in the south wall. The mechanism is similar to the mechanism in the north clock room, marked "Bodene Electrical Company" and "Fractional Horsepower Gearmotor."

The original clock supplied by Simon Willard in 1826 was located in this same area. The original dial was about 5'-0" in diameter and was set in a circular opening in the original wood pediment. Exterior pre-fire photographs show two small rectangular doors in the wood pediment, at each side of the clock face frame. The doors are painted the same white as the pediment to blend with that surface.

Jefferson's original specifications for the clock in 1825 stated that the weight mechanism was to extend straight back for about 30 feet from the clock mechanism, then turn at a right angle for 21 feet, and then descend through a 5-foot-diameter hole (the current elevator shaft) for 50 feet.

*South Portico Attic (402), looking south towards the south clock room (402A) (top). Detail of the clock mechanism in the clock room (left). [JGWA, 2006]*

Equipment: A fire extinguisher is mounted to the wall near the Dome Room doorway.

***Northwest Fire Stair (C117/C205/C301/C402)***

Prior to the post-fire reconstruction, this space was not thought to be accessible. Although some sort of space did exist here, there were no formal access doors. There are references to the upper portion of the space being used as a water cistern. In 1824, Brockenbrough suggests that they "put reservoirs in the two North corners of the Attic." In 1854, two seven thousand gallon tanks were constructed here and at the northeast corner. The cisterns proved unsatisfactory because they leaked, causing exterior and interior damage. The tanks continued to be a problem, and were repaired in 1882. They ceased to exist after the 1895 fire.

Floor: The floors at each level are poured concrete.

Walls: The wall surfaces are a combination of original brick, later fire-resistant terra cotta fire tile, and concrete.

Above the main floor, a flue in the southwest corner is encased in brick.

Doors: There is a doorway to the exterior in the west wall at the ground level, and doorways in the southeast wall at the Dome Room and Middle Gallery levels. All of the openings have plain metal frames.

The main floor entrance to the stairwell was bricked up in 1976. This doorway formerly opened to the main floor of the McKim Mead & White library space.

Ground level door: The flush door is 2'-11 3/4" wide x 6'-11 3/4" high x 1-3/4" thick.

Hardware: The 1976 hardware includes three butt hinges, a grip on the exterior face, and a closer and a crossbar exit device on the interior face.

Dome Room and Middle Gallery doors: The flush doors are 2'-8" wide x 6'-7 3/4" high x 1-3/4" thick.

Hardware: The 1976 hardware at each door includes three 4-3/4" high butt hinges, a 4-3/4" high "Union" mortise lockset marked "Parkes Willenhall England" with bronze knobs and oval keyhole escutcheons, and a closer.

Stairs: The spiral, open-riser steel stairs were installed in 1976. The diamond plate winders begin at the south wall, and wind around a central 4" diameter steel column, with three winders to turn 90 degrees. There are thirty-four risers to the Dome Room landing, and eleven to the Middle Gallery landing; the risers are approximately 10-1/2" high. A pipe rail extends up the exterior perimeter of the stairs.

Lighting/electrical: The space is lit by utility fixtures mounted to the stairwell walls.

Equipment: A fire extinguisher is mounted to the wall near the Dome Room doorway.

***Northeast Fire Stair (C118/C206/C302/C403)***

This space evolved in the same manner as the northwest stairwell (C117/C205/C301/C402). There was a water cistern at the upper level.

Floor: The floors at each level are poured concrete.

Walls: The wall surfaces are a combination of original brick, later fire-resistant terra cotta fire tile, and concrete. The walls at the Dome Room and Middle Gallery doorways are brick, installed in the mid-1970s.

Doors: There is a doorway to the exterior in the east wall at the ground level, and doorways in the southwest wall at the Dome Room and Middle Gallery levels. All of the openings have plain metal frames.

The main floor entrance to the stairwell was bricked up in the mid-1970s. This doorway formerly opened to the main level of the McKim Mead & White library space.

> Ground level door: The flush door is 2'-11 3/4" wide x 6'-11 3/4" high x 1-3/4" thick.
>
> > Hardware: The mid-1970s hardware includes three butt hinges, a grip on the exterior face, and a closer and a crossbar exit device on the interior face.
>
> Dome Room and Middle Gallery doors: The flush doors are 2'-7 3/4" wide x 6'-7 3/4" high x 1-3/4" thick.
>
> > Hardware: The 1976 hardware at each door includes three 4-3/4" high butt hinges, a 4-3/4" high “Union” mortise lockset marked “Parkes Willenhall England” with bronze knobs and oval keyhole escutcheons, and a closer.

Stairs: The spiral, open-riser steel stairs were installed in the mid-1970s. The diamond plate winders begin at the south wall, and wind around a central 5" diameter steel column, with three winders to turn 90 degrees. There are thirty-four risers to the Dome Room landing, and eleven to the Middle Gallery landing; the risers are approximately 10-1/2" high. A pipe rail extends up the exterior perimeter of the stairs.

Lighting/electrical: The space is lit by utility fixtures mounted to the stairwell walls.

Equipment: A fire extinguisher is mounted to the wall near the Dome Room doorway.

***Stair to Roof (C404)***

This area became the access to the roof as part of the reconstruction carried out by McKim Mead & White.

Floor: The landing at the Middle Gallery is a poured concrete slab.

Walls: The stairwell is painted brick.

Doors: The doorway at the Middle Gallery, in the northeast wall of the stairwell, has a plain metal frame.

The roof hatch has a plain wood surround.

Roof hatch: The wood gabled hatch is covered with sheet metal.

Hardware: The hardware includes three hinges, chains at the west end of the door, and a wood security bar.

Stairs: A spiral, open-riser steel stair was installed in the mid-1970s. The diamond plate winders begin at the west wall, and wind around a central 4" diameter column, with three winders to turn 90 degrees. The spiral stair ascends eighteen risers to a landing, and then three risers ascend straight east to the remaining 1896 brick stairs, which in turn ascend four risers to the roof hatch.

The brick stair risers range from 8-1/2" to 11" high, and the treads are 9" to 10-3/4" deep.

As part of the mid-1970s work, a steel frame was inserted beneath the brick stairs.

Lighting/electrical: The stairwell is lit by utility fixtures mounted to the stairwell wall.

Equipment: A sprinkler pipe extends through the stairwell.

Plumbing: A vent pipe for the toilet rooms extends up through the roof.

*The northeast fire stair, looking down from the Middle Gallery landing (C302). [JGWA, 2007]*

THE ROTUNDA

# PROBLEMS OF REPAIR

Although the Rotunda receives ongoing building and equipment maintenance and regular housekeeping services, much of this work is of limited scope and follows the same pedantic daily and seasonal regimen that has been developed for all of the University's buildings. The Rotunda is a special building, and it requires specialized care.

The building has survived in remarkably good condition considering the dramatic changes and different forms that it has taken over time. However, between June and December 2006 the existing building conditions were surveyed, and University staff were interviewed, to gain a thorough understanding of the immediate problems of repair. The problems associated with equipment and maintenance must be addressed to ensure the functionality of the building, while building conservation issues require specialized attention to assure the long term survival of the structure.

Generally, on the exterior of the building, the brick masonry is dirty, stained, and supporting biological growth. There have been many campaigns of inadequate pointing repairs; the replacement mortar does not match the color, profile, or hardness of the original mortar, nor the original intent of the builders to create narrow head joints and wider bedding joints. Efflorescence is occurring where dissolved salts from the masonry construction and from the ground are carried to the surface of the masonry and re-deposited. While this leads to unsightly white deposits on the face of the brickwork, it is the sub-fluorescence that causes more significant damage. Sub-fluorescence occurs as the moisture traveling through the masonry evaporates as it reaches the outer surface of the brickwork; the salts re-crystallize in the masonry pores immediately beneath the outer surface of the brick and cause the brick to spall or pop off. The marble column capitals and bases are eroded and cracked; the capitals are supporting the development of brown and black gypsum crusts that result from the dry deposition of airborne sulfur contaminants.

The terne-coated steel sheet metal roofing on the dome is rusted through and leaking. This deterioration appears to have originated on the underside of the metal roofing. Condensation by itself, or condensation in the presence of sulfur from underlying asphaltic building paper (leading to the creation of sulfuric acid) can attack the metal from below and cause it to rust from the inside out. Also, the juxtaposition of terne-coated steel roofing and copper sheet metal roofing is promoting deterioration of the metal roofing through galvanic corrosion.

Terrace leaks have been a perpetual problem, and they appear to continue despite extensive efforts to address them. Water percolates through the terrace construction and finds its way out through joints in the brickwork and marble cornice below. Lime is leached from the setting bed of the terrace paving and redeposited on the surface of the masonry below, leaving milky white clouds of staining or lime run (calcium carbonate deposits). Sand from the setting bed of the terrace paving works its way into the water drains and must be regularly cleared. Water from the terrace also finds its way into the building and causes continuing problems with plaster damage.

The heavy institutional use of the building has taken a toll on building materials. In particular food service catering has battered the doors, passages, and moldings along the route from the ground floor servery to the dome room, and the finishes within the dome room.

Building systems introduced in the 1970s have generally reached the end of their serviceable life. Portions of the mechanical equipment, electrical wiring, and plumbing systems are worn out and require replacement.

The specific problems of repair have been itemized by elevation or location on the exterior of the building, and by room or space on the interior. A comprehensive listing of the problems is provided below and in the individual reports of the engineering consultants (see appendices).

## Exterior

### NORTH ELEVATION, NORTHWEST WING

- There are eroded mortar joints with spalling brick above grade level.
- Algae and lichen are growing on brick near the base of the wall.
- Remnants of vines are growing on the brickwork near grade level.
- Efflorescence is visible on the brickwork up to two feet above grade level.
- The brick spalling is localized and relatively minor. The brickwork has an eroded appearance due to grit blasting. There is general surface abrasion on the exposed faces of the brick, and evidence of red paint is clearly visible on protected areas of the eroded mortar. The paint remaining on the mortar would not have survived a chemical paint stripping process. The grit blasting was well controlled; this explains

why so much paint evidence remains. The grit-blasted masonry is most noticeable between the window openings.

- The surface-mounted conduit, photo electric cell, and junction box adjacent to the west cheek wall of the monumental stair are rusting and obtrusive.
- The flat painted masonry surrounds at the windows and doorway, and the painted keystones above the openings, have uneven layers of paint that are alligatored, cracked, and peeling.
- The exterior shutters are missing; however, the hinge pintles remain. Two are broken.
- The flashing above the half-rounded window architraves is irregular and gapped, and there is no formed drip at the outer face.
- The glazing putty at the window muntins is irregular and generally cracked at the half-round transoms.
- At the northwest corner, the brickwork immediately beneath the marble cornice has been smeared with grey mortar in an unsuccessful attempt to repair localized cracking.
- There is efflorescence on the brickwork immediately beneath the marble cornice and balustrade, suggesting that water is migrating from the terrace above.
- The sheet metal cornice flashing above the doorway at the east end of this elevation is irregularly formed and has a build-up of paint coatings.
- The absence of a formed drip has caused rot of the cornice molding that is improperly repaired with caulk.
- The metal transom chains on the exterior of the building are partially painted and visually distracting (door only).
- The undersides of the marble cornice and balustrade moldings are dirty. There are hairline cracks in the marble cornice.
- The exterior window screens detract from the appearance of the divided-light windows. The aluminum screening is creased and has small tears.
- The stile-and-rail wood door at the east end of the elevation has cracked and peeling paint along the bottom rail.
- The painted steel areaway grating is rusted. There appears to be dark biological staining on the brickwork immediately above the areaway.
- The paint from the window surrounds has left chalky, runoff staining on the brickwork.

NORTH PORTICO STAIR

- The dutchman stone repairs in the marble cheek walls do not match the original stone.
- The marble stairs appear to be stained or coated with a yellow/beige primer at the sealant joints in the treads.
- The top two treads have significant hard crust build-up that appears to be calcium carbonate deposition.

UPPER NORTH TERRACE

- The concrete aprons flanking the brick sidewalks parallel to the northeast and northwest wings are cracked and heaved, with open breaks. Repairs have been attempted using concrete patch material that does not match the appearance of the existing concrete; these repairs are also failing.
- The bluestone paving on the intermediate terrace at the base of the north portico marble stair is eroded and delaminating; the mortar and sealant joints have failed. The concrete paving at the perimeter of the bluestone is cracked and broken. The concrete paving along the base of the marble stair appears to be pitched into the first riser of the stair; water ponds in this location. Significant water infiltration problems will continue to be an issue until this paving is properly repaired.
- The concrete stair construction to the north of the intermediate bluestone terrace is cracked and broken. Patches and repairs have been attempted, but they have failed. Large pieces of concrete are missing. Weeds and moss are growing in the cracks and voids. Algae is growing on the flanking cheek walls. The steps and cheek walls are heavily soiled.
- The mortared and sanded joints in the brick terrace paving are eroded and open. The mortar from pointing repairs at the south end of the terrace has been buttered over the brick surfaces.
- There are uneven areas of brick paving to the north and northeast, where water appears to pond. To the northwest, a paneled section of brick paving has cracked in an east-west direction.
- The four light standards at the corners of the brick terrace appear to be in good condition, with a minor degree of crazing in the painted finishes.
- The cast-concrete base of the Seven Society sundial at the southeast corner of the brick terrace has a series of hairline cracks. The finished surface of the concrete is eroded and stained with copper runoff from the sundial. Algae is visible on the concrete as well.

EZEKIEL'S STATUE OF JEFFERSON

- The marble plinth beneath the statue of Jefferson is heavily stained with copper runoff from the bronze sculpture.
- There are large pieces of spalled stone missing from the marble plinth, along the vertical and horizontal joints of its construction. Generally, the marble appears to be dry-laid with the infrequent use of lead wedges, and a mortar bed between the marble plinth and granite base.
- The face of the marble is eroded along the veining.
- The granite base is stained reddish brown from rainwater splash-back. The vertical joints in the granite are open. Weeds are growing out of the horizontal mortar joint on the north elevation.
- The bronze statue of Jefferson is oxidized and soiled.

EAST FLAGPOLE

- The painted finish on the steel flagpole is uneven and pockmarked with rust.
- The cast-bronze base of the flagpole is oxidized, with paint chalking and rust staining from the pole above.
- The concrete plinth and base beneath the bronze casting is soiled and has black, green, and orange staining. Spalls and chips in the concrete have been repaired with mortar.
- The vertical joints in the granite apron at the base of the concrete plinth are open.

WEST FLAGPOLE

- The painted finish on the steel flagpole is uneven and pockmarked with rust.
- The cast-bronze base of the flagpole is oxidized, with paint chalking and rust staining from the pole above.
- The concrete plinth and base beneath the bronze casting has black and orange staining to the northeast and green copper staining to the west.
- The horizontal mortar joints in the cast concrete elements have vivid blue-green copper staining.
- Some chips in the concrete have been patched with mortar that is now stained blue-green. Other chips, especially two pronounced spalls in the leading edge, or nosing of the southeast facet of the plinth have not been repaired.
- There is a hairline crack in the concrete plinth (north elevation).

- The vertical joints in the granite apron at the base of the concrete plinth are open.

LOWER NORTH TERRACES

- The bluestone treads on the brick stairs located between the upper and lower brick terraces are eroded and delaminating. The mortar joints in the treads are eroded, and significant water infiltration is occurring in the stair construction. The brick risers are heavily encrusted with lime run where water has percolated through the stair and escaped at the joints beneath the treads. The brick cheek walls are heavily soiled. There are open mortar joints in the cheek walls with weeds growing in the voids. Mortar repairs have been made with mortar of the wrong color; many of the joints are cracked and open. The brick along the raking edges of the cheek walls are chipped and broken, probably as a result of skateboarding. The louvered brick step lights in the cheek walls are bent and broken.
- The leading edge of the square brick pavers forming the upper tread of the three brick steps between the lower brick terraces is pitched forward, opening the joint at the back of the tread and creating a raised tripping hazard. Mortar repairs have been made at the brick steps with mortar of the wrong color; vertical and horizontal mortar joints are cracked and open.
- The mortared and sanded joints in the brick terrace adjacent to University Avenue are eroded. Many of the mortared joints are cracked. Small areas of brick repair have been made with brick of the wrong color.

NORTH ELEVATION, NORTHEAST WING

- There are eroded and open mortar joints in the brickwork, especially at the east end of the elevation.
- There is settlement cracking in the brickwork beneath the marble cornice and immediately west of the arcade opening (vertical hairline cracking).
- The brickwork above grade level has relatively minor evidence of spalling. There is efflorescence on the brick where it has been eroded by grit blasting. Evidence of paint remains. Isolated masonry repairs have been made with mortar buttered over the face of the brick.
- Moss and algae are visible near grade level, and lichen is growing on the brickwork in isolated locations. Evidence of vines remain on the brickwork. There appears to be dark biological staining on the brickwork at grade level, above the grated areaways.
- The flat painted masonry surrounds at the windows and doorway, and the painted keystones above the openings, have uneven layers of paint that are alligatored and cracked. These areas appear to have been recently painted.

- The exterior shutters are missing; however, the shutter pintles remain. One is broken.
- The flashing above the half-round window architraves is irregular and gapped, and there is no formed drip at the outer face.
- There is cracked window glass in isolated locations (fanlight of second window from NE corner and fanlight of west window).
- The window glazing putty is cracked and irregular.
- There is efflorescence on the brickwork immediately beneath the marble cornice and balustrade, suggesting that water is migrating from the terrace above.
- The sheet metal cornice flashing above the doorway at the west end of this elevation is irregularly formed, has a build-up of coatings, and has rusted fasteners. The absence of a formed drip has caused runoff staining on the cornice molding below.
- The metal transom chains on the exterior of the building are partially painted and visually distracting (door only).
- The undersides of the marble cornice and balustrade moldings are dirty.
- The exterior window screens detract from the appearance of the divided-light windows. The aluminum screens are creased, with small tears; and several have screening pulled loose from their frames. The screens are fixed in place with rusting ferrous screws. The frame of one screen is splintered by a screw (second from NE corner) and the frame of the westernmost screen has a rotted bottom rail and stiles.
- The painted steel areaway grating is rusting. The galvanized grating remains in good condition.
- The stile-and-rail wood door (west end of elevation) has cracked and peeling paint along the bottom rail.
- The paint from the window surrounds has left chalky, runoff staining on the brickwork.

EAST ELEVATION, EAST COLONNADE AND ARCADES

- The mortar in the brickwork is eroded, and there are open joints. Efflorescence is visible on the brickwork above grade level and below the marble cornice and balustrade. The eroded appearance of the brickwork is largely due to grit blasting for paint removal.
- The painted finish on the masonry keystones is peeling.
- The undersides of the marble cornice and balustrade moldings are soiled and dirty. The undersides of the marble soffits are dirty as well. The soiling appears to be related to rainwater runoff.

- Although recently re-coated, the paint layers on the masonry columns, capitals, pedestals and flanking arched openings are uneven, giving the masonry a mottled appearance.
- At the south end of the colonnade lime run has built-up on the marble cornice moldings adjacent to vertical mortar joints in the cornice construction. Water is percolating through the terrace construction above and leaching lime out of the mortar and setting beds.
- The parged coating on the arcades is cracked and uneven; this is compounded by uneven paint coatings.
- The juxtaposition of eroded mortar joints and struck mortar joints, where repairs have been made in the brickwork, at the south end of the elevation is visually distracting.
- The efflorescence on the brickwork at the south end of the elevation is pronounced.
- At the far south end of the elevation, beneath the marble cornice, brick repairs have been unsuccessfully attempted with grey Portland cement mortar. Algae is growing on the brickwork at the base of the wall.
- There is a broken column capital at the north end of the colonnade.
- There are open mortar joints in the brick paving at the base of the columns.
- The soil adjacent to the piers at the north end of the elevation is eroded.

EAST COLONNADE, WEST ELEVATION

- The parging on the pier at the north end of the colonnade has separated from the underlying brick construction.
- The piers at the south end of the colonnade have peeling paint, advanced cracking of the parging, and splash-back from the red clay soil.
- The undersides of the marble cornice and balustrade moldings are soiled, especially at the north and south ends of the colonnade, beneath the overhang of the magnolia trees.
- There is rust-colored staining and lime-run on the marble cornice, especially at the south end of the colonnade.

SOUTH ELEVATION, NORTHEAST WING

- There is splash-back from the red clay soil at the base of the brick wall.
- The painted finish on the flat masonry surrounds of the windows is cracked and peeling. The flashing at the top of the half-round window architraves is irregular and gapped, with no formed drip.

- There are open joints in the brickwork near grade level.
- There is staining on the brickwork from lime run that originates in the terrace construction above.
- The aluminum screens detract from the divided-light appearance of the windows. The screens have small tears.
- The window air-conditioning unit at the west end of this elevation is visually obtrusive and detracts from the historic character of the courtyard. There is a cracked light in the half-round window above the air-conditioner.
- The louvers in the sheet metal vent at the far west end of the wall are bent.
- The surface-mounted PVC electrical conduit and junction box at the west end of the elevation detract from the historic character of the courtyard.
- There is lime run staining on the brickwork at the west end of the elevation, and poorly matched repointing.
- The painted finish on the parged keystones above the windows is cracked and peeling.

NORTH ELEVATION, SOUTHEAST WING

- The undersides of the marble cornice and balustrade moldings are soiled, particularly at the east end of the elevation where the magnolia tree overhangs the balustrade.
- There is splash-back from the red clay soil at the base of the brick wall.
- There is lime run beneath the marble cornice, originating in the terrace construction above. The calcium carbonate deposits on the brickwork are concentrated on the brick piers, particularly the center pier and those towards the east and west ends of the elevation.
- The aluminum screens detract from the divided-light appearance of the windows. The screens have tears and paint stains. The frames of some screens have evidence of water damage (peeling paint and exposed substrate) along the bottom rails.
- The flat painted masonry surrounds at the windows have cracks and uneven layers of finishes. The flashing above the half-round windows is irregular and gapped, with no formed drip.
- The painted finish on the masonry keystones is irregular, cracked, and peeling.
- The mortar joints have been re-pointed with a hard Portland cement mortar, and inappropriately finished with hard-struck joints.
- The A/C condenser adjacent to the building at the west end of the wall is visually obtrusive and detracts from the historic quality of the courtyard. Similarly, the

electrical conduit, disconnect switch, and refrigerant tubing in this area is visually distracting.

- There is relatively minor evidence of efflorescence and brick spalling beneath the marble cornice. This has probably resulted from water percolating through the terrace construction.
- The window glazing putty is irregular and cracked.
- Generally, with the reconstruction of the terrace paving system, nylon weep tubes were inserted in the mortar joint beneath the marble cornice (entire perimeter of terrace). These weeps may be contributing to calcium carbonate staining on the brickwork beneath the terrace (although there are no direct staining patterns associated with the weeps).

EAST COURTYARD

- The courtyard fountain is generally inoperable. The basin leaks and will not retain water. Ad hoc repairs have been made to the water supply piping.
- The magnolia trees obscure the building, and the falling debris from the trees requires constant maintenance. The root systems of the trees may threaten the building foundations. The trees are also contributing to the retention of moisture in the courtyards, and this is promoting the growth of algae on the brickwork.
- The mechanical condensing unit detracts from the historic character of the courtyard.

SOUTH ELEVATION, SOUTHEAST AND SOUTHWEST WINGS

- The painted parging beneath the half-round windows is cracked. There are uneven paint coatings on the parging. The paint is peeling, particularly at the west end of the elevation; infill painting has been unsuccessfully attempted with paint that does not match the existing color.
- The brickwork has been grit blasted, leaving an eroded brick surface. The mortar joints are eroded and open.
- There is lime run on the brickwork beneath the marble cornice and balustrade. Water is percolating through the terrace construction above, especially to the immediate east and west of the south portico stair.
- The undersides of the marble cornice and balustrade moldings are soiled.
- The painted finish on the half-round window muntins is cracked, and the glazing putty is uneven.
- The brickwork is spalling in isolated locations to the east of the south portico stair.

- There is a poorly executed brick repair at the far east end of the elevation, immediately beneath the marble cornice. This repair was made with grey Portland cement mortar.
- The marble stair treads of the south portico stair have biological staining from tree debris.
- The stark white sealant in the joints of the stair treads is visually distracting; there are isolated open joints.
- The design of the modern painted iron-and-bronze railings on the south portico stair competes with the architecture and detracts from the historic character of the building.
- The painted parged coatings on the cheek walls of the monumental portico stairs are cracked and stained.
- The parged coatings on the retaining walls of the stairs and ramp down to the cryptoporticus have surface erosion and discoloration. There are hairline cracks in the parging on the walls of the east stairwell and west ramp. The coping stones on these walls are water stained; they have surface soiling, algae growth, and lichens. The butted mortar joints of the coping are cracked.

CRYPTOPORTICUS (SOUTH PASSAGE)

- The modern halogen lighting and floating plaster ceiling panels at the east and west ends of the passage detract from the historic character of the building. These design elements visually compete with the period finishes.
- The prismatic Halophane light fixtures in the center of the passage are dirty.
- The parged and painted south wall is uneven and cracked. Water infiltration through the exterior wall has left the plastered surface of the interior passage blistered and friable. Paint is peeling in localized areas.
- The painted finish on the half-round windows of the south wall is built-up and uneven. The window stop moldings no longer have distinct profiles. The window hardware generally appears to be inoperable or missing.
- The north-south connecting passages flanking the Rotunda have uneven and poorly patched plaster ceilings. The parged wall surfaces are uneven and cracked, with peeling paint and rust staining.
- The brick paving of the cryptoporticus is stained.
- The finishes within the cryptoporticus, flanking the public entrance to the Rotunda, are worn and abraded from intense, constant use. The painted finishes are dirty, scuffed and chipped. Wood doors and jambs are nicked and abraded.

- The north wall of the passage has cracked and peeling paint.
- The plaster on the arched east and west entries to the passage is irregular. Paint appears to have been used as a short term maintenance solution for deteriorated finishes.
- There are grounded electrical outlets on the north wall of the passage. These outlets do not appear to have ground-fault (GFI) protection, and they do not have protective weather enclosures.

WEST ELEVATION, WEST COLONNADE AND ARCADES

- The mortar joints in the brickwork are eroded and open, especially near grade level.
- Algae and lichen are growing on the brickwork near grade level and in the areaway at the south end of the elevation.
- The exposed brickwork is eroded where it has been grit blasted to remove paint. The soft brick at he north arcade has spalled.
- Efflorescence is visible on the brick at the north and south ends of he elevation, beneath the marble cornice and balustrade.
- At the south end of the elevation lime run deposits cover much of the brickwork at the north, intermediate pier. This is material that is being leached out of the terrace above.
- The underside of the marble cornice and balustrade moldings are soiled and have algae growing on them.
- There are uneven paint coatings on the parged masonry columns, capitals, pedestals, and arcaded openings at the north and south ends of the intermediate colonnade. The finish is cracked and mottled in appearance. The parged coating is cracked and open to water infiltration in isolated areas.
- The marble cornice above the south end of the colonnade is heavily stained with rust colored runoff. This appears to be originating within the terrace construction above. Lime run deposits occur in the same area.
- There are open joints in the brick paving along the arcades and colonnade. Ineffective mortar repairs have been made with mortar buttered over the joints.
- There are isolated open mortar joints (vertical) in the marble cornice, generally above columns.
- There are open joints in the brick steps at the south end of the elevation, and there are poorly executed mortar repairs with wide joints and that do not match the existing mortar in color or profile.

INTERIOR PASSAGE OF EAST COLONNADE AND ARCADES

- The painted, parged surfaces of the piers, walls and columns are uneven and cracked. They have a mottled appearance, and the uneven surfaces collect dirt. Coating build-up on the moldings has obscured their profiles. Diagonal cracking is obvious in the parging above the arched openings within the passage. There is rust staining associated with the cracks above the arch at the south end of the colonnade (north elevation of arch).
- The parged and painted ceilings of the colonnade are uneven and cracked.
- The painted ceiling of the north arcade is dirty and has localized areas of insect nests. There is duct tape and a one-inch diameter hole near the southeast corner of the ceiling.
- The combination of mortared and sanded joints in the brick paving are eroded and open with efflorescence, algae, and moss visible on the brick and in the joints.
- The prismatic Halophane lighting fixtures are dirty. The ceiling access panels surrounding the Halophane fixture at the north end of the south arcade are visually distracting.
- The marble soffits of the colonnade are soiled. The soffits have open vertical joints above the column capitals.
- The modern halogen lighting and floating ceiling panels in the south arcade detract from the historic character of the building. These design elements are competing with the period finishes.
- The concrete steps at the north and south ends of the passage have hairline cracks. Chipped nosings at the south stairs have been repaired; however, the chipped and spalled riser and tread at the top of the north stair remains unrepaired.
- The parging on the brick cheek wall at the south steps is cracked and missing along the upper extent of the west wall.

INTERIOR PASSAGE OF WEST COLONNADE AND ARCADES

- The painted, parged surfaces of the piers, walls and columns are uneven and cracked. They have a mottled appearance, and the uneven surfaces collect dirt. Coating build-up on the moldings has obscured their profiles.
- The parged and painted ceilings of the colonnade and north passage are uneven and cracked. The painted finish of the colonnade is peeling.
- The combination of mortared and sanded joints in the brick paving are eroded, cracked, and open with efflorescence and algae visible on the brick. Mortar repairs that do not match the existing mortar in color and profile are commonplace.

- The prismatic Halophane lighting fixtures are dirty. The ceiling access panels surrounding the Halophane fixture at the north end of the south arcade are visually distracting.
- The marble soffits of the colonnade are soiled and stained. Hairline cracks in the soffits have orange, rust colored staining. The marble soffits have open vertical joints above the column capitals with lime run deposits and chipped marble at many of the joints.
- The modern halogen lighting and floating ceiling panels in the south arcade detract from the historic character of the building. These design elements are competing with the period finishes.
- The concrete steps at the north and south ends of the passage have hairline cracks; there are chips in the concrete nosings and risers. The parging on the brick cheek walls at the south steps is cracked and missing in localized areas.

WEST COLONNADE, EAST ELEVATION

- The undersides of the marble cornice and balustrade moldings are soiled.
- The bottom rail and plinths of the marble balustrade have a vivid orange stained appearance that may be biological growth within the pores of the marble.
- Significant lime-run deposits cover the lower moldings of the marble cornice; this material is being leached from the terrace construction above and is coming through the vertical joints in the cornice.
- Mortar repairs, rather than dutchman repairs, have been made to chips and breaks in the marble cornice.
- The parged coating on the plinth blocks of the columns is uneven and cracked; the painted finish is peeling.
- The parging on the brick cheek walls at the south steps is uneven and cracked.

SOUTH ELEVATION, NORTHWEST WING

- The undersides of the marble cornice and balustrade moldings are soiled.
- There is calcium carbonate staining, leaving a cloudy appearance on the brickwork, immediately beneath the marble cornice. There is a direct staining pattern associated with one of the terrace (lime-run) weep holes, near the center of the elevation.
- There are open mortar joints in the brickwork, especially near grade level. Efflorescence is also present near grade level, especially at the western end of the elevation. There is splash-back from the red clay soil at the base of the brick wall.

There is an unsuccessful mortar repair, immediately beneath the marble cornice, and near the centerline of the wall, where mortar has been smeared on the brickwork.

- The painted and parged layers on the flat masonry surrounds at the windows are uneven and cracked, with peeling paint. The flashing at the half-round window heads is irregular and gapped, with no formed drip.
- The painted finish on the masonry keystones is uneven and peeling.
- The PVC electrical junction boxes mounted adjacent to nearly every window are visually distracting, especially the large one at the east end of the wall.
- The louvers in the sheet metal vent at the east end of the wall are bent.
- The abandoned surface-mounted low voltage wiring at the head of the east window is visually distracting.
- The aluminum screens detract from the divided-light appearance of the windows. There are small tears in the screening.
- There is algae growing on the brickwork near the base of the wall.
- The wide mortar joint beneath the marble cornice is open at the far east end of the wall.
- The window glazing putty is irregular and cracked.

NORTH ELEVATION, SOUTHWEST WING

- The undersides of the marble cornice and balustrade moldings are soiled.
- There are mortar repairs in the brickwork immediately beneath the marble cornice that do not match the existing mortar in color and profile.
- There is splash-back from the red clay soil at the base of the brick wall, especially at the east end of the elevation.
- The A/C condenser located adjacent to the building detracts from the historic character of the courtyard. The associated electrical conduit, disconnect switch, and refrigerant tubing are visually obtrusive.
- There is algae growing on the brickwork near the base of the wall and at the spring line of the arched opening at the east end of the wall.
- There is calcium carbonate staining with a cloudy appearance on the brickwork beneath the marble cornice. This problem appears to originate in the terrace construction above.
- The brick openings cut in the wall for the louvered vents beneath the cornice (at the west end of the wall and to the east of center) have not been properly finished. The

brick is rubbed and chipped, and there are open perimeter joints with neither mortar, nor sealant.

- The flat parged and painted window surrounds are cracked, and the paint is peeling. The flashing at the half-round window heads is irregular and gapped, with no formed drip.
- The bronze and aluminum screens detract from the divided-light appearance of the windows. The painted finish on the frames of some screens is cracked and peeling.
- The window glazing putty is irregular and cracked, and some windows sills have exposed wood substrate. The joints in the wood window architraves are beginning to open.
- The painted finish on the masonry keystones is uneven and peeling.
- The mortar joints in the brickwork at the far west end of the wall are heavily eroded.
- There are isolated areas of open mortar joints in the brickwork.
- The large surface-mounted PVC electrical conduit elbow adjacent to the arched opening at the east end of the wall is visually distracting.

WEST COURTYARD

- The magnolia trees obscure the building, and the falling debris from the trees requires constant maintenance. The root systems of the trees may threaten the building foundations. The trees are also contributing to the retention of moisture in the courtyards, and this is promoting the growth of algae on the brickwork.
- The mechanical condensing unit detracts from the historic character of the courtyard.

TERRACE PAVING AND BALUSTRADE

- The marble railings and balusters are soiled.
- There is constantly accumulating debris on the terrace from the magnolia trees in the east and west courtyards.
- There is relatively minor rust staining at the southwest corner of the marble balustrade that appears to be the result of rainwater runoff from the roof of Pavilion I.
- There is vivid orange “staining” along the bottom rails of the balustrades, this is more pronounced on the west and north terraces. The orange staining appears to be subsurface biological growth.
- There are isolated open sealant joints in the top rail of the balustrade.

- There is blue-green copper staining on the ends of the balustrades adjacent to the north and south porticos of the Rotunda; the staining is from rainwater runoff shed from the portico roofs.
- There are hairline cracks in the marble balustrade components. Generally these are the result of natural flaws in the stone.
- There are hairline cracks in the marble bands of paving crossing the terrace (relatively few).
- There are localized rust stains at the southeast corner of the marble balustrade that appear to be the result of rainwater runoff from the roof of Pavilion II.

NORTH PORTICO

- Insect nesting is visible at the perimeter of the ceiling.
- The spiked bird proofing above the capitals is visually distracting and ineffective.
- There are yellow-brown to black gypsum deposits on the inner, protected faces of the marble Corinthian capitals.
- The outer, exposed surfaces of the marble capitals are eroded. The capitals of the pilasters have blue-green copper staining.
- The paint build-up on the soffits and entablature is uneven and crazed. At the northwest corner of the entablature there is rust staining, and paint has peeled from one of the modillions. At the east cornice, near the drum of the Rotunda, there is discolored streaking/staining coming from one of the modillions. The staining appears to be associated with the built-in storm water drainage system on the roof.
- The flush-mount light fixtures in the ceiling of the portico are unevenly recessed in their openings.
- The paint build-up on the colossal columns, bases, and plinths is uneven, giving these architectural elements a blotchy appearance.
- The paint build-up on the cornice moldings of the pediment is uneven. There is rust staining and peeling paint on the sheet metal cornice moldings at the base of the tympanum.
- There is peeling paint on the flat surface of the tympanum.
- The marble paving within the portico is generally in good condition with some hairline cracking and limited staining. The mortar in the joint above the marble base at the foot of the brick wall is loose. There is blue-green staining on the marble base beneath the bronze commemorative plaques.

NORTH ELEVATION OF ROTUNDA BENEATH NORTH PORTICO

- The brick near the base of the wall has paint over spray, smudges, and spatters.
- Generally, the horizontal mortar joints are tooled with a flat face and the joint is separated from the brick above and below. The total joint space between courses is 3/8" to ½". The narrow head joints vary from 1/3" to 1/4" in thickness and are not tooled. Because of the skill required to point those joints, it would appear that little effort is being made to maintain the joints. There are open head joints and areas of eroded mortar. Where repairs have been attempted, they generally do not match existing mortar in color or profile. Mortar repairs tend to be made with hard Portland cement mortar.
- The painted finishes on the window sash are crazed. The sash are painted shut. The window glazing putty is irregular and cracked; in some places the replacement putty has not been painted.
- The horizontal surfaces of the marble window sills at the main level are soiled. The vertical surfaces of the marble window sills at the upper level are soiled and appear to have yellow-brown to black gypsum deposits. The sill at the upper west window appears to be cracked.
- The paint build-up on the copper sheet metal cladding at the window architraves, and window and door pediments, is irregular. The sheet metal is dented and oil-canned in appearance. Some of this damage appears to be the result mechanical paint removal. There are isolated areas of peeling and cracked paint. The sheet metal is gapped from the brick wall surface in some locations.
- The built-up paint coatings on the doors are crazed. The wood door architrave is abraded at arises in the moldings.
- There are small splits in the lower raised panel of the west door leaf.
- The patina on the bottom bronze commemorative plaque has been discolored and damaged by some type of chemical agent.
- The alteration of the upper bronze commemorative plaque to add the name of William D. Langhorne was poorly finished with an applied overcoat.
- The patina of the intermediate bronze commemorative plaque has been damaged by abrasive graffiti.
- The parged and painted finishes on the monumental pilasters are cracked and uneven.

SOUTH PORTICO

- The paint on the portico ceiling, adjacent to the center window opening, is peeling. Other areas of peeled ceiling paint have been in-fill painted with a stark white paint that does not match the existing color.

- The spiked bird proofing above the column capitals is visually distracting.
- There are black gypsum crusts on the inner surfaces of the marble Corinthian capitals. The capitals are dirty, and the carved leaves are eroded. The pilaster capitals have blue-green copper staining.
- The large ventilation grilles in the ceiling are visually distracting.
- The built-up paint coatings on the pilasters and columns are crazed and peeling.
- There are hairline cracks in the marble column bases. The spider-web networks of cracks at several of the column bases are advanced.

SOUTH ELEVATION OF ROTUNDA BENEATH SOUTH PORTICO

- There appear to be salt deposits (efflorescence) on the brickwork beneath the portico ceiling and along the outer pilasters. This may be the result of leaks above, and the migration of water though the building construction.
- There are localized areas of open joints in the brickwork; these are generally vertical head joints. There appears to be many generations of pointing. The most noticeable one using a yellow mortar for head joints only.
- The pointing has been done with hard, Portland cement mortar, tooled to separate the horizontal mortar joints from the brick, top and bottom. The flat tooled face of the horizontal joints contrasts with the extremely narrow un-tooled vertical joints.
- There are white paint drips and splatters on the brickwork.
- There is copper staining on the brick and mortar beneath the east bronze plaque.
- Each of the four bronze plaques on the south elevation have a blotchy appearance where the patina has been damaged with spattered paint, bird guano, and/or some type of chemical agent.
- Poor quality pointing repairs have been made to the brickwork behind the open door leaves and adjacent to the east and west pilasters, near floor level.
- The window sash are painted shut. There is a heavy build-up of paint on the sash and frames. The glazing putty is cracked and unevenly applied. The paint on the copper sheet metal covering the window architraves is peeling. The sheet metal on the window architraves, and on the window and door pediments is oil-canned.
- The painted finish on the outer face of the stile-and-rail doors has localized cracking and crazing. There is a build-up of paint coatings on the doors.
- The vertical surfaces of the upper marble window sills, and the horizontal surfaces of the lower marble window sills, are dirty.

- There are a series of holes drilled in the brickwork behind each of the open door leaves.

EAST ELEVATION OF ROTUNDA AT GROUND LEVEL

- There is splash-back from the red clay soil on the brickwork at the base of the wall.
- There are open joints in the brickwork beneath the sandstone water table. Inappropriate pointing repairs have been made with hard grey Portland cement mortar. There are many generations of pointing repairs; generally, they do not match the color, profile, or hardness of the surrounding mortar joints. Often the mortar was buttered over the edges of the brick or finished as a hard struck joint.
- At the north and south ends of the elevation there is algae growing on the brickwork and stone water table.
- The stone water table is chipped and broken at its outer face, overhanging edge, and butted joints. Hard Portland cement repairs have been made. These repairs have generally failed. A large failed brick-and-mortar repair was made to the sandstone beneath the center window.
- Evidence of paint coatings remains on the brickwork above and below the stone water table.
- The flat upper face of the stone water table has no outward pitch. The butted end joints of the stonework and the continuous mortar joint along the brick wall are generally cracked or open.
- The four sandstone window sills to the north are chipped and broken. Failed stonework and unsuccessful mortar repairs are allowing water to infiltrate the building construction.
- The copper sheet metal cladding on the ground floor window architraves has a build-up of uneven paint layers. The metal is dented and pitted, apparently as a result of mechanical paint removal. There are irregular sealant joints at the perimeter of the window openings.
- The built-up coatings on the window sash are crazed, chipped, and peeling. Many of the sash are painted closed.
- The window glazing putty is uneven and cracked.
- The mortar in the brickwork is eroded and missing in localized areas. Pointing repairs have been made with mortar that does not match the color or profile of the surrounding mortar. This is especially apparent above the ground floor windows and surrounding the north door opening. Repairs were made using a hard Portland cement mortar.

- The base of the steel door at the north end of the elevation is rusted. The concrete threshold has little outward sloping pitch.
- There are miscellaneous abandoned metal wire ties along the east elevation, immediately above the window openings.
- The lightning down-conductor cable at the south end of the elevation has been pulled loose from the wall.
- An electrical conduit elbow and photocell protrude from the brickwork at the south end of the elevation, and an abandoned conduit riser extends approximately eighteen inches out of the ground. These materials are visually distracting.

EAST ELEVATION OF ROTUNDA ABOVE GROUND LEVEL

- The brick shelf between the ground floor and first floor windows is flat with no outward sloping pitch to shed water.
- The sheet metal cladding at the first and second floor window openings is dented and deformed with irregular layers of paint build-up and peeling paint.
- The painted finish on the wood window sash and sills is crazed, uneven, and peeling.
- The window glazing putty is cracked, irregular, and missing in localized areas.
- Many of the window sash appear to be painted closed.
- The marble sill at the first floor, south window is chipped.
- The sheet metal cladding on the lower entablature and upper cornice is dented and deformed, with an irregular buildup of paint layers.
- Mortar joints near the midpoint of the elevation have been pointed with replacement mortar that does not match the color of the surrounding mortar; this is especially apparent at the head joints. Generally, the pointing mortar on the east elevation is eroded, it is missing in isolated locations.
- The upper moldings of the lower entablature have brown staining.
- The brickwork beneath the upper cornice appears to have areas of cloudy lime deposits where water has leached lime from the masonry.

WEST ELEVATION OF ROTUNDA AT GROUND LEVEL

- There is splash-back from the red clay soil on the brickwork at the base of the wall.
- There are open joints in the brickwork beneath the sandstone water table (“coping stone”).

- Poor quality repointing and repairs have been attempted. Hard Portland cement mortar has been buttered over the joints and used to repair areas of missing brick.
- There is algae growing on the brickwork above and below the stone water table.
- The stone water table is covered with algae and paint splatter. The flat upper face of the water table appears to cant into the brick wall, directing water against the building. Many of the mortar joints in the stonework are open. Hard Portland cement mortar has been used in the joints and buttered over the face of the stone. The stone at the north end of the elevation is unevenly bedded. The water table has small and large chips of stone missing from its outer face and overhanging edge.
- The stone sills of the three northern ground floor windows are cracked through. Unsuccessful attempts have been made to repair the sills with mortar and joint sealant. Sealant has also been used in an unsuccessful attempt to repair superficial longitudinal cracking in the stone sill at the south ground floor window.
- The copper sheet metal cladding on the ground floor window architraves has a build-up of uneven paint layers. The metal is dented and pitted, apparently as a result of mechanical paint removal. Irregular and gapped sealant joints surround the window openings.
- The built-up paint coatings on the window sash are crazed, chipped and peeling. The sash are painted closed.
- The window glazing putty is uneven and cracked.
- The mortar in the brickwork at the ground floor level is eroded. Pointing repairs have been made with mortar that does not match the color or profile of the surrounding mortar; this is especially apparent above the ground floor windows. Repairs were made using a hard Portland cement mortar.
- The base of the steel door at the north end of the elevation is rusted, and the concrete threshold appears to be flat with no outward sloping pitch.
- The braided copper down-conductor cables of the lightning protection system (at the north and south ends of the elevation) have loose fasteners.

WEST ELEVATION OF ROTUNDA ABOVE GROUND LEVEL

- The brick shelf between the ground floor and first floor window is flat with no outward sloping pitch to shed water. There is algae growing on the brick shelf, and there is a broken shelf brick at the north end of the elevation.
- The sheet metal cladding at the first and second floor window openings is dented and deformed with irregular layers of paint build-up. The paint is peeling in localized areas.

- The painted finish on the wood window sash and sills is crazed, uneven, and peeling.
- The window glazing putty is cracked, irregular, and missing in localized areas.
- Many of the window sash appear to be painted closed.
- There is broken and displaced brick along the south architrave of the second floor south window.
- The sheet metal cladding on the lower entablature and upper cornice is dented and deformed, with an irregular buildup of paint layers.
- The mortar joints are generally eroded.
- The narrow head joints in the brickwork are often missing mortar.
- There is staining (brown and gray) from rainwater runoff on the upper moldings of the lower entablature.
- The brickwork beneath the upper cornice has areas of cloudy staining that appear to be the result of lime deposits where water has leached lime from the masonry.
- Between the upper cornice and lower entablature, at the south end of the elevation, there is yellow/white replacement pointing that does not match the appearance of the mortar in the surrounding brickwork.
- The paint on the lower entablature is peeling in localized areas.

INSPECTION OF WEST ELEVATION OF ROTUNDA FROM A HYDRAULIC AERIAL LIFT

- The copper step flashing above the pediments of the first floor windows is nailed into the masonry with ferrous cut nails. Galvanic corrosion is attacking the nails.
- The copper sheet metal at the windows and cornice has an excessive build-up of paint layers. The paint is uneven and peeling in localized areas.
- To the south of the building's centerline, there is an open horizontal mortar joint beneath the upper cornice.
- The seams in the built-in copper sheet metal gutter above the lower cornice have been repaired with a fiber-reinforced elastomeric seam tape. The tape is failing from long term exposure.
- The sheet metal modillions and egg-and-dart moldings of the lower cornice have a build-up of dirt in the folds of the metal.
- Hard Portland cement mortar has been used to point the drum of the Rotunda; however, no spalling or cracking brick is evident.

- The vertical head joints appear to have been more narrow than the bedding joints when the brick was laid originally; however, poor quality repointing has led to mortar buttered over the vertical joints.
- The vertical seam to the south of the building's centerline, in the upper sheet metal cornice is water stained. The horizontal mortar joint immediately beneath the cornice is open.

**Note: Similar conditions were observed in an inspection of the East Elevation of the Rotunda from a hydraulic aerial lift.*

ROOF

- The painted finish on the terne-plate sheet metal roofing is crazed and rust stained, this condition is pronounced on the north elevation.
- The paint is peeling significantly at the rusted areas on the north slope of dome. This may be because this portion of the roof remains shaded for longer periods, and surface water and condensation last for longer periods.
- The skylight has open sealant joints. The outer glazing has been etched by wind blown grit.
- Inadequate attempts have been made to cover areas of exposed sheet metal on the steps at the base of the dome and on the flat sheet metal surfaces beneath the steps with smeared sealant. The sealant is supporting the growth of algae.
- The copper sheet metal cove of the upper cornice has a folded seam in common with the terne-plate roofing at the base of the dome. The contact of dissimilar metals (copper and steel) in the presence of an electrolyte (water) will lead to galvanic corrosion. This has probably been inhibited to some degree by the applied paint coating and the positive drainage of water.
- The surface of the wash at the base of the south portico tympanum is dirty.
- The sheet metal seams in the gutters of the south portico have been repaired with an elastomeric material that is failing due to long term exposure.
- The down spout outlet at the inside southwest corner, between the south portico and drum of the Rotunda, has a displaced wire screen. The outlet is open to debris.

## Interior

GROUND FLOOR: ROTUNDA

***Lower Center Hall (101)***

- Much of the brick paving is obscured by the carpet in the hall.
- There is an east-west hairline crack in the ceiling plaster at the centerline of the hall.
- The painted plaster walls along the south stairways are scuffed and dirty. The painted plaster ceiling surfaces adjacent to the stairs are dirty.
- There are vertical hairline plaster cracks in the wall plaster between the ceiling and the door openings on the east and west elevations.
- There is hairline plaster cracking beneath the main floor stair landing that extends east from the bottom of the west newel post.
- The painted finishes at the south entrance (door, paneled reveal, and inner architrave) are dirty, and the paint is chipped. The woodwork is generally abraded from heavy use.
- As the southeast and southwest stairways curve in the louver extent of their runs, the plaster finish on the underside is chipped and broken at the juncture of the plaster and wood trim.
- There are hairline plaster cracks outlining access panels cut in the south wall, flanking the entrance doors.
- There are hairline plaster cracks radiating from the northwest closet door opening. The cracked plaster is visible at the chair rail and at the head of the door.
- There is minor horizontal plaster cracking on the east and west wall partitions, about midway between floor and ceiling.
- There are hairline plaster cracks radiating from the corners of the HVAC grilles on the east and west walls, near the southeast and southwest corners of the hall.
- The door architraves and paneled reveals to the lower east and west oval rooms are abraded.

***Closet (101A)***

- The painted finishes on the blind door, door jambs, and walls are scuffed and dirty.
- The plaster ceiling surface adjacent to the recessed sprinkler head is chipped.
- Stored easels and projection screens hinder access to the electrical panel on the west wall.

***Closet (101B)***

- There is significant water damaged plaster on the ceiling and upper southeast wall surfaces of the closet. The plaster is friable, and the painted finish is peeling. The frame of the steel access panel in the ceiling is rusting.
- The painted finish on the blind door and door jamb are dirty and chipped.
- The spring actuated latch on the blind door is difficult to engage and disengage. This problem exists to some degree at all blind doors in the Rotunda.

***Lower West Oval Room (102)***

- The brick paving is obscured by a large oval carpet.
- The dark painted finish on the baseboard is chipped.
- There is a minor degree of east-west hairline plaster cracking in the ceiling. These cracks are generally associated with the recessed sprinkler heads. A minor crack extends eastward from the outside southeast corner of the chimney mass.
- There are minor hairline cracks radiating from the corners of the HVAC grilles on the east wall.
- There are minor hairline cracks extending from the upper corners of the window openings on the west wall to the ceiling, and from the lower corners of the openings to the chair rail.
- The venetian blinds at the windows are dirty.
- The laminated wood aprons within the window reveals have cracked along their glue lines. There is uneven paint layering on the window aprons where previously peeling paint was top-coated without adequate preparation.
- There is a network of hairline plaster cracking on the wall surfaces at the south end of the room and on the east elevation.
- The perimeter chair rail and the architrave surrounding the fireplace opening are scuffed and abraded.
- The paint on the lower reaches of the walls is dirty.
- There are minor hairline plaster cracks radiating from the corners of the HVAC grilles that flank the chimney mass.
- The painted finish on the east door is scuffed and abraded. The latch for the box lock is loose.

***Lower East Oval Room (103)***

- A large oval carpet obscures much of the brick paving.

- There appears to be water staining at the joint in the baseboard cap molding in the southwest quadrant of the room.
- There are several hairline plaster cracks in the ceiling, generally running in an east-west direction, from wall to wall. Cracks extend westward from the outside corners of the chimney mass.
- The painted finish on the lower plaster wall surfaces is dirty.
- The venetian blinds are dirty; the valance panel for the blinds is missing at the north window on the east elevation.
- The painted finish on the wood aprons at the base of the window openings is cracked along the lines of glued laminations, and the paint is peeling in localized areas.
- There is minor hairline cracking extending outward from the corners of the HVAC grilles flanking the chimney mass.
- There is vertical hairline cracking in the raised panels of the painted wood door.

***Lower North Oval Room (104)***

- Much of the brick paving is obscured by carpet.
- There is a north-south hairline plaster crack at the western end of the room (west of light fixture), extending from wall to wall.
- There are minor scuffs to the painted finishes within the room.
- The lower rails of the paneled reveals in the south door opening are scuffed.

GROUND LEVEL: BELOW SOUTH PORTICO (CRYPTOPORTICUS)

***Passage (C102)***

- The painted stucco finishes are dirty.
- The cement plaster surrounding the handicap door actuator control at the south end of the east wall is cracked and broken.
- The wood entrance door at the north end of the passage is abraded along its outer stile. The matching door architrave is abraded as well. The butt hinges on the door are dirty.

***Passage (C103)***

- The painted stucco finishes are scuffed and dirty. The wall surfaces have been abraded by the heavy use of food service catering equipment.
- The painted steel door and doorframe at the elevator are dirty. The paint has been worn away to the metal substrate.

- The light switch on the east wall, adjacent to the elevator, is missing its cover plate.
- The interior of the elevator is scuffed, dirty, stained, and smells of hydraulic fluid.
- The automated door opening mechanism at the head of the elevator door rubs on the surface-mounted electrical conduit and cement plaster finish of the west wall.
- The wood door at the south end of the corridor is abraded, especially along its bottom rail and outer stile.
- The cement plaster finish surrounding the south doorframe is cracked, and the painted finish is peeling.
- The brick ramped floor is dirty and appears to have a significant amount of adhesive residue from a previous floor covering.
- The wall plaster has hairline cracks and peeling paint.

***Closet / Passage (105)***

- Mortar has been leached from the brick joints near ground level, along the full height of the west wall, and at the vaulted ceiling of the passage.
- The brick paving at the north end of the passage is visibly wet (apparently from mop bucket storage).
- The brickwork at the head of the door opening at the north end of the passage is missing. The brick is corbeled and a charred wood lintel remains in place. The east door jamb and the lintel have significant fire damage. The west door jamb and sill are missing.
- The mortar in the brickwork of the stair cavity at the north end of the passage is moderately eroded. Some brick is missing to either side of the pipe chase cut in the brick wall at the southwest quadrant of the cavity.
- The painted steel lintel above the south passage door is rusted at its west end. The painted finish on the door is dirty, and the finish is peeling.
- The painted finish on the brickwork in the passage is dirty and peeling. Much of the painted finish is missing from the west wall and from the base of the east wall.
- The brickwork adjacent to the light switch and the abandoned conduit at the south door is chipped.

***Catering Servery (106)***

- The hard, unpainted plaster wall and ceiling surfaces above the ceramic tile wainscot are traversed with hairline plaster cracks.
- The ceramic floor tile is chipped, and mismatched tile (two shades of green) has been used at the east end of the space for repairs.

- The doors and door frames are dirty and have been heavily abraded by the movement of catering equipment.  The east door has significant damage.
- The painted finish on the east window is dirty and peeling; the wood substrate is exposed.
- The ceramic wainscot tile is cracked and broken at the west end of the space:  near the floor level, beneath the plaster wall surface, and on either side of the east door opening.
- The tile floor and wall surfaces are dirty.

***Toilet (T101)***

- The paint on the stuccoed reveals of the doorway is peeling.
- The wood door frame is abraded and the bottom rail of the door is scuffed.  The painted finish on the interior face of the door is peeling.
- The plaster wall surface to the west of the door opening is friable, and the paint is peeling.
- The painted finish on the vaulted plaster ceiling is peeling, and the plaster is friable in localized areas.
- The plaster wall surfaces surrounding the west window are friable.  The paint on the sash and frame is stained and peeling.
- The tile floor beneath the urinals is etched and stained.
- An abandoned electrical conduit protrudes from the east wall, near the ceiling.
- The paint on the east wall is peeling and uneven, and there is a minor degree of mildew growth.
- The janitor's sink in the southwest corner of the space is stained and dirty.

***Toilet Vestibule (T102)***

- The suspended acoustical tile ceiling is stained, and the sprinkler head escutcheon is rusted.
- The plaster wall surface of the north wall is chipped where it meets the frame of the suspended ceiling.
- The north door is missing.  Parts of the butt hinges remain, as does the arm of the missing door closer.
- The wood door to the south is scuffed and has localized areas of peeling paint.
- The paint on the plaster soffit above the south door is cracked and peeling.

- The grouted horizontal seam between the plaster surface of the west wall and the ceramic tile wainscot is open.

***Closet (T102B)***

- The plaster wall finishes are friable with visible deposits of salt. The plaster has eroded from rising damp, exposing metal lath and brown coats of plaster.
- The vinyl floor tiles (12"x12") are dirty, broken, and missing.
- The painted finishes are dirty.
- The sprinkler head escutcheon at the ceiling is rusted.
- The ventilation grille in the ceiling is dirty.
- The closet door does not latch. The painted finish on the door is cracked along vertical lines of lamination.

***Toilet Vestibule (102A)***

- The painted plaster finish in the northwest corner of the space is peeling.
- The steel doorframe at the south end of the space has chipped paint, exposing the steel substrate.
- There is a hairline plaster crack on the vaulted ceiling at the south end of the space, extending from east to west. The painted finish along the crack is chipped.
- There are holes in the ceramic tile wainscot where anchors were installed for plumbing accessories and subsequently abandoned.
- The ceramic floor tile at the south end of the space has been repaired with mismatched tile (two shades of green).

***Mechanical Room (108)***

- The painted wood doors at the south end of the room are scuffed and dirty.
- The clearance space for mechanical equipment, electrical equipment, telephone equipment, and sprinkler equipment is inadequate and does not meet current building code requirements.
- Despite isolation mounts, the air-handling equipment is loud and there is significant vibration.
- The room is dirty.
- There is insufficient space to store filters for the air-handling equipment.
- Equipment condensation and leaks keep the concrete floor at the north end of the room wet.

- There is rising damp in the brick construction of the north wall. The painted finish on the brickwork is peeling, and efflorescence has formed on the masonry. These same conditions are visible on the east wall.

GROUND LEVEL: BELOW NORTH PORTICO

***Hall (C111)***

- Painted finish on east wall is scuffed and dirty.
- The electrical panel box on the east wall has a dirty painted finish with chipped paint. The circuit breakers in the panel box have a non-code compliant face panel with openings that do not adequately protect against electrical shock.

***Toilet (T112)***

- The plaster wall surface above the lavatories on the north wall has a network of hairline plaster cracks.
- The plaster wall surfaces beneath the lavatories on the north wall, and behind the accessible toilet on the south wall, are uneven as a result of plumbing and wall repairs.
- There are hairline plaster cracks on the north wall, at the east end of the space.

***Toilet (T113)***

- The terrazzo floor tile is discolored and etched beneath the urinals on the north wall.
- The plaster wall and ceiling surfaces in the northeast corner of the space are badly blistered. The paint is peeling, and the plaster is friable as a result of water infiltration.
- Holes in the ceramic wall tile at the east end of the room have been repaired with a non-matching filler.
- The plaster wall and ceiling surfaces in the northwest corner of the space are blistered and cracked. The paint is peeling, and the plaster is friable as a result of water infiltration.
- The painted steel toilet partitions have dented doors.
- The plaster ceiling at the west end of the room is uneven as a result of plaster repairs.

***Hall (C110)***

- Carpet obscures the floor.

- The build-up of painted finishes on the west door and transom obscures the detail of the moldings. The recessed door panels are cracked.
- The east door is warped and will not latch.
- The globe of the ceiling light fixture at the east end of the hall is water stained and appears to have collected leaking water from above.

***Hall (C112)***

- Carpet obscures the floor.
- There is evidence of blistered, friable plaster in a small area above the west door and on the ceiling at the east end of the hall. This damage has been caused by water infiltration, but it is not clear if the problem remains active.
- There is heavy, uneven paint build-up on the east door and transom that obscures the molding profiles. Poorly executed repairs at the mortised lockset have left the outer stile weak and the finished surface irregular. The upper and lower recessed door panels have a series of small cracks.
- The north door frame has uneven paint coatings.

***Storage/Janitor's Closet (110)***

- The door on the south wall is racked, and the stile-and-rail joints are open. The painted finish is peeling, and the wood substrate is exposed.
- The painted finishes on the brick and block walls, and on the cast-in-place concrete ceiling, are dirty.
- The brickwork near the floor level in the southeast corner of the room, adjacent to the janitor's floor sink, is spalling.
- The painted finish on the door to the elevator machine room is dirty and covered with adhesive tape residue.

***Elevator Machine Room (110A)***

- The exposed steel beam supporting the sloping cast-in-place concrete ceiling has significant surface rust. Rust staining runs down the north wall beneath the bearing point of the beam. The corrosion of the beam is more advanced at the bearing point in the north wall. This appears to be a replacement beam for an earlier beam located immediately to the west.
- Galvanized sheet metal and an acrylic glazing panel have been installed above the elevator machinery and beneath the sloping concrete ceiling in an effort to protect the equipment from water percolating through the portico stair construction above.

- An electrical junction box on the north wall is protected from water and deteriorating masonry above by a simple sheet metal shelf. The concrete above appears to be spalling; and the exposed, twisted steel reinforcing bar has rusted through.

***Storage (109)***

- The outer face of the door, transom, and frame have a heavy build-up of paint finishes that obscure the molding profiles. The paint layers are uneven, and the large upper recessed panel in the door has a distinct vertical crack extending from rail to rail. The inner face of the door has peeling paint with exposed wood substrate; the stile-and-rail construction of the door is racked with open joints.
- The floor drain appears to be filled with dirt and trash. A dehumidifier runs constantly and is piped to the floor drain.
- The paint on the brick walls and sloping concrete ceiling is peeling.
- The steel beams supporting the concrete have surface rust, with more advanced rust at their bearing points. The three existing beams appear to be replacements for two earlier beams that had significant corrosion at their bearing points.
- Brick spalling and deteriorated mortar on the north wall suggest that water infiltration has been a problem.

***Mechanical Room Beneath North Portico***

- The brick walls have evidence of significant water damage. Currently the space is dry; however, the painted finish on the brickwork is peeling. There is efflorescence on the masonry, the brickwork is spalling, and there are open mortar joints on each of the walls. There appear to have been problems with rising damp; as well as water infiltration from above.
- Oral history suggests that previously installed chillers and an interior cooling tower contributed to water problems in this space.
- An open pipe protruding from the top of the south wall, near the southwest corner of the space, drips water on the concrete floor at the base of the steel grate stair. This appears to be condensate.
- Temporary shoring, consisting of steel pipe scaffolding, welded steel angles, Lally columns, and wood cribbing, has been used to support the concrete and marble portico stair construction above.
- The concrete floor near the southwest corner of the space is broken and irregular.
- Steel electrical junction boxes mounted on the exterior walls have rusted away as a result of water infiltration.

GROUND LEVEL: NORTHEAST WING

***Office / Administrative Area (140)***

- The door architrave, chair rail, and baseboard on the north wall have significant paint build-up and uneven layers of paint. These moldings are abraded.
- The semi-circular bottom light in the fanlight on the north wall is cracked.
- The surface-mounted electrical conduit and data wiring on the west wall is visually obtrusive.
- Carpet obscures the flooring.
- The paint build-up on the west door architrave obscures the molding profiles.
- The surface-mounted electrical panel boxes and conduit in the southeast corner of the space are visually obtrusive.
- The vertical chase mounted on the east wall, and the overhead storage units at the south end of the room detract from the architectural character of the space.
- The surface-mounted electrical conduit and free-standing fan-coil unit on the east wall detract from the architectural character of the space. The fan-coil units installed in the wings of the Rotunda are generally noisy.
- The hanging incandescent and surface-mounted fluorescent light fixtures detract from the architectural character of the space.
- Much of the wall surface is obscured by office equipment and furniture.

***Office (141)***

- The floor is obscured by carpet.
- The suspended acoustical tile ceiling and the window air-conditioning unit detract from the architectural character of the space.
- The large electrical conduit riser in the southwest corner of the room and the surface-mounted electrical conduit for the window air-conditioning unit on the south wall are visually obtrusive.
- Office furniture and file boxes obscure much of the wall surface.

***Hall (C140)***

- Carpet obscures the floor.
- The baseboard and door architraves are abraded.
- The suspended acoustical tile ceiling and fluorescent light troffer detract from architectural character of the space.

***Hall (C141)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling and light troffers detract from the architectural character of the space.
- The foot of the door architraves and the baseboards are abraded.

***Office (142)***

- Carpet obscures the floor.
- The suspend acoustical tile ceiling, fluorescent light troffers, free-standing fan-coil unit, and surface-mounted electrical conduit detract from the architectural character of the space.
- Office furniture and shelving obscure much of the wall space.
- Paint build-up on the window sash and architrave obscures the molding profiles.
- One light in the lower window sash and one light in the fanlight are cracked.
- The south wall finish is scuffed.

***Office (143)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling, fluorescent troffers, surface-mounted electrical conduit, and the free-standing fan-coil units detract from the architectural character of the space.
- Office furniture and shelving obscure much of the wall surface.
- Heavy paint build-up on the window sash and architraves obscures the molding profiles.
- A light in the lower sash of the west window is cracked.

***Office (144)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling, fluorescent troffers, surface-mounted electrical conduit, and free-standing fan-coil units detract from the architectural character of the space.
- Paint build-up on the window sash and architraves obscures the molding profiles.
- A single light in the fanlight of the east window is cracked.
- Office furniture and casework obscure much of the wall surface.

- Condensation forms on the exterior face of the east window when the fan-coil unit runs in the air-conditioning mode.

***Copy Room (145)***

- The floor is obscured by carpet.
- The suspended acoustical tile ceiling and fluorescent troffers detract from the architectural character of the space.
- The paint build-up on the window sash and architrave obscures the molding profiles.
- The surface-mounted electrical conduit on the south and west walls, and the free-standing fan-coil unit detract from the architectural character of the space.
- Office equipment, file cabinets, casework, and shelving obscure much of the wall surface.
- A dehumidifier is required in this space.

***Office (147A)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling, fluorescent troffers, free-standing fan-coil unit, and the surface-mounted electrical conduit detract from the architectural character of the space.
- Paint build-up on the window sash and architrave obscures the molding profiles. There is plaster cracking on the wall surfaces at the head of the window opening.
- Office furniture and shelving obscure much of the wall surface.

***Office (147)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling, fluorescent troffers, surface-mounted electrical conduit, and free-standing fan-coil unit detract from the architectural character of the space.
- One of the acoustical ceiling tiles does not meet the frame, leaving an opening of approximately 3/4" in the ceiling.
- Paint build-up on the window sash and architrave obscures the molding profiles.
- Office furniture and shelving obscure much of the wall surface.
- The foot of the door architrave is abraded.

***Reception (148)***

- Carpet obscures the floor.

- The suspended acoustical tile ceiling, fluorescent troffers, free-standing fan-coil unit, and surface-mounted electrical conduit detract from the architectural character of the space.
- Paint build-up at the window sash and architrave obscures the molding profiles. The paint layers are chipped and uneven.
- There is a significant vertical crack in the plaster, running from ceiling to baseboard, in the southeast corner of the room.
- There is blistered paint near the base of the east wall, to the north of the door opening. This damage was caused by water infiltration.
- Uneven paint build-up on the east door architrave obscures the molding profiles.
- A dehumidifier is required in this space.
- There is a hairline plaster crack extending upward from the north end of the opening in the west wall.

***Conference Room (149)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling, flourescent troffers, free-standing fan-coil unit, and surface-mounted electrical conduit detract from the architectural character of the space.
- A dehumidifier is required in this space.
- Paint build-up on the window sash and architraves obscures the molding profiles. Significant gaps have opened in the joints of the architrave construction at the head of the half-round windows. The plaster window reveal and wall surface at the head of the east window are cracked. A plaster crack extends east from the sill of the east window.
- Office furniture and casework obscure wall surfaces to the south and west..
- The baseboard along the south wall is abraded.
- A single light in the lower sash of the east window is cracked.
- The carpet in the northeast corner of the room is discolored. This appears to have resulted from water infiltration.

## GROUND LEVEL: SOUTHEAST WING

***Office (150)***

- Carpet obscures the floor.

- The suspended acoustic tile ceiling and fluorescent troffers provide a modern office environment but detract form the historic character of the building. The ceiling obscures the upper portion of the south and east door/transom architraves.
- There is significant paint build-up on the south and east doors and door architraves and on the north window.
- The east, west, and north walls are obscured by office furniture.
- The north wall base (appears to be a cementitious material) is heavily damaged near the northwest corner of the space.

***Office (151)***

- Carpet obscures the floor.
- The stepped, suspended acoustic tile ceiling and fluorescent troffers detract from the historic character of the building. The ceiling obscures the upper portion of the east and west door/transom architraves.
- There is significant paint build-up on the north windows. The mortised brass sash lifts are missing from the bottom rail of the northwest window.
- Surface-mounted wiring is attached to the north wall beneath the windows.
- Office furniture obscures most of the east, west, and south wall surfaces.
- There is significant paint build-up on the east and west doors and architraves.

***Reception (152)***

- Carpet obscures the floor, except at the entry where slate tile has been laid.
- The suspended acoustic tile ceiling and fluorescent troffers detract from the historic character of the building. The ceiling obscures the upper portion of the east, west, and south door/transom architraves.
- The modern glass and aluminum wall system separating Reception 152 from Office 153 detracts from the historic character of the building.
- The south door and architrave have heavy paint build-up and uneven layers of paint. The finish on the outer stile is dirty.
- Office furniture obscures much of the west and south walls.
- There is surface-mounted wiring attached to the east and south walls above the baseboard.
- The east and west doors and door architraves have heavy paint build-up and uneven layers of paint.
- The south wall is scuffed beneath the chain rail.

*Office (153)*

- Carpet obscures the floor.
- The suspended acoustic tile ceiling and fluorescent troffers detract from the historic character of the building.
- There is significant paint build-up on the north windows.  There is blistered and peeling paint, and friable plaster, at the base of the west reveal of the northeast window.  This damage is the result of water infiltration.
- Surface-mounted wiring is attached to the north wall beneath the windows.
- There is blistered paint beneath the chair rail on the north wall, between the window openings.  This damage is the result of water infiltration.  The cementitious base in this area is damaged as well.
- The paint build-up on the access panels at the northeast and northwest corners of the space prevents their proper operation.

*Office (154)*

- Carpet obscures the floor.
- The suspended acoustic tile ceiling and fluorescent troffers detract from the historic character of the space.  The suspended ceiling obscures the upper architraves of the south and west door/transom openings.
- Surface-mounted wiring is attached to the north wall beneath the windows.
- There is heavy paint build-up and uneven layers of paint on the west and south doors and architraves.  The outer stile on the south door is dirty.
- There is significant deterioration of the plaster on the south wall, to the east of the door.  The plaster has "bloomed" and is in a friable state as the result of water infiltration.
- Office furniture obscures most of the wall surfaces on the east, west, and south elevations.
- There is heavy paint build-up and uneven layers of paint on the north windows.
- Paint build-up on the steel access panel in the northeast corner prevents its normal operation.

## GROUND LEVEL: SOUTHWEST WING

*Office (120A)*

- Carpet obscures the floor.

- The suspended acoustic tile ceiling and surface-mounted fluorescent light fixtures detract from the historic character of the building.
- Miscellaneous hardware (picture hooks and screw-in-anchors) remains on the east, west, and south walls.
- The painted plaster wall finishes are scuffed and dirty.
- Office furniture obscures portions of the east and west walls.
- There is surface-mounted wiring on the north wall beneath the window.
- The east wall has paint blisters where water has infiltrated the wall construction.
- The painted finish on the east base is irregular.
- A single light in the upper window sash is cracked (adjacent to the meeting rail).
- The painted finish on the half-round wood window frame is blistered, cracked, and peeling. There has been significant water infiltration through the head of the window; ad-hoc repairs have been made to address the damage.

***Copy Room / Office (120)***

- Carpet obscures the floor.
- The suspended acoustic tile ceiling and surface-mounted fluorescent light fixtures detract from the historic character of the building. The suspended ceiling obscures the upper architraves of the doors to the south and west.
- The painted plaster walls are scuffed.
- Office furniture obscures the east and west walls.
- There is surface-mounted wiring on the north wall, beneath the window.
- The painted finishes on the window are built-up and irregular. Paint cracks occur at joints in the woodwork; this is typical of all wood windows in the wings.
- The painted finish on the south door and architrave is built-up and irregular. The door and architrave are abraded. Touch-up painting does not match the existing paint color.
- The painted finish on the west door architrave is built-up and irregular. The paint surrounding the transom is cracked and chipped.

***Hall (C122)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling and surface-mounted light fixtures detract from the historic character of the building. The boxed soffit of acoustical tile is

particularly obtrusive. The ceiling obscures the upper architraves at each of the door openings.

- The painted plaster walls are scuffed and dirty.
- The baseboard is abraded and has irregular paint build-up.
- There is heavy paint build-up on the door architraves. The build-up is irregular and visually distracting.
- The painted finish on the east door is built-up, and touch-up painting does not match the existing paint color.

***Office (121)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling and surface-mounted fluorescent light fixtures detract from the historic character of the building.
- Office furniture obscures portions of the west, north, and east walls.
- Surface-mounted electrical wiring is attached to the north wall, beneath the window.
- There are cracks in the half-round plaster reveal at the head of the north window. The plaster appears to be friable as a result of water infiltration.
- One of the brass sash lifts at the bottom rail of the lower window sash is missing.
- The painted finish on the window architrave is built-up and cracked.
- The painted finish on the south door architrave is uneven, and touch-up painting does not match the existing paint color.
- The suspended ceiling obscures the upper architrave of the door/transom.

***Office (122)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling and surface-mounted fluorescent light fixtures detract from the historic character of the building. The ceiling obscures the upper architrave of the south door/transom.
- The east wall is obscured by built-in casework.
- Office furniture obscures portions of the south and west walls.
- Water infiltration through the north wall has caused the plaster wall surface to blister near the northeast corner; the plaster is friable.
- Surface-mounted wiring is attached to the north wall, beneath the window.
- The baseboard is abraded.
- The painted finish on the window sash is built-up and dirty.

***Reception (123)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling and surface-mounted fluorescent light fixtures detract from the historic character of the building. The ceiling tiles are bowed; it appears that the suspended frame was not properly installed. The ceiling obscures the upper architraves of the door openings to the east, west, and south.
- The painted plaster wall finishes are scuffed and dirty.
- The touch-up painting on the south door and architrave do not match the existing paint color.
- The painted finish on the doors, architraves, baseboard, and chair rail is uneven and abraded.
- Surface-mounted wiring has been attached to the north wall, beneath the window.
- The half-round plaster reveal at the head of the north window is cracked and blistered as a result of water infiltration.
- The paint build-up on the window architrave is heavy; it is cracked along joints in the woodwork.
- The paint build-up on the access panel in the northwest corner of the room prevents its proper operation.

***Office (124)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling and surface-mounted fluorescent light fixtures detract from the historic character of the building. The ceiling tiles are bowed. The suspended ceiling obscures the upper architraves of the south and east door/transoms.
- The touch-up paint used on the doors and trim does not match the color of the existing paint.
- The south wall surface is scuffed.
- Plaster is missing from an area on the south wall, to the west of the door opening and beneath the chair rail. The clay tile wall construction is exposed.
- The west wall is obscured by built-in casework.
- Surface-mounted wiring is attached to the north wall, beneath the windows.
- The painted plaster finish on the north wall is blistered above the baseboard and to the east of each of the window openings. This damage is the result of water infiltration.

- There is heavy paint build-up on the windows and window architraves. The painted finish has cracked at joints in the woodwork. The paint on the half-round architrave at the west window is cracked and peeling.
- There are plaster cracks in the half-round reveal of the west window, extending to the ceiling.
- There are paint blisters on the plaster wall surface between the windows, extending to the ceiling.
- There is significant dirt and insect debris, including cobwebs, between the windows and outer screens. This condition is common for all windows in the wings.
- There is irregular paint build-up on the cementitious north baseboard.
- Surface mounted wiring has been attached to the east wall for a thermostat located adjacent to the doorway.

## GROUND LEVEL: NORTHWEST WING

***Reception (129)***

- The floor is obscured by carpet.
- There is a network of hairline plaster cracks on the ceiling.
- The paint build-up on the window sash and architraves has obscured the molding profiles.
- The metal venetian blinds are dirty with bent slats.
- There are areas of uneven plaster on the south wall and in the window reveals where water infiltration has caused deterioration and subsequent repairs have not fully addressed the problem.
- Plaster cracks have developed on the west elevation, near the southwest corner.
- The plaster surrounding the electrical receptacle in the southwest corner is blistered and friable as a result of water infiltration.
- There are plaster cracks extending form the head of the door opening on the west wall.
- There is surface-mounted wiring attached to the baseboards and west door architrave.
- The painted baseboards are abraded.
- A dehumidifier runs constantly in this space.
- The painted finish on the exterior door is scuffed and chipped. Filler used for repairs has not been carefully applied, leaving an uneven finish.

***Vestibule (C130)***

- The floor is obscured by carpet.
- There is low voltage wiring stapled to the south baseboard.
- The southeast door binds on the vinyl transition strip in the carpeting.
- The fluorescent troffer in the ceiling detracts from the architectural character of the building.

***Conference Room (131)***

- The floor is obscured by carpet.
- A dehumidifier runs constantly in this space.
- The acoustical tile ceiling and fluorescent troffers detract from the architectural character of the building.
- The paint build-up on the window sash and architraves obscures the molding profiles.

***Vestibule (C131)***

- Carpet obscures the floor.
- The door plinths are abraded, and the painted finish is chipped.
- The fluorescent troffer in the ceiling detracts from the architectural character of the building.

***Supply Closet (131A)***

- The closet walls are generally obscured by the storage of stationary supplies.
- The 9"x9" vinyl floor tile and/or the mastic used to apply it may contain asbestos.

***Office (132)***

- Carpet obscures the floor.
- The fluorescent troffers in the plaster ceiling detract form the historic character of the building.
- Framed maps, prints, and posters obscure the wall surfaces.
- Built-in casework obscures the south wall to the west of the south door opening.
- The west wall, north wall, and east door opening are obscured by office furniture.
- The HVAC access panel beneath the north window is scuffed.

***Office (134)***

- Carpet obscures the floor.

- The adhered acoustic ceiling tiles and fluorescent troffers detract from the historic character of the building.
- Shelving on the west wall, to the north of the door opening obscures the wall surface.
- Office furniture obscures the north, east, and south wall surfaces.
- A single light in the bottom sash of the north window is cracked.

***Office (134A)***

- The acoustical tile adhered to the ceiling is discolored. The acoustical tile ceiling and the fluorescent troffer detract from the historic character of the building.
- Carpet obscures the floor.
- Office furniture obscures the east wall.
- Casework partially obscures the north wall.

***Hall (C133)***

- The floor is obscured by carpet.
- The suspended acoustical tile ceiling and fluorescent troffer detract from the historic character of the building.
- The wall plaster in the northeast and southeast corners of the hall has minor water damage; the surface of the plaster is irregular.
- The base is moderately abraded. The previous black painted finish can be seen where the existing white paint on the base is chipped.
- The surface-mounted thermostats on the walls at the east and west ends of the hall are visually obtrusive.
- There are hairline plaster cracks extending from the HVAC grilles on the north wall, beneath the ceiling.

***Office (133)***

- Carpet obscures the floor.
- Acoustic tile has been adhered to the ceiling, and a surface-mounted fluorescent fixture provides general lighting. These materials detract from the historic character of the building.
- Shelving obscures wall surfaces to the east and west. Office furniture obscures wall surfaces to the north and east, and office equipment obscures the wall surface to the west.
- There is surface-mounted wiring on the east, west, and south walls.

- There are plaster cracks in the half-round window reveal.
- The painted finish is peeling from the wall plaster, near the ceiling in the southeast corner of the room.
- Abandoned window shade hardware remains in place at the window opening, along with abandoned hardware for an interior hopper at the base of the window opening.

***Office (135)***

- The floor is obscured by carpet.
- Acoustical tile has been adhered to the ceiling, and a surface-mounted fluorescent fixture provides general lighting. These materials detract from the historic character of the building.
- Shelving obscures the north wall, to the east of the doorway. Office furniture obscures the west wall.
- Surface-mounted wiring extends from ceiling to floor in the southeast corner of the room, and along the base of the south and east walls.
- A single light in the lower window sash is cracked (adjacent to the meeting rail).
- Abandoned window shade hardware remains at the window opening.

***Office (136)***

- The floor is obscured by carpet.
- Acoustic tile is adhered to the ceiling at the east end of the space, and surface-mounted fluorescent light fixtures provide general lighting. A suspended acoustical tile ceiling with a fluorescent troffer is installed at the west end of the space. These materials detract from the historic character of the building.
- Built-in casework obscures the east wall.
- There is hairline plaster cracking extending to the east and west of the northeast window opening. The cracking generally extends horizontally from the spring line of the half-round opening. The plaster reveal at the head of the opening is cracked as well.
- There are horizontal plaster cracks along the north wall and vertical water stains between the cased opening and the northeast window.
- Vertical water staining is visible at the north and south ends of the cased opening near the midpoint of the room. The staining appears to originate near the ceiling. The painted finish on the plaster wall surfaces to the north of the cased opening is peeling in localized areas.
- There is surface-mounted wiring on the north wall.

- Office furniture obscures wall surfaces to the north, west, and south.
- The painted finish at the edges of the HVAC access panel beneath the northwest window is chipped and dirty.
- There is water staining in the northwest and southwest corners of the room. The vertical stains extend down from the ceiling.

***Office (137)***

- The acoustical tile adhered to the ceiling is uneven. The ceiling tile, the surface-mounted fluorescent light fixture, and the capped electrical junction box on the ceiling detract from the historic character of the building. There are holes in the tiles at the northwest and southwest corners of the ceiling.
- The east wall, to the north of the east door, is obscured by office furniture.
- The painted walls are scuffed, and miscellaneous hardware (hooks) remains attached to the north and south walls.
- Abandoned window shade hardware remains at the window opening, along with a visually obtrusive glass hopper at the base of the window opening.
- The half-round plaster reveal at the head of the window opening is cracked.
- The electric circuit breaker panel in the southeast corner of the room has a broken Bakelite spacer that leaves energized buss contacts exposed. This is an electrical shock hazard.
- The plaster finish surrounding the electrical panel is cracked, and the paint is peeling.
- There is an open junction box on the south wall, near the southeast corner of the room. Surface-mounted telephone station wire extends from the box to the base of the south wall. The plaster surrounding the open junction box appears friable.
- The surface of the plaster on the south wall, beneath and to the east of the window, is uneven.

***Vestibule (C132)***

- Carpet obscures the floor.
- The suspended acoustical tile ceiling, fluorescent troffer, and plywood cabinet (housing conduit, HVAC controls, and electrical disconnects) in the southeast corner of the vestibule all detract from the architectural character of the building. The plane of the tile ceiling intersects the half-round architrave of the east door.
- The uneven paint build-up on the east door architrave obscures the molding profiles. The door frame is abraded.
- The west door is scuffed, and the painted finish on the west face is crazed.

- The plaster surfaces in the southwest corner of the vestibule, near the base of the wall, are blistered, and the plaster is friable. This deterioration has resulted from water infiltration. The plaster wall surfaces in this corner are generally uneven as a result of previous plaster problems and repairs.
- A sheet metal junction box is mounted to the south wall, in the southwest corner of the vestibule. This box is visually obtrusive.
- The joints at the head of the west door architrave have uneven paint build-up, and the architrave is stained. The staining appears to be related to water infiltration from above.

***Vestibule (138)***

- The 9"x9" vinyl floor tile and/or the mastic used to apply it may contain asbestos.
- The uneven paint build-up on the north door architrave obscures the molding profiles. The door binds on the door frame.
- The vertical sheet metal chase and surface-mounted wiring in the southeast corner of the vestibule, as well as the free-standing fan-coil unit in the northeast corner, and the built-in casework and sink in the southwest corner detract from the historic character of the building.
- The south door is missing; the butt hinges and door strike remain in place.
- The surface-mounted fluorescent light fixtures on the ceiling, and the electric doorbell and surface-mounted wiring to the east of the north door are visually obtrusive.

***Office (139)***

- The floor is obscured by carpet.
- The acoustic tiles adhered to the ceiling are broken along the east edge of the ceiling, where ceiling meets a boxed plywood soffit. The tiles adjacent to the surface-mounted fluorescent ceiling fixtures are bucked.
- The painted finish on the rough cement plaster of the south wall is peeling in localized areas to either side of the window.
- The east sash cord of the double-hung window is broken. A single light in the upper sash is cracked (adjacent to the meeting rail).
- There is surface-mounted wiring on the north and south walls.
- There is a large and obtrusive electrical service conduit and elbow at the southeast corner of the room. It enters through the south wall and extends vertically into the boxed plywood soffit extending the full length of the office along the east wall.

- There is miscellaneous hardware (anchors and screws) remaining on the north, south, and west walls.
- The cementitious base immediately east of the north door opening is rough and uneven.
- Built-in casework (shelving) obscures the east wall.
- Office furniture obscures much of the west wall. There are hairline plaster cracks above the west door, generally extending from the HVAC grille near the ceiling. Although there is evidence of previous repair work, these cracks remain active.

MAIN FLOOR

***Center Hall (C202/C203)***

- The plaster wall surfaces are dirty and scuffed, especially along the staircases to the south. The plaster ceiling surfaces near the stair openings are dirty and smudged.
- There is an east-west crack in the ceiling and cornice plaster near the centerline of the space.
- The salvaged heart pine flooring at the south central stair landing is moderately abraded.
- The wood chair rails and bases have minor abrasion in localized areas.
- The cork transition strip between the marble paving of the portico and the heart pine flooring at the south door is broken, and small pieces are missing.
- There is hairline cracking at the south end of the plaster cornice on the west wall. The upper ledge of the plaster architrave is dirty.
- There is hairline cracking at the south end of the plaster architrave on the east wall.
- There is vertical hairline cracking in the plaster architrave and cornice at the curved northeast and northwest corners of the hall.

***President's Reception Room / Upper West Oval Room (201)***

- The floor finish has been discolored by UV degradation. This was made apparent by the removal of a large oval rug that was once located in the center of the room. This problem has been compounded by floor sanding at the east entry to the room as part of a refinishing effort in the central hall. The flooring at the perimeter edge of the rug was abraded by the movement of the rug.
- There is an east-west hairline crack in the ceiling plaster at the centerline of the room.
- A hairline crack in the ceiling plaster also extends eastward from the southeast outside corner of the chimney mass.

- A hairline crack in the wall plaster extends upward from the HVAC grille to the north of the east entry door, through the plaster entablature, to the ceiling.
- There is peeling paint and hairline, vertical plaster cracking above the window opening to the north of the chimney mass on the west wall.
- There are hairline plaster cracks radiating from the corners of the HVAC grilles that flank the chimney mass.
- There is cracked and abraded paint on the wood window aprons of the west windows (moderate damage at the north window, minor damage at the other three windows).
- There is minor abrasion on the perimeter baseboard.
- There is relatively minor vertical cracking in the wood-grained, raised panels of the east door leaves.

***Robe Closet (201A)***

- The painted plaster wall finishes and blind door finishes are scuffed and dirty.

***Passage to Upper North Oval***

- The painted blind door is scuffed and dirty.

***Toilet Room and Passage (T201)***

- The blind door does not latch; the painted finish on the door is dirty.
- There is significant plaster damage to the ceiling of the toilet room vestibule. The paint is peeling, and the plaster is friable. This damage appears to be the result of plumbing leaks.
- The cover plate for the recessed sprinkler head in the ceiling of the toilet room vestibule has been dislocated.
- The baseboard in the vestibule is scuffed. The painted plaster wall surfaces are dirty.
- The southeast corner of the toilet room ceiling has water-damaged plaster that has been poorly repaired. Friable plaster remains; the plaster repair is uneven. The water-damaged plaster appears to be the result of plumbing leaks.
- The ceramic wall tile has a vertical crack beginning at the radiator enclosure on the west wall and extending upward to the top of the wainscot.
- The painted finish on the lavatory base cabinet is worn and peeling; the wood substrate is exposed.

***Board of Visitors Room / Upper East Oval Room (202)***

- The blind door passage to the north oval room is scuffed and dirty (doors and jambs). The heart pine flooring in the passage is moderately abraded.
- A large oval rug obscures much of the flooring in the east oval room. The floor finish at the perimeter of the rug is discolored by UV degradation. The wood flooring at the west doorway has minor to moderate abrasions.
- There is east-west hairline cracking of the plaster ceiling along the centerline of the room.
- There is vertical hairline cracking in the wall plaster extending from the south HVAC grille on the west wall to the baseboard.
- There is vertical hairline cracking in the wall plaster, architrave, and cornice above the three northern window openings.
- There is horizontal hairline cracking in the wall plaster between the heads of the north door openings.
- There is vertical hairline cracking through the architrave, frieze, and cornice at the northern outside corner of the chimney mass.
- The lower plaster wall surfaces, wood chair rail, and wood window architraves adjacent to the chair rail are scuffed and abraded.
- The painted finish on the wood window aprons is peeling.
- There is hairline plaster cracking radiating from the HVAC grille openings flanking the chimney mass on the east wall.
- There are minor chips in the finish of the wood-grained doors.

***Closet (202A)***

- The painted plaster wall surfaces are scuffed and dirty.
- The painted finish on the blind door is scuffed and dirty.

***Elevator Passage (C204)***

- The plaster wall finishes and painted door finishes are scuffed and dirty.
- The west baseboard is abraded.
- The wall plaster at the perimeter of the HVAC grille on the west wall is chipped and broken.
- Elevator door and controls are dirty.
- The surface-mounted wiring for automated door controls is visually obtrusive. The retrofit installation is awkward.

***Upper North Oval Room (205)***

- There is relatively minor abrasion of the salvaged heart pine flooring.
- The lower plaster wall surfaces, baseboard, and chair rail moldings are scuffed.
- The wood-grained finish on the south door leaves is chipped along the leading edges.

DOME ROOM, GALLERIES, AND ATTICS

***Dome Room (301)***

- The salvaged heart pine floor is abraded, but remains in relatively good condition.
- The railing, casework, moldings, and plaster in the area adjacent to the elevator, at the southeast quadrant of the room, are significantly abraded as a result of food service catering functions. The alcove to the northeast of the elevator is used for the ad hoc storage of tables and catering equipment. These materials are visually obtrusive and incompatible with the character of the space.
- The bookcases flanking the catering alcove are abraded and food stained. Ceiling and wall surfaces in this area are food stained and scuffed.
- The wood column bases along the east elevation are significantly abraded.
- The wood base and fireplace molding at the east elevation are abraded.
- The wood flooring in the window recess to the south of the east fireplace has an area of damage (2" ± diameter) that has the appearance of rot. An unsuccessful attempt was made to repair it with filler. This is localized damage that appears to be the result of a very specific cause.
- One column in each pair of columns surrounding the space has two vertical cracks, 180 degrees opposed from one another, extending from base to capital. The cracked columns have steel structural columns inserted within them. The widest crack is approximately 1/4" wide (along west elevation).
- The toilet room in the southwest quadrant has chipped ceramic floor tile. Holes in ceramic wall tile have been filled with non-matching cementitious material. The radiator grille on the west wall has surface rust; the ceramic tile adjacent to the radiator is cracked. The cork transition strip between the ceramic floor tile of the toilet room and the wood floor of the Dome Room is broken, and pieces are missing.
- The painted plaster wall finishes adjacent to the south stairs are dirty and scuffed.
- The painted wood venetian blinds at the windows are dirty and abraded. The valance panel is missing from the blind to the south of the east fireplace. The operating mechanisms bind, and some do not work.

- A single light in the lower sash of the east window beneath the south portico has compound cracking.
- A single light in the lower sash of the window to the north of the east fireplace is cracked.
- A single light in the lower sash of the window to the north of the toilet room is cracked.
- The painted wood moldings and plaster wall surfaces adjacent to the west fireplace are dirty and scuffed.
- The abraded white paint on the brown plastic electrical receptacles is visually distracting.
- The plaster ceiling beneath the lower gallery has a series of hairline cracks that generally radiate from openings in the plaster or from the curved, leading edge of the gallery.
- The plaster ceiling surrounding a recessed sprinkler head to the west of the elevator has been unsuccessfully repaired. The plaster is cracked and friable, and the painted finish on repaired plaster does not match the adjacent ceiling finish.
- There is a horizontal crack/split in the top rail of the lower south reveal paneling in the window alcove to the south of the west fireplace.
- The painted steel emergency egress doors in the northeast and northwest quadrants have dirty and scuffed finishes. The steel door jambs have rust blisters at their outer edges, where the jambs meet the plaster wall surface.

***Northwest Fire Stair (C301)***

- The painted finishes on the steel doors and fire stair are worn, stained, and dirty.
- There are hairline cracks in the rough masonry parging applied to the wall surfaces.
- At ground level the emergency exit door and floor slab are dirty and covered with cobwebs. Low voltage wiring is taped to the walls and connected to a contact switch at the head of the door. The illuminated exit sign is not working.
- Some of the industrial light fixtures in the stairwell are missing their glass globes and/or their protective metal cages. Cages and globes are laying on the stair landings.
- There is a breech in the masonry wall construction where a sprinkler pipe protrudes into the stairwell beneath the dome room floor level.

***Northeast Fire Stair (C302)***

- The painted finishes on the steel doors and fire stair are worn, stained, and dirty.
- There are hairline cracks in the rough masonry parging applied to the wall surfaces.

- At ground level the emergency exit door and floor slab are dirty and covered with cobwebs.
- Some of the industrial light fixtures in the stairwell are missing their protective metal cages. The cages are laying on the stair landings.

***Lower Gallery of Dome Room (C401)***

- The white carpeting on the gallery floor is dirty and heavily stained. The dirty grey/black discoloration may have resulted from mold growth. The stains on the carpet adjacent to the southwest mechanical room may be the result of grease or oil. (The carpet was removed during a mold abatement project in December 2006, exposing the unfinished plywood subfloor with sheet metal patches adjacent to the columns.)
- The painted finish on the perimeter wall is dirty and peeling. To the east of the northwest stair, the plaster is friable.
- The painted finish on the steel perimeter railing is dirty, with rust staining bleeding through the paint.
- The Composite column capitals are dirty.
- There are hairline cracks in the plaster ceiling. The paint on the ceiling is peeling in localized areas, especially adjacent to the west wall.
- The painted finish on the recessed ceiling light fixtures is dirty and fingerprinted.
- The doors to the access stairs, clock rooms, and mechanical space are dirty and scuffed.
- The hatches and hatch openings for the folding stairs to the Upper Gallery are scuffed and abraded, and the printed finished are dirty.

***North Portico Attic (401)***

- The masonry floor vaulting is uneven.
- There is debris and trash throughout the attic.
- The steel used in the construction of the north-south roof beams has surface rust and is delaminating in localized areas at the south wall of the attic. The raking steel bearing plate on which the roof beams bear is rusted and delaminating.

***North Portico Clock Room (401A)***

- The walls are covered with graffiti, and the painted finishes are dirty.
- The steel angle brackets supporting the clock face are rusted.
- The wire mesh lath with sealant or mortar, at the perimeter of the clock face opening is rust-stained and appears to be mildewed.

- The steel access door in the clock face is haphazardly attached to the clock face with metal mending plates and machine screws.

***South Portico Attic (402)***

- The attic space is generally clean and full of mechanical equipment. Several large duct penetrations have been made through the north wall of the attic without lintels to support the brick wall construction.
- There are hairline cracks in the clay tile roof construction near the ridge of the roof.

***South Portico Clock Room (402A)***

- The painted wall finishes are dirty and covered with graffiti.
- The gypsum board ceiling has two holes: one for an electrical junction box; the other is unused.

***Elevator Shaft (403)***

- The brick and clay tile construction of the shaft appears to be in good condition, with no visible cracks.
- There are hairline cracks in the unpainted plaster ceiling of the shaft.

***Stair to Roof (C404)***

- The painted finishes on the door and stair are dirty and worn.
- The protective metal cage is missing from the industrial light fixture at the base of the stair.
- An ad-hoc heat tape installation on the wet-pipe sprinkler riser hangs loosely from the steel construction at he head of the stair shaft.
- The painted finish on the interior of the roof hatch and curb is eroded, and the wood substrate is exposed.
- There is no railing or opening assist device for the roof hatch.
- The wood boxed construction at the head of the plumbing vent, where the vent pipe penetrates the roof, is water stained.
- The painted brick construction of the shaft appears to be in good condition. Parged mortar repairs have been made in localized areas.
- The mortised lock on the door at the base of the stairway is not functioning properly. The latch does not fully extend, and the lock is not properly aligned and retained in the mortise.

*Upper Gallery of Dome Room (C501)*

- There is mold growing on the painted balustrade railing, balusters and base. Paint is peeling from the balusters and base in localized areas, exposing the wood substrate. (The mold and accumulated dirt was cleaned from these surfaces during a mold abatement project in December 2006.)
- The vinyl tile flooring (12"x12") is dirty, stained, and scuffed. The folding stairs, and hatches to the north and south, are dirty and abraded.
- The painted plywood wallboard is dirty, stained, and scuffed. The wallboard has come loose at the seams and has been screwed back in place.
- The painted wood rail above the perimeter knee wall, and the light cove behind the knee wall, are dirty. Mold is growing on the painted surfaces, on the fluorescent light fixtures, and on the base of the acoustical ceiling panels at the south elevation of the dome.
- Many of the rivets used to fasten the acoustical ceiling panels in place are rusted.
- Many of the fluorescent fixtures are rusted and covered with molded, and the bulbs are not illuminated. (These fixtures were removed during the mold abatement project of December 2006. The exposed wiring for these fixtures protrudes from the remaining conduit risers to the north and southeast. This is an electrical shock hazard and potential fire hazard.)
- Retrofitted HVAC grilles in the alcove have displaced five of the perimeter spotlight fixtures.
- Several of the perimeter spotlights are not illuminated. Others have been removed. Retrofit metal brackets have been installed to prevent the perimeter spotlights from dropping down and resting on the plywood shelf of the alcove. Several charred areas are visible where the lights previously burned the woodwork.
- There is mold growing on the surface of individual acoustical panels. There is discoloration of some acoustical panels, particularly a single panel in the northwest quadrant of the dome. These symptoms may indicate water infiltration through the dome construction.
- The outer tempered glass of the skylight appears to have a spiderweb network of cracks; this may be the etched glass that was observed on the exterior.
- The two folding ladder stairs providing access to the upper gallery have dirty and worn finishes. The residential quality of the ladder stairs is insufficient for their intended use.

THE ROTUNDA

# PROBLEMS OF REPAIR IMAGES

*Rotunda, East Elevation. [JGWA, 2006]*

*Rotunda, East Elevation. The sandstone water table is chipped and broken at its outer face, overhanging edge, and butted joints. A large brick-and-mortar repair to the sandstone beneath the center window has failed. [JGWA, 2006]*

*Rotunda, East Elevation.*
*[JGWA, 2006]*

*Rotunda, East Elevation. Evidence of paint coatings remains on the brickwork above and below the stone water table at the south end of the wall. The lightning down-conductor cable has been pulled loose from the wall, and there are lime-run (calcium carbonate) deposits on the brickwork.* [*JGWA, 2006]*

*Southeast Wing, South Elevation. [JGWA, 2006]*

*Southeast Wing, South Elevation. The brickwork has been grit-blasted, leaving an eroded surface. The brick is spalling in isolated locations, and there are lime-run (calcium carbonate) deposits on the brickwork beneath the marble cornice. [JGWA, 2006]*

*South Portico Stair. [JGWA, 2006]*

*South Portico Stair. The design of the modern iron-and-bronze railing competes with the architecture and detracts from the historic character of the building. [JGWA, 2006]*

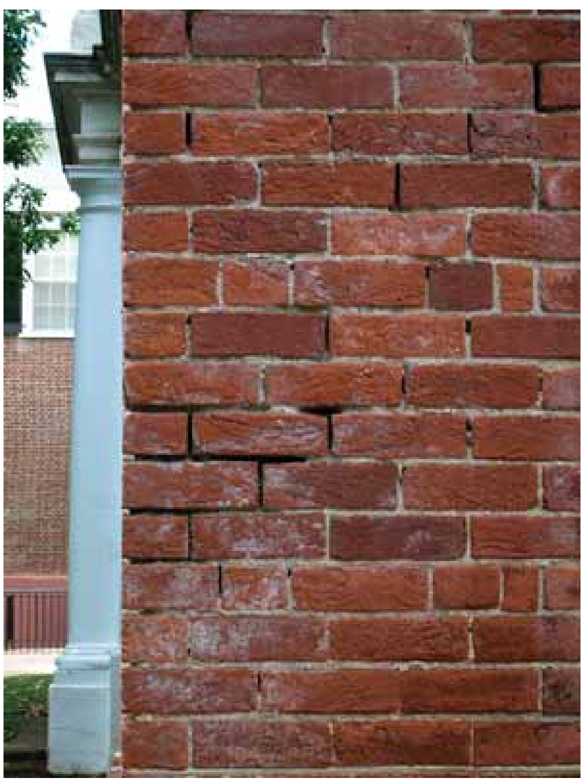
*Northeast Wing, South Elevation. [JGWA, 2006]*

*Northeast Wing, South Elevation. The window air-conditioning unit and electrical conduit at the west end of the wall detract from the historic character of the courtyard. [JGWA, 2006]*

*Northeast Wing, North Elevation. [JGWA, 2006]*

*Northeast Wing, North Elevation. The painted surfaces have chalked and stained the brickwork. There is dark biological staining on the brick near the rusted areaway grates. [JGWA, 2006]*

*Northeast Wing, Northeast corner. [JGWA, 2006]*



*Northeast Wing, Northeast corner. The mortar is eroded, and there are open joints in the brickwork. The brick has been grit blasted to remove paint. [JGWA, 2006]*

*East Colonnade, East Elevation. [JGWA, 2006]*

*East Colonnade, East Elevation. The marble entablature and soffit have been soiled and stained by rainwater run-off, originating in the terrace construction above. [JGWA, 2006]*

*West Colonnade, West Elevation.[JGWA, 2006]*

*West Colonnade, West Elevation. There are lime-run (calcium carbonate) deposits at the vertical joints in the marble entablature, and rust colored staining on the architrave. This deterioration has resulted from water percolating through the terrace construction above.  [JGWA, 2006]*

*East Colonnade, West Elevation. [JGWA, 2006]*

*East Colonnade, West Elevation. The parging on the pier at the north end of the colonnade has seperated from the underlying brick construction. [JGWA, 2006]*

*West Terrace. Debris from the magnolia trees accumulates on the terrace. [JGWA, 2006]*

*West Terrace. There is vivid orange "staining" along the bottom rails of the marble balustrades; this appears to be subsurface biological growth. [JGWA, 2006]*

*South Portico. The outer, exposed surfaces of the marble capitals are eroded. There are yellow-brown to black gypsum deposits on the inner, protected surfaces of the capitals. [JGWA, 2006]*

*South Portico. The marble column bases have networks of cracks. [JGWA, 2006]*

*Rotunda, West Elevation [JGWA, 2006]*

*Rotunda, West Elevation. The copper step flashing above the pediments of the first floor windows is nailed into the masonry with ferrous cut nails. Galvanic corrosion is attacking the nails. [JGWA, 2006]*

*Rotunda, West Elevation. [JGWA, 2006]*

*Rotunda, West Elevation. The seams in the copper sheet metal gutter above the intermediate cornice have been repaired with fiber-reinforced elastomeric seam tape. The tape is failing from long-term exposure. [JGWA, 2006]*

*Rotunda, Roof. [JGWA, 2006]*

*Rotunda, Roof. The painted finish on the terne-coated sheet metal roofing of the dome is crazed and rust stained; this condition is pronounced on the north elevation. [JGWA, 2006]*

*Rotunda, Roof. Inadequate attempts have been made to cover areas of exposed sheet metal on the steps at the base of the dome with smeared sealant. The sealant is supporting the growth of algae.[JGWA, 2006]*

*Rotunda, Roof. The painted finish on the terne-coated roofing of the dome is crazed and peeling; the underlying sheet metal is rusting through. [JGWA, 2006]*

*The plaster on the ceiling and upper southeast wall surfaces of the northeast closet (101B) in the ground floor stair hall is water damaged. The plaster is friable, and the painted finish is peeling. [JGWA, 2006]*

*There is rising damp in the masonry construction of the north and east walls of Mechanical Room (108). The painted wall finish is peeling, and efflorescence has formed on the masonry. [JGWA, 2006]*

*The clearance space for mechanical, electrical, telephone, and sprinkler equipment in Mechanical Room (108) is inadequate and does not meet current building codes. [JGWA, 2006]*

*Closet (T102B), women's toilet room, below the south portico (cryptoporticus). [JGWA, 2006]*


*Rising damp has caused the wall plaster in Closet (T102B) to deteriorate, exposing the metal lath and brown coats of plaster. [JGWA, 2006]*

*Men's Toilet Toom (T113), looking northeast. [JGWA, 2006]*

*The plaster wall and ceiling surfaces in the northeast corner of the Men's Toilet Room (T113) are badly blistered. The plaster is friable, and the painted finish is peeling as a result of water infiltration. [JGWA, 2006]*

*Elevator Machine Room (110A) below the North Portico. [JGWA, 2006]*

*The exposed steel beam supporting the sloped concrete ceiling of Elevator Machine Room (110A) has significant surface rust. The rust is more advanced at the beam's bearing point in the north wall. Galvanized sheet metal and acrylic glazing have been installed above the elevator machinery to protect the equipment from water infiltration occurring in the north portico steps above. [JGWA, 2006]*

*Generations of temporary shoring have been introduced in the Mechanical Room beneath the north portico to support the ceiling and terrace construction above. [JGWA, 2006]*

*Significant problems with water infiltration in the Mechanical Room beneath the north portico have lead to advanced deterioration of equipment and fixtures. [JGWA, 2006]*

*Years of water infiltration and rising damp in the masonry walls of the Mechanical Room beneath the north portico have eroded the mortar and caused the brick to spall. [JGWA, 2006]*

*Southwest Wing, office of the Vice President for Student Affairs (124), looking west. The suspended acoustical tile ceiling and surface-mounted fluorescent light fixtures detract from the historic character of the space. The suspended ceiling obscures the upper architraves of the door/transom openings. [JGWA, 2006]*

*The plaster finish is missing from the south wall of the office of the Vice President for Student Affairs (124), west of the door opening and below the chair rail. The hollow clay tile wall construction is exposed. [JGWA, 2006]*

*Southeast Wing, room 154, looking south. [JGWA, 2006]*

*The wall plaster on the south elevation of room 154, to the east of the door opening, is friable. Water infiltration has caused the plaster to "bloom." [JGWA, 2006]*

*The floor finish in the President's Reception Room (Upper West Oval Room 201) is discolored as a result of UV degradation. This was made apparent by the removal of the large oval rug that was located in the center of the room. [JGWA, 2006]*

*Floor sanding in the Center Hall (C202/C203) was continued through the east entry of the President's Reception Room (Upper West Oval Room 201). This refinishing work and the perimeter abrasion from a large oval rug have caused discoloration and uneven wear in the heart pine flooring. [JGWA, 2006]*

*The* ad hoc *storage of tables and catering equipment in one of the alcoves of the Dome Room (301) has contributed to the abrasion and wear of the room's finishes. [JGWA, 2006]*

*One column in each pair of columns encircling the Dome Room (301) has two vertical cracks, opposed 180 degrees from one another. The cracked wood columns have structural steel columns within them. [JGWA, 2006]*

*Prior to a December 2006 mold remediation project the Upper Gallery (C501) railing was covered with dust and mold growth. [JGWA, 2006]*

*The paint on the balusters of the Upper Gallery (C501) railing is peeling; the wood substrate is exposed. [JGWA, 2006]*

*Middle Gallery C401).[JGWA, 2006]*

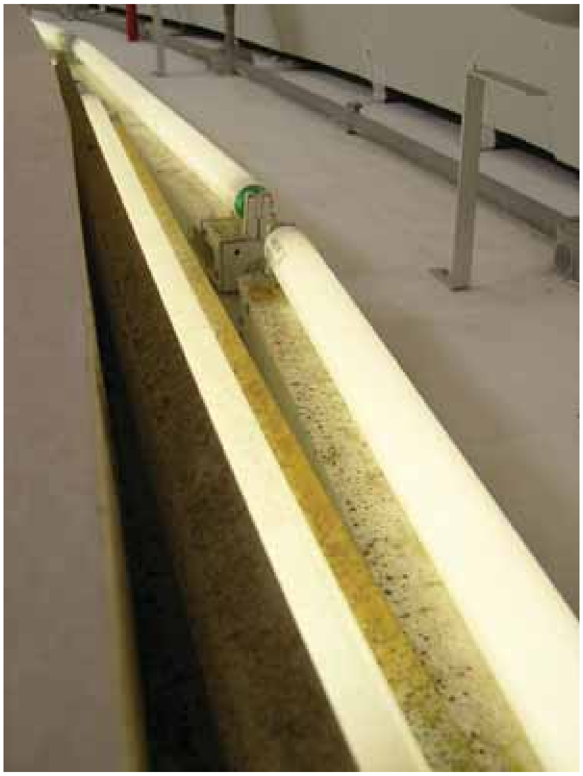

*Middle Gallery C401).[JGWA, 2006]The folding ladder stairs providing access to the Upper Gallery of the Dome Room (C501) are of a residential character and quality. The stairs and the reveals of the stair openings are dirty, worn, and abraded. [JGWA, 2006]*

*The glass of the skylight oculus is heavily abraded; from the interior, it appears to have a spider-web network of cracks. [JGWA, 2006]*

*Some of the vinyl-coated, perforated metal acoustic ceiling panels that line the dome are discolored. Mold was growing on the surface of individual panels prior to the December 2006 mold remediation project. Many of the rivets used to fasten the ceiling panels are rusted. [JGWA, 2006]*

*Several of the perimeter spotlights at the base of the dome are not illuminated. Others have been removed or displaced by the installation of HVAC grilles. [JGWA, 2006]*

*Metal brackets were retrofitted beneath the high temperature spotlights at the base of the dome to prevent the fixtures from dropping and charring the plywood shelf on which they are mounted. [JGWA, 2006]*



*The fluorescent strip lighting fixtures at the base of the dome were removed in December 2006 as part of the mold remediation project. Exposed conductors protruding from conduit remain; these conductors may present an electrical shock hazard. [JGWA, 2006 (top), 2007 (bottom)]*

*The steel plates and ledgers for the ribs of the tile vaulting in the North Portico Attic (401) are rusting; minimal delamination of the steel is occurring. [JGWA, 2006]*

*Large duct penetrations have been made in the north wall of the South Portico Attic (402) without providing lintels to support the brick construction above. [JGWA, 2006]*


*The emergency exit door (left) and floor slab (above) of the Northwest Fire Stair (C117) are dirty and covered with cob webs. The illuminated exit sign is not working. [JGWA, 2006]*

THE ROTUNDA

# RECOMMENDATIONS

## APPROACH TO PRESERVATION AND RESTORATION

As a cultural property of great national and international significance, the Rotunda requires thoughtful consideration in the development of philosophical guidelines and a practical approach to preservation and restoration. The 1973-1976 renovation was largely based on academic research and not the examination of physical evidence. This has resulted in considerable controversy, particularly regarding the purging of the McKim, Mead & White interior and the compromises made to the original Thomas Jefferson design in the renovations of the interior. The fact that work was carried out by an architectural firm more experienced with new construction than historic preservation resulted in an overreaction to perceived functional and administrative requirements.

As the previous sections of this report document, the Rotunda has undergone four separate periods of construction, each of which resulted in a distinct form for the building. These periods are the following:

1. Thomas Jefferson's original Rotunda (1824-1827).
2. Thomas Jefferson's Rotunda with Robert Mills' annex (1854).
3. McKim, Mead & White's rebuilding of the Rotunda after the 1895 fire (1898).
4. Ballou and Justice's renovation of the Rotunda retaining the McKim, Mead & White exterior and recreating a version of the original interior (1973-1976).

From these four periods of construction, there are three basic options for the preservation and restoration of the Rotunda, as outlined below. We strongly recommend that the University consider the adoption of Option 3 as the most historically sensitive, accurate, politically defensible, and cost effective approach to the preservation and restoration of the Rotunda.

***Option 1. Restore Thomas Jefferson's Rotunda on the interior and exterior.***

This option would remove all of the McKim, Mead & White building fabric, as well as the 1970s work designed by Ballou and Justice. This approach would result in a building that is similar in plan to the existing, but would be more accurate to the original design.

One problem with this approach is that the exteriors of all of the pavilions have been altered from their original Jefferson design; many now have significant, later additions which were constructed to accommodate specific functional requirements. Philosophically, in their present form, the pavilions would not be consistent with a pristinely restored Rotunda. Also, the restored Rotunda would, in effect, ignore significant events in the history of the university, such as the 1895 fire and subsequent McKim, Mead & White design work. This option would include the following construction:

a. Remove the north portico.
b. Reconstruct the exterior north stair.
c. Remove the north wings, and restore the south wings.
d. Reconstruct the dome and skylight.
e. Replace all exterior moldings with more accurate replications of Jefferson's work.
f. Replace doors and windows. Replicate the curved sash.
g. Remove the McKim, Mead & White masonry lining on the interior of the Rotunda drum; this lining was introduced to support the c.1898 Guastavino tile dome.
h. Replace the stone capitals at the porticos.
i. Reconstruct the cornice under the south portico.
j. Remove the balustrades on the terraces.
k. Introduce serrated roofing on the south wings, and eliminate the ability to walk on the terrace.

**Advantages of Option 1**

a. Stripping the building will expose any remaining evidence of Jefferson's construction.
b. The complete reconstruction and restoration of Jefferson's Rotunda will create a model that more clearly communicates the architect's original design intent.
c. By restoring and reconstructing Jefferson's Rotunda, the design integrity between the interior and exterior will be re-established.
d. This approach allows the University to more accurately interpret Jefferson's interior. The 1970s project had significant budget constraints, and relied heavily on an art-historical approach. This can now be tempered by a more thorough understanding of early nineteenth century building technology.

**Disadvantages of Option 1**

a. This approach will require the demolition of the McKim, Mead & White north portico (the elevation of the Rotunda that has become the *front* of the building for generations of students and alumni).

b. This approach will require the demolition of the north, east, and west terrace construction surrounding the Rotunda (including balustrades) introduced by McKim, Mead & White.

c. This approach will require a conjectural roof design for the south terrace construction.

d. This approach will require demolition of the McKim, Mead & White tile dome and skylight opening and replacement with conjectural wood-framed construction. The non-historic replacement materials will present a greater fire hazard.

e. The exterior restoration will be expensive.

f. This approach will require the loss of an important surviving McKim, Mead & White exterior, and will ignore more than a century of the University's history, including the 1895 fire.

g. The re-creation of Jefferson's Rotunda must co-exist with the remaining buildings on the Lawn, buildings that have undergone nearly 200 years of change and modification. This would be an incongruent presentation.

h. Carrying this approach into the landscape would require that all of the existing landscape features to the north of the Rotunda be removed and replaced with conjectural elements. Jefferson intended that a fence be constructed to the north of the Rotunda to limit or control access to the building. The landscape was utilitarian; it was used for vegetable gardens.

***Option 2. Reconstruct the McKim, Mead & White interior and restore the surviving McKim, Mead & White exterior.***

This option would remove all of the 1970s Ballou and Justice interior and recreate the McKim, Mead & White interior. The existing McKim, Mead & White exterior would be restored. From a historic preservation standpoint, this option would be the most radical and controversial. There would also be programming problems because the interior would be essentially a two-story library space that might be difficult to use for other functions. This option would include the following construction:

a. Repair and restore exterior architectural elements.

b. Repair and restore the north and south porticos.

c. Repair and restore the north and south wings, and reopen the exterior passages flanking the north portico.
d. Restore the existing windows.
e. Reconstruct the McKim, Mead & White double-height library interior.
f. Restore the McKim, Mead & White roof and skylight.
g. Retain the c.1930s marble balustrade at the terraces.

**Advantages of Option 2**

a. The McKim, Mead & White exterior remains essentially intact and can be accurately restored.
b. The preservation of the exterior and the reconstruction of the interior would serve to educate students and the public about early twentieth century preservation philosophy.
c. Reasonably accurate documentation survives in the form of drawings, specifications, and photographs for both the interior and exterior work of McKim, Mead & White.

**Disadvantages of Option 2**

a. Would celebrate the work of McKim, Mead & White and suggest that it is more important than Jefferson's work.
b. The double-height domed interior space would limit the practical use of the building.
c. The interior restoration will be expensive.

***Option 3. Revise and upgrade the 1970s reconstruction of the original Thomas Jefferson interior to make it more accurate, and restore the surviving McKim, Mead & White exterior.***

This approach would retain and restore the McKim, Mead & White exterior and would selectively alter the 1970s interior to make it a more accurate reconstruction of Thomas Jefferson's original interior. However, because of the additional brick added to the interior of the original exterior walls by McKim, Mead & White, it will not be possible to exactly restore the original room dimensions. Of the three options, this is the most conservative and arguably the most defensible from the standpoint of modern historic preservation philosophy. This option would include the following work:

a. Repair and restore the exterior architectural elements.
b. Repair and restore the north and south porticos.

c. Repair and restore the north and south wings, and reopen the exterior passages flanking the north portico.

d. Restore the existing windows, and determine if the dome room windows on the north and south elevations were cut in following the original construction of the building.

e. Retain much of the c.1975 reconstruction of Jefferson's interior, upgrading and replacing building systems, refining architectural details and improving the interpretation of archival and physical evidence. Proposed changes to the interior include:

    1. Replacing the cast column capitals in the dome room with carved wood capitals to recapture the character of Jefferson's interior.

    2. Replacing the column bases in the dome room with accurate period bases.

    3. Replacing the turned balusters at the upper gallery with accurately profiled balusters.

    3. Removing the acoustical paneling from the interior of the dome and reconstructing a plastered finish.

    4. Reconstructing the stairs to reflect a more accurate interpretation of Jefferson's stairs. The existing risers are too deep because the wood finishes have been applied to a steel stair. Also, the stairs to the ground floor level were probably enclosed beneath the upper stairs, using longer single runs against the east and west walls of the central hall. There would not have been grand stairs to the basement. This modification would be made in conjunction with the re-establishment of the first floor entrance at the south portico. The existing glass door would be eliminated, and views would once again be possible from the windows flanking the doorway; the windows would no longer be inacessable behind the stairwells.

    5. Studying and reinterpreting the molding profiles used throughout the Rotunda to ensure that they conform to the known builders' profiles. The molding profiles should be matched to the work of the men known to have constructed the Rotunda. Examples of their work are available in the Pavilions.

    6. Modifying the width of door openings to reflect the detailed scaled plans of Jefferson.

    7. Removing passages, blind doors, and modifications introduced to accommodate the University president's office in the 1970s.

    8. Returning the statue of Jefferson to its nineteenth century location in the dome room, and reconstructing its stone pedestal.

    9. Reconstructing bookcases in the galleries, along with stairs to the galleries.

10. Re-establish Jefferson's natural history museum in the lower north oval.

Certain existing interior elements should be retained:

1. The antique English rim locks introduced in the 1970s are appropriate and should be maintained, except for the Carpenter-type rim lock on the door to Room 205.
2. The northeast and northwest corner stairs should be kept as fire exits.
3. The dome room bookcases appear to be accurately detailed.
4. The window reveals appear to be accurate reconstructions.

**Advantages of Option 3**

a. The McKim, Mead & White exterior will remain intact and can be accurately restored. This approach places an emphasis on the authenticity of existing construction, as opposed to the re-creation of missing construction.
b. The existing form of the building, including the terrace construction can be retained; and the complete history of the building can be interpreted.
c. From political and building conservation perspectives this approach represents the most conservative response to preservation and restoration needs. It requires the least intervention in the existing building fabric.
d. This approach represents the most cost effective solution to preservation and restoration.
e. This approach allows the University to more accurately interpret Jefferson's interior. The 1970s project had significant budget constraints, and relied heavily on an art-historical approach. This can now be tempered by a more thorough understanding of early nineteenth century building technology.
f. This approach acknowledges the past 100 years of the University's history, and the school's need to evolve. It is in keeping with the development of the Lawn over time, especially considering the closure of the south end of the Lawn.

**Disadvantages of Option 3**

a. Retention of the tile dome will require that the brick lining added by McKim, Mead & White to the inner surface of the exterior walls must be retained to support the dome. This will prevent an exact recreation of Jefferson's oval rooms and the Dome Room.
b. The cost-conscious selection of materials by McKim, Mead & White will require ongoing maintenance, repair, and replacement.

# RECOMMENDATIONS

The following recommendations for the Rotunda's exterior, interior, building systems, landscape, maintenance, and programming assume the adoption of preservation and restoration Option 3:

## EXTERIOR RECOMMENDATIONS

1. Replace the rusted terne and painted copper sheet metal roofing on the dome and portico roofs with copper sheet metal roofing to replicate the McKim, Mead & White copper tile roofing.  Use flat-lock seam copper roofing on the flat areas surrounding the base of the dome and on the steps of the dome.
2. Replace the modern aluminum-framed skylight at the oculus of the dome with a vented skylight replicating the framing and appearance of the sixteen foot diameter circa 1826 skylight.
3. Provide more comprehensive lightning protection for the Rotunda dome and porticos.
4. Chemically clean the exterior brick and marble masonry to remove dirt, stains, lime run, and algae; and repoint the masonry using lime-rich mortar and grout to replicate the original appearance of narrow head joints and wider bed joints in the brickwork.  Develop a monitoring program to observe areas cleaned of lime run; this program will determine if previous terrace repairs have been successful, or if water continues to percolate through the terrace construction.
5. Repair areas of broken or missing brick, and restore parged coatings (stucco) on columns and brickwork.
6. Re-lay the inward sloping stone water table course at the base of the Rotunda, establishing positive drainage away from the building and making dutchman repairs as necessary to restore the stonework.
7. Develop a program for cleaning and repairing the stone capitals and bases of the portico columns and pilasters.  A conservative schedule of traditional stone dutchman repairs and replacement should be utilized to ensure a sound, long-term approach to preservation.
8. Chemically strip the built-up paint from the copper sheet metal architraves and pediments at the windows and doors, and the copper sheet metal cornice moldings.  Once stripped of paint, the sheet metal ornamentation should be surveyed; and a repair program should be developed to restore and paint the copper moldings.

9. Restore the c.1898 windows (replacing cracked glass and all window glazing putty) and doors. An effort is currently being made to maintain windows and doors on an ad-hoc basis with paint and additive repairs; however, a comprehensive program is required to establish sound base conditions.
10. Replace existing window and door flashings.
11. Remove, conserve, and re-install the bronze plaques on the north and south elevations of the Rotunda.
12. Re-lay the terrace paving, replacing the constantly eroding setting bed that clogs the terrace drains with sand. Alternatively, consider reconfiguring the drains so that they are not susceptible to the infiltrating sand.
13. Conserve the marble balustrade at the perimeter of the terrace to eradicate the bright orange biological growth in the pores of the stone. Repoint the balustrade to maintain weatherproof joints.
14. Develop a program of building probes to evaluate the structure of the north portico stair and the terrace at the base of the stair. Restore the stair, terrace paving, and underlying structure as required, eliminating the temporary shoring in the mechanical room beneath the stair.
15. Restore the south portico stair, and replace the existing iron-and-bronze railings with iron railings of a more historically appropriate character.
16. Replace the modern floating plaster ceilings and halogen down-lighting in the cryptoporticus and adjacent arcades with more traditional plaster ceilings and prismatic Halophane lighting that is sympathetic to the existing fixtures along the Lawn colonnades.

INTERIOR RECOMMENDATIONS

If the recommendations of Option 3 of the choices for preservation and restoration are selected, additional recommendations for the interior include the following:

1. Replicate historic furnishings in the restored rooms.
2. Eliminate the down-light fixtures in the primary spaces of the Rotunda.
3. Remove the oversized chandeliers from the oval rooms of the Rotunda.
4. Install a historically appropriate chandelier in the dome room of the Rotunda.
5. Develop a program of building probes to more carefully evaluate plaster cracking in the ceiling construction and column cracking in the dome room.
6. Survey the interior dome construction following the removal of the acoustical paneling.

7. Repoint exposed brick masonry as required, especially in the spaces beneath the north portico stair.
8. More latitude should be allowed for the interior finishes of the wings. The McKim, Mead & White windows and doors should be retained, and new doors should reflect the design and construction of the existing MM&W doors. The new finishes should be compatible with the turn-of-the-century construction of the wings.

BUILDING SYSTEMS RECOMMENDATIONS

1. Provide new electrical wiring and devices throughout the building to replace the existing thirty year old wiring and equipment.
2. Provide new piping and plumbing fixtures throughout the building to replace the existing equipment.
3. Provide a new fire detection, notification, and suppression system for the building, replacing the existing sprinkler system.
4. Provide new mechanical equipment throughout the building to replace the existing thirty year old equipment. The new equipment should not depend on the ability of the centrally supplied chilled water system to remove humidity by cooling. At delivery, this water may have become warm enough that it can not effectively remove humidity. The existing system may be contributing to mold growth in the building.
5. Replace mechanical air distribution systems to provide air supply and return grilles that are less visually obtrusive. The air distribution systems must also be replaced so that the duct lining can be removed. These linings may be contributing to mold growth within the building. New mechanical and utility space beneath the drum of the Rotunda will make new air distribution systems more accessible.
6. Currently, the mechanical system for the dome room utilizes an overhead air supply, and low level air returns. This should be reversed, supplying air low and returning it high, to make the most effective use of natural air currents (venting through a re-designed skylight), and thereby improving control of humidity.

LANDSCAPE RECOMMENDATIONS

1. A cultural landscape report should be completed for the entire *Academical Village* so that informed decisions can be made with regard to landscape changes over time and to the development of adjacent landscapes. There appears to be no

mapping or cataloging of trees, understory and shrubbery. This would be very useful to tracking the change and evolution of the spatial frame and visual landscape setting of the Rotunda, and integral to understanding the significance of both landscape and building and their relationship to emerging Charlottesville. This inventory and analysis could/would lend credence to and contribute to the discussion of periods of significance. This kind of analysis would greatly inform historical understanding and future restoration/design work in the landscape to the north of the Rotunda.

Based on the research for this historic structure report, there does not appear to be enough in the record to justify the identification of a period of significance for the landscape. The process of change has in fact been the characteristic most consistent about the northern landscape. If the cultural landscape report concurs with these findings, then a set of recommendations should be developed that adjust the landscape setting to a minor degree, that re-create/restore lost conditions because they are more workable solutions now, and make improvements to circulation, to maintenance, or to the unity of the Rotunda and its setting.

2. Initially, the landscape to the north of the Rotunda was utilitarian; vegetable gardens were located there until the mid-nineteenth century. And, it was not until that time that an office of superintendent of buildings and grounds was established. Thomas Jefferson preferred seeding grass in the lot north of the Rotunda because trees would mask the building and view (November 1, 1825 letter to Brockenbrough). In keeping with Jefferson's vision or intent, it would be appropriate to allow the planted areas surrounding the Rotunda to naturally open over time. As trees die, they should not necessarily be replaced, especially evergreens which mask the view of the Rotunda year round.
3. Until recent years there does not appear to have been formal landscaping in the courtyards flanking the Rotunda. The only two periods of correlation between the landscaping in the courtyards and the Rotunda appears to have been at the turn-of-the-century, following reconstruction of the Rotunda, and again in the 1970s with the restoration of the Rotunda. Stanford White provided half-hearted designs to fill voids on his drawings, but the courtyards and landscaping were scaled back as a cost saving measure. The current designs have no historical precedence. With no period of significance to which the courtyards should be restored, sufficient freedom exists to meet the functional needs of the building. With the re-establishment of ground-level passages flanking the north portico, paved paths should be provided between the north and south wings. These paths could be sloped to serve as accessible routes between the wings. Paving should be prioritized over landscape. The existing fountain in the east courtyard should

be removed or relocated. It detracts from the historic character of the space, and it requires significant ongoing maintenance. Similarly, the mechanical units and exposed electrical conduit and junction boxes should be removed from the courtyards.

4. The Magnolia trees should be removed from the courtyards. Apparently, they were introduced in the early twentieth century; c.1918 photographs show them in place. The tree roots may have an adverse impact on the building construction, and the debris from the trees contributes significantly to building maintenance requirements. Currently, the overgrown Magnolias obscure the Rotunda from view.

## MAINTENANCE RECOMMENDATIONS

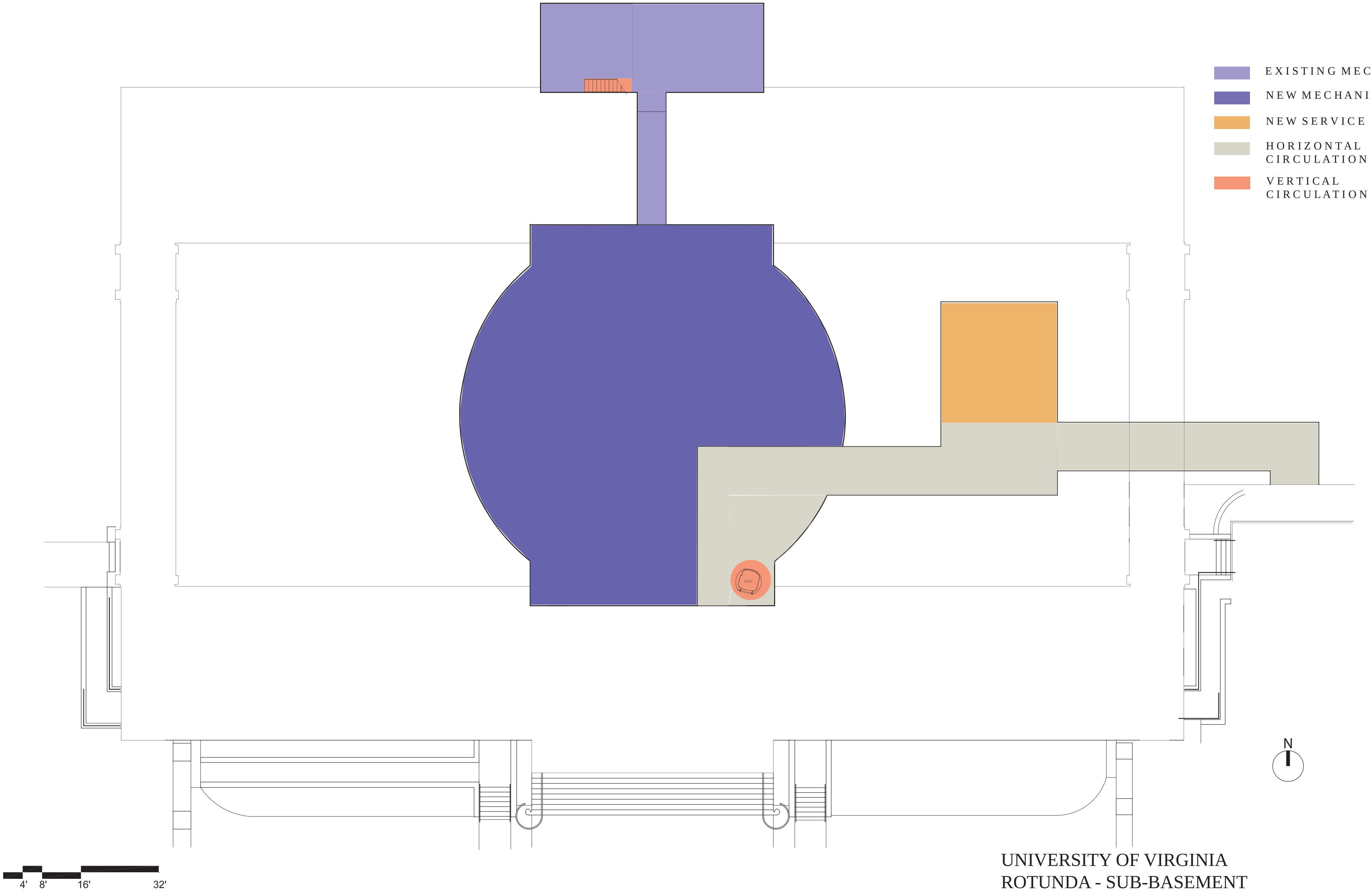
While it is obvious that ongoing building and equipment maintenance and regular housekeeping services are adequately provided for the Rotunda at the present time, a more sophisticated approach will be required in the future. The Rotunda should clearly be set apart from standard University maintenance procedures. As a National Historic Landmark, and as an integral part of an UNESCO World Heritage Site, the Rotunda demands special care and consideration.

1. A curatorial approach should be taken, treating the building as an artifact; and building conservation issues should be addressed from a scientific and technical perspective.
2. Maintenance routines and procedures should be standardized and scheduled regularly, and all work thoroughly documented.
3. A maintenance manual that outlines procedures and schedules repetitive surveys should be prepared specifically for the Rotunda.
4. Only highly trained and skilled tradesmen and craftsmen, who have a clear understanding of the building's importance, and who are thoroughly knowledgeable of the building's material history, should be allowed to work on the structure.

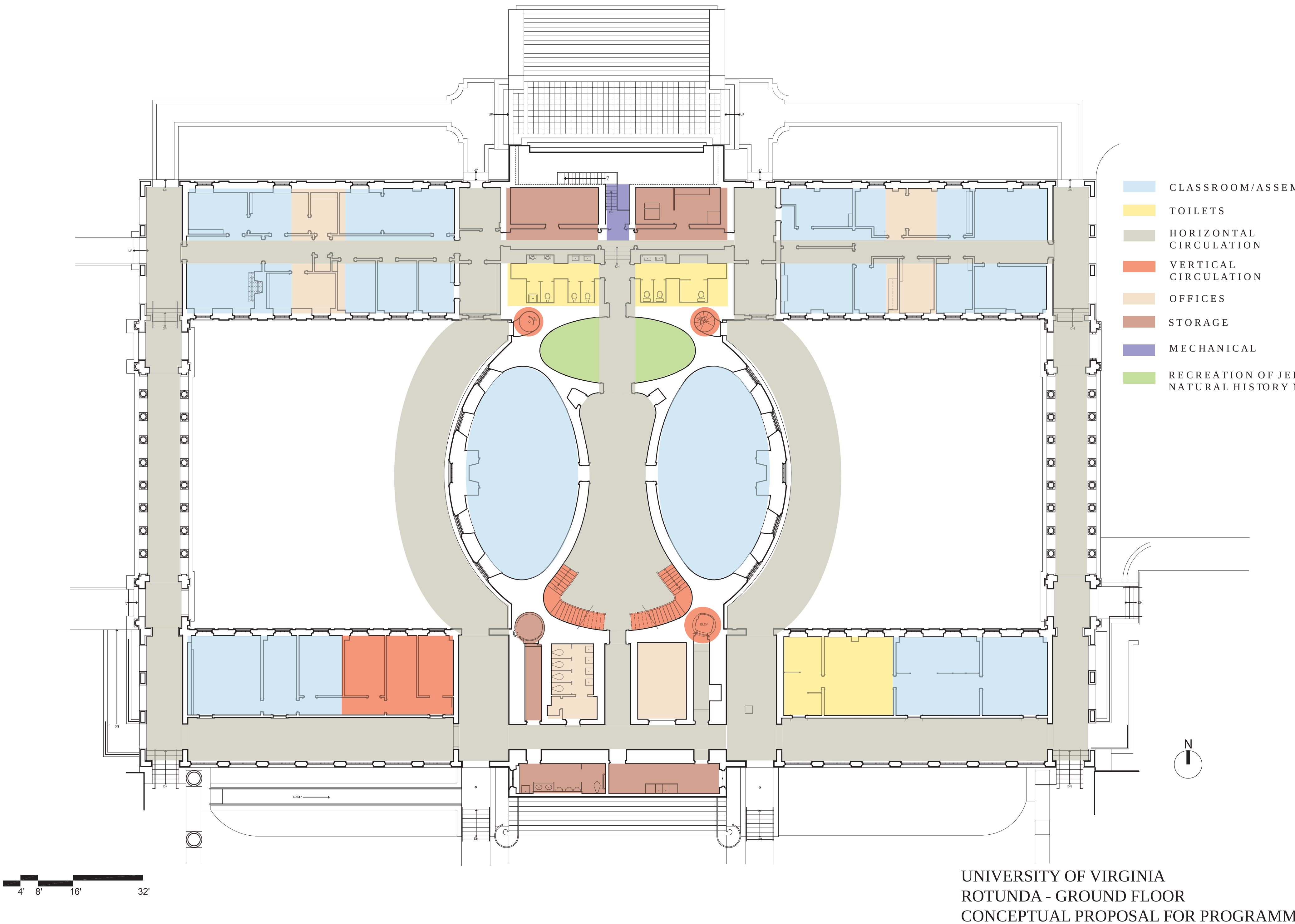
## PROGRAMMING RECOMMENDATIONS

As the heart of the Academical Village and icon of the university, the restored Rotunda should once again play a central and essential role in the life of the institution. A wide range of students, faculty, and administrators should actively use the Rotunda on an everyday basis. The new uses should be related to the original functions of the building. Recommendations include the following:

1. A new program of circulation should be developed so that the principal south entrance of the Rotunda becomes the main public entrance of the building.
2. The ground-level wings of the Rotunda should be adapted for seminar teaching spaces. Administrative functions should be relocated, so that students and faculty have the opportunity to use the Rotunda on a regular basis, restoring the function of the building to its original use at the center of student life.
3. The ground floor north-south passages flanking the north portico should be re-established for circulation. These passages may be used to accommodate the grade change for disability access to the north wings.
4. Restore dome room to an intimate reader's library, similar to the one recently established in Alderman Library, and discontinue its use for catered dining functions. This will encourage student use of the building and re-establish the original library function of the Rotunda.
5. Have smaller dining functions and lectures in the large oval rooms at the ground floor or main floor levels. Remove the oversized tables from the upper north oval room and the upper east oval room.
6. Relocate the Rotunda Administrator's desk and office from the lower north oval room to one of the spaces flanking the ground floor south entrance (these spaces are currently used for a toilet room and mechanical room). The lower north oval should be used for circulation and to re-establish Jefferson's natural history museum.
7. Relocate the toilet rooms that are currently adjacent to the ground floor south entrance to one of the flanking south wings.
8. Locate a new stair and lift in one of the flanking south wings, opposing the location of the new toilet rooms, so that public access is provided to the terrace and main south entrance of the Rotunda.
9. Develop underground mechanical and catering space beneath the ground floor of the Rotunda and/or beneath the courtyards so that adequate space is provided for equipment, storage, and service.
10. Install a new custom cab elevator in the same location as the current elevator (southeast corner of the Rotunda). Consider enlarging the shaft so that a larger cab can be accommodated.




UNIVERSITY OF VIRGINIA
ROTUNDA - SUB-BASEMENT
CONCEPTUAL PROPOSAL FOR PROGRAMM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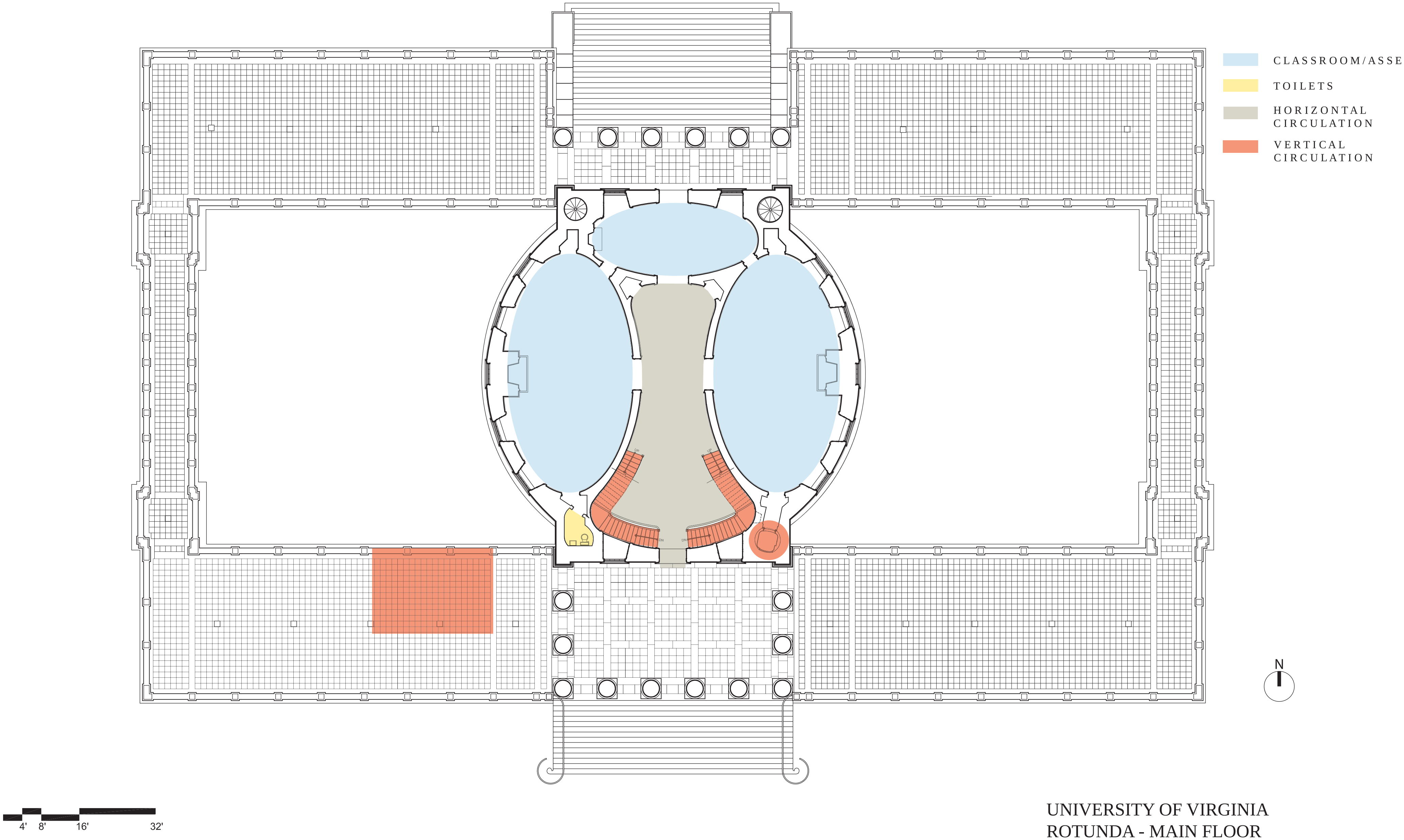
UNIVERSITY OF VIRGINIA
ROTUNDA - GROUND FLOOR
CONCEPTUAL PROPOSAL FOR PROGRAMM

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ROTUNDA - MAIN FLOOR
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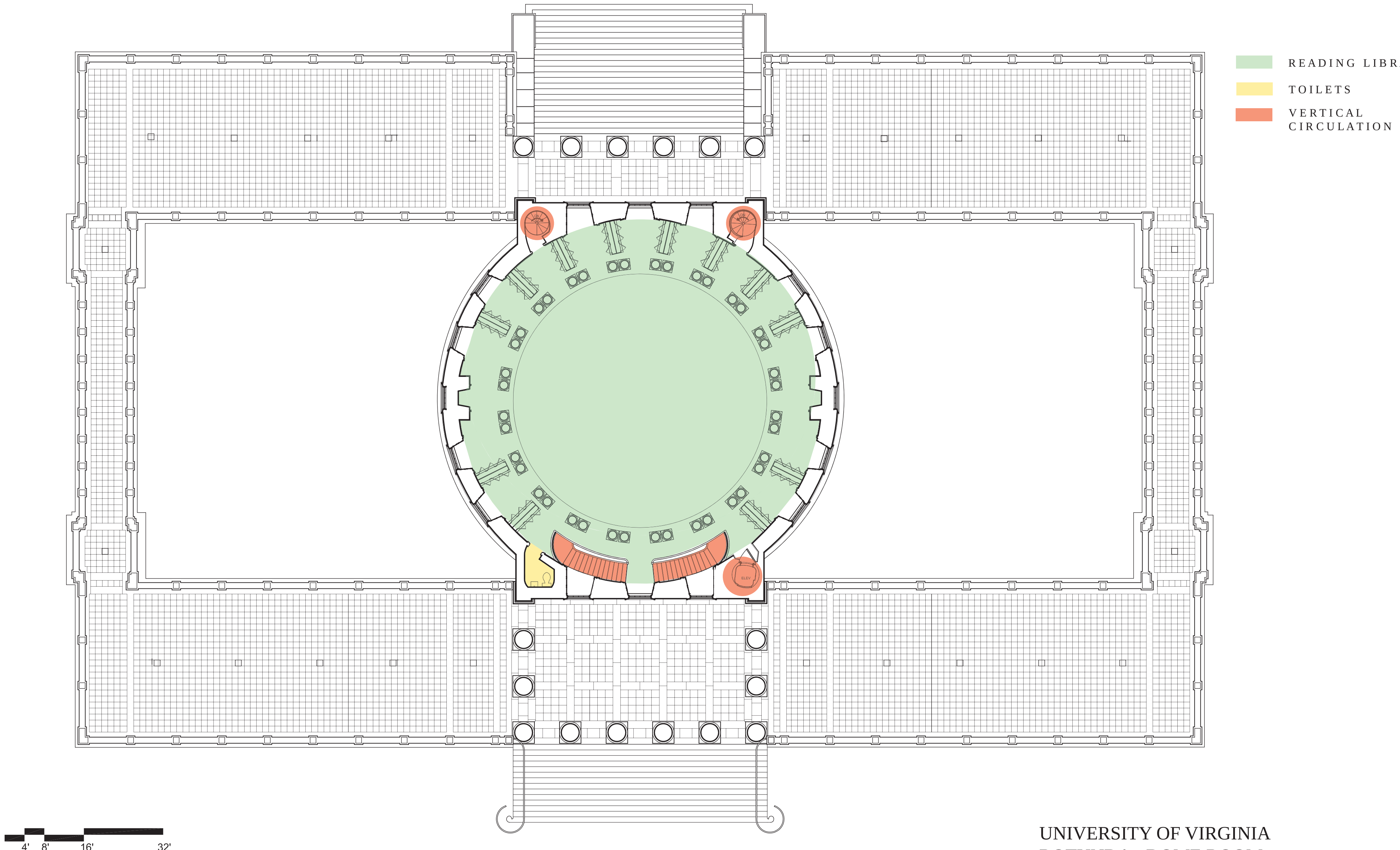
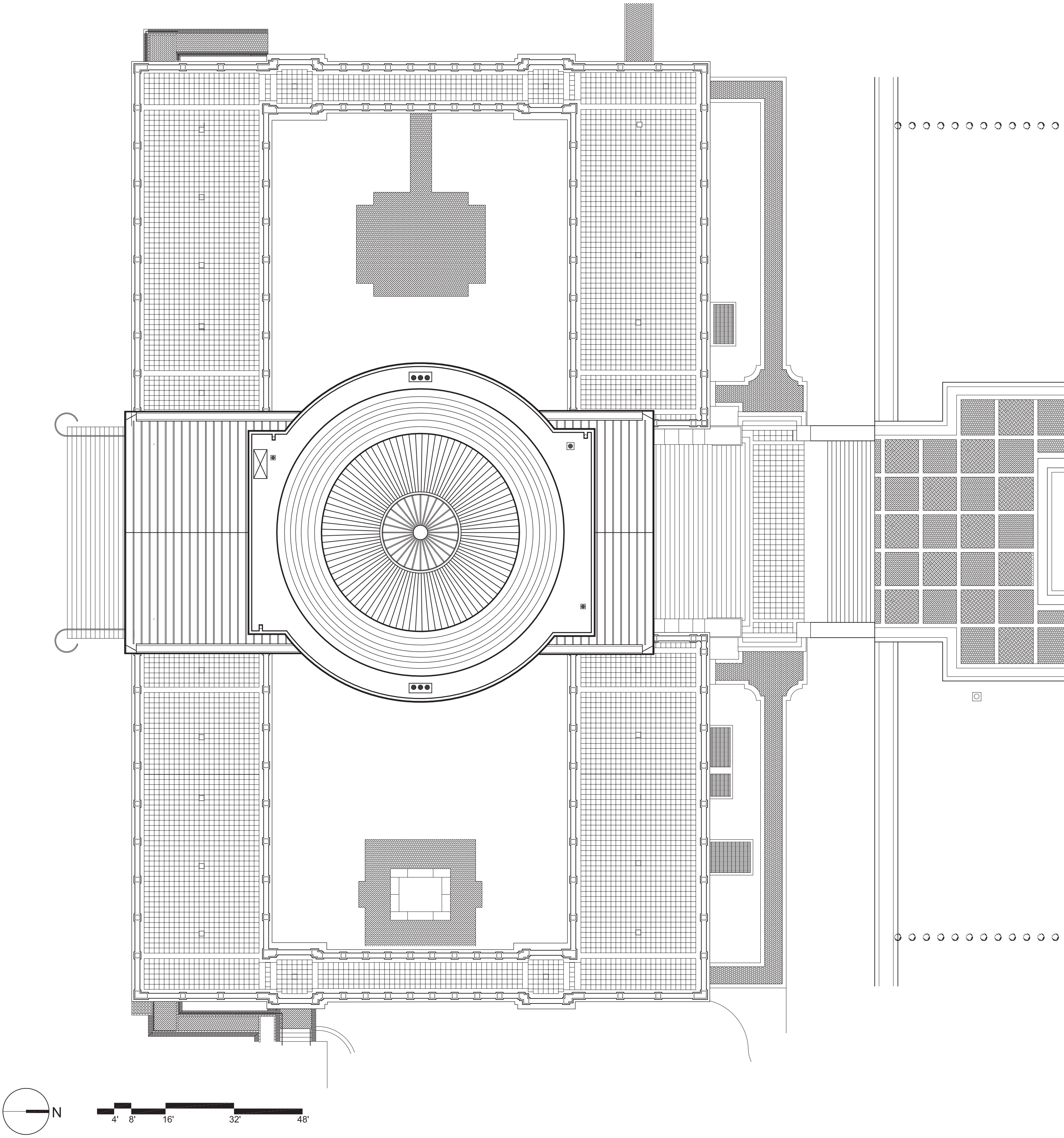



UNIVERSITY OF VIRGINIA
ROTUNDA - DOME ROOM
CONCEPTUAL PROPOSAL FOR PROGRAMM

THE ROTUNDA

# APPENDIX A

***Measured Drawings, 2007***
***John G. Waite Associates, Architects** PLLC*



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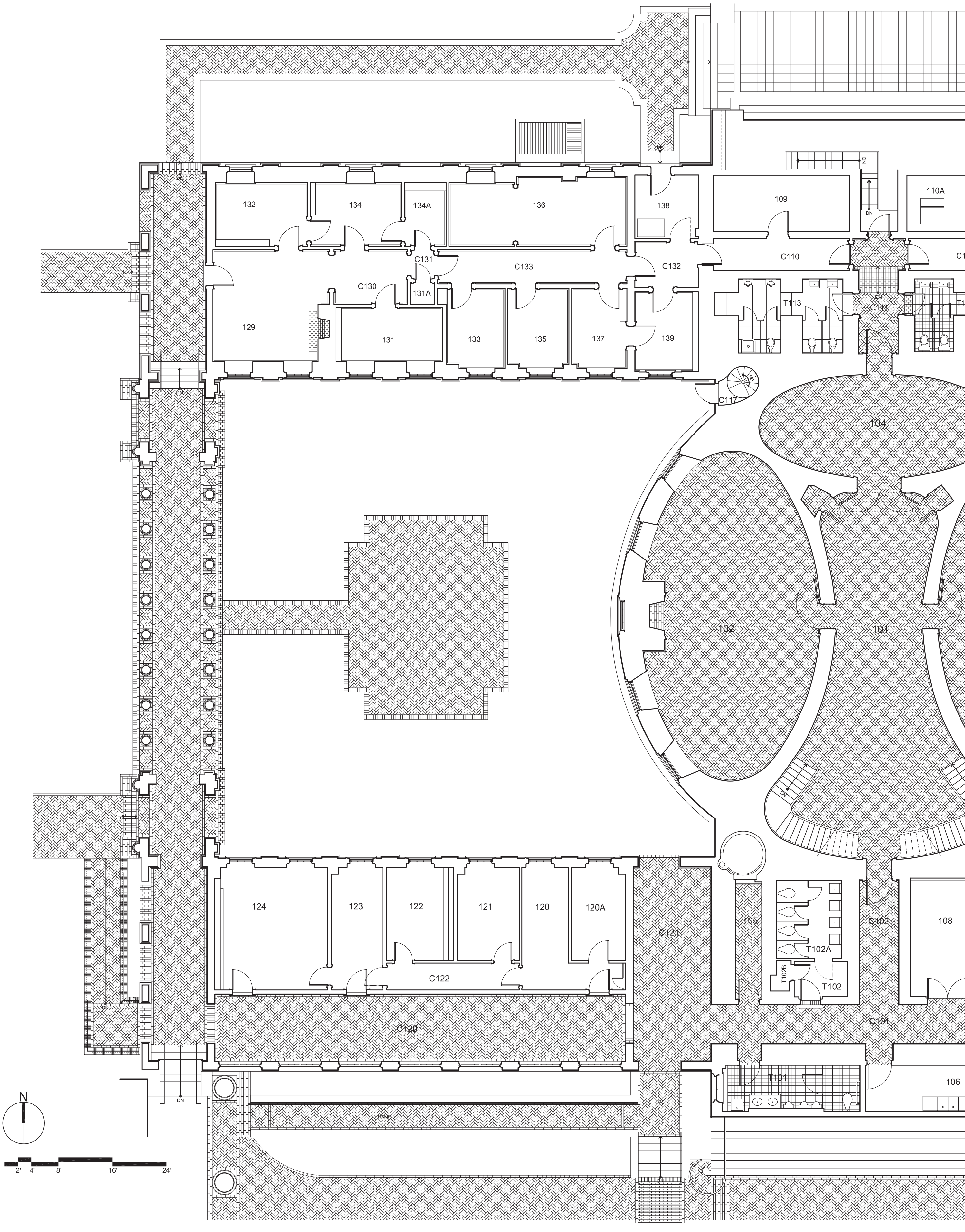

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120A
C121
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T102A
C102
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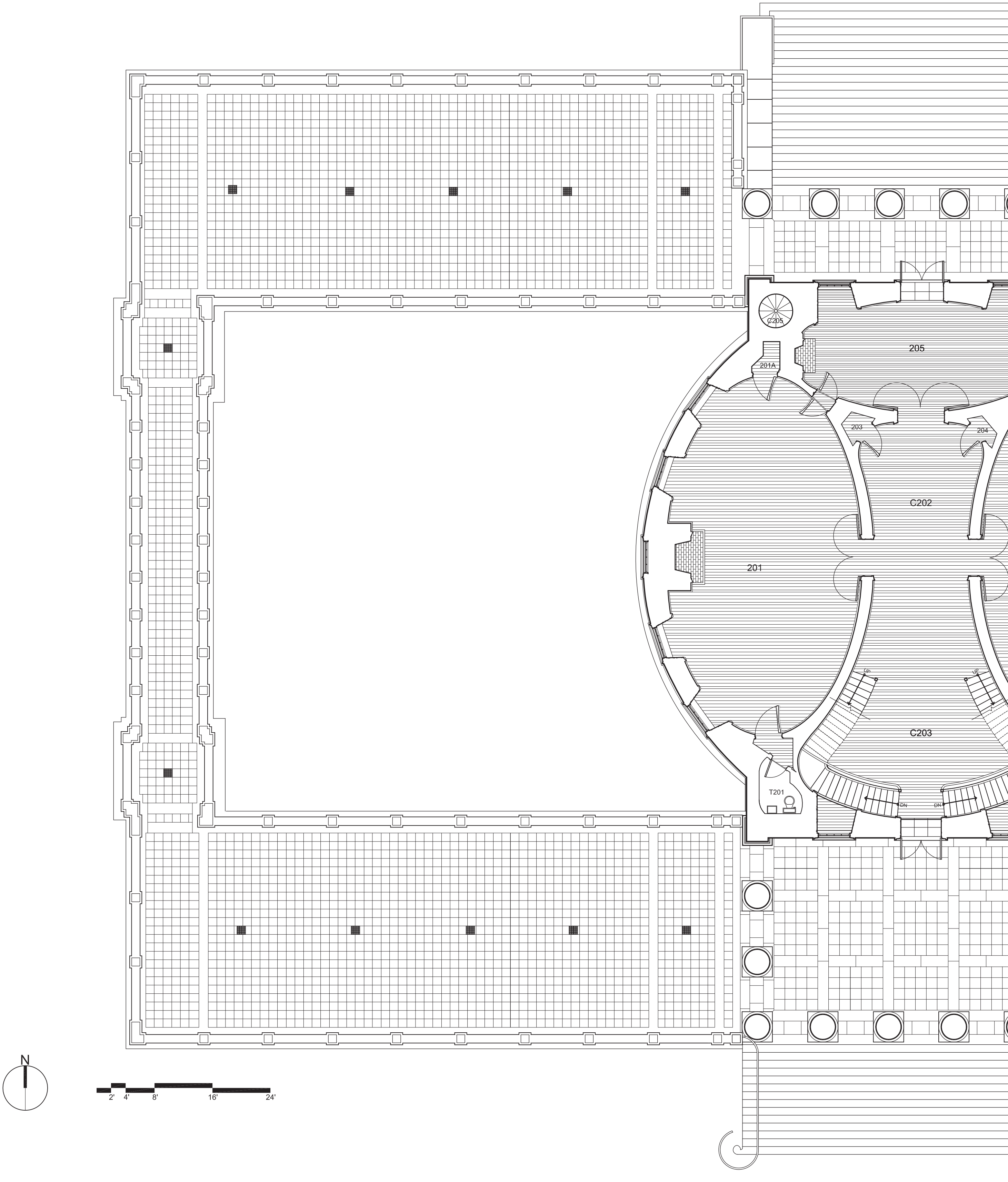

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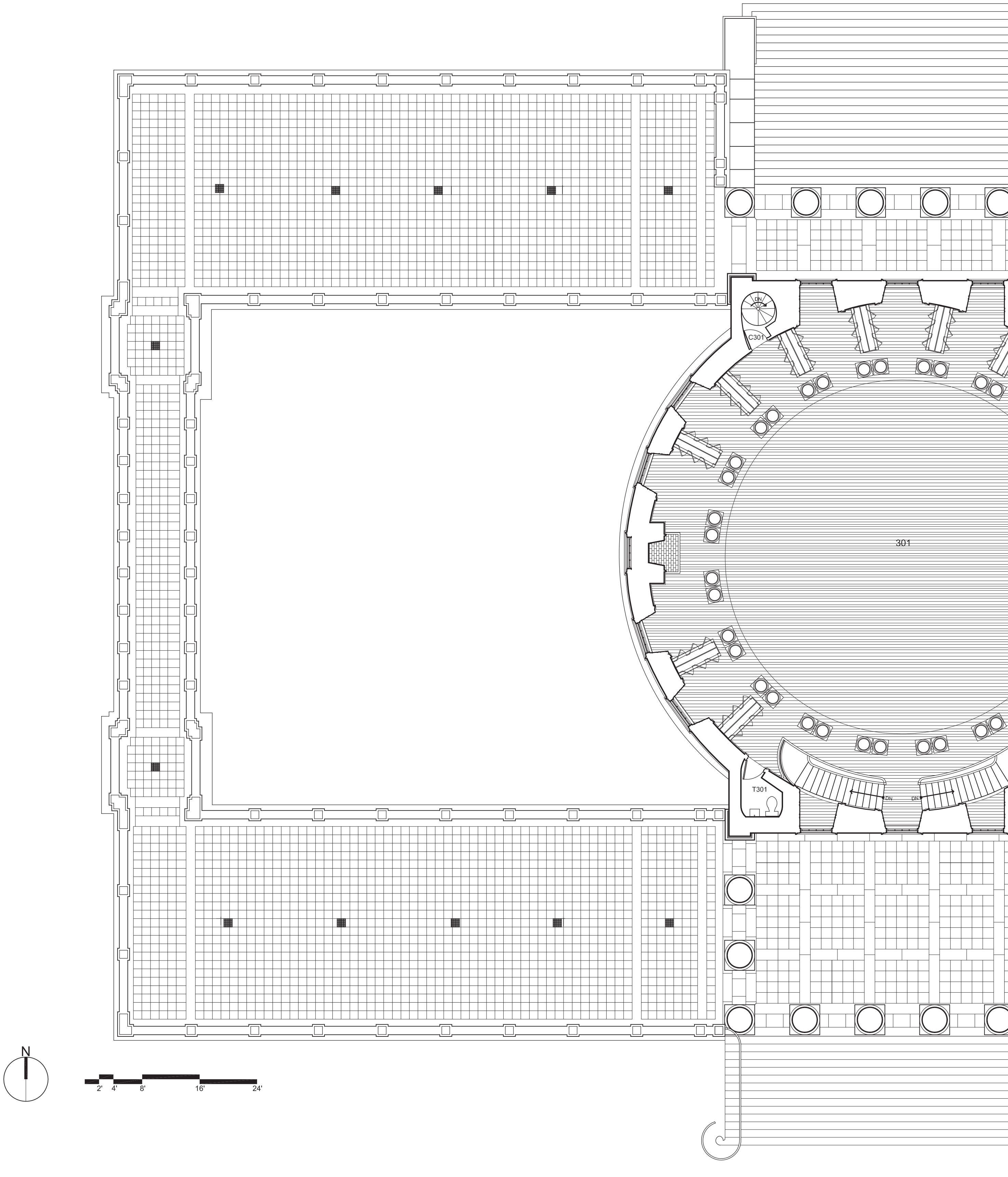

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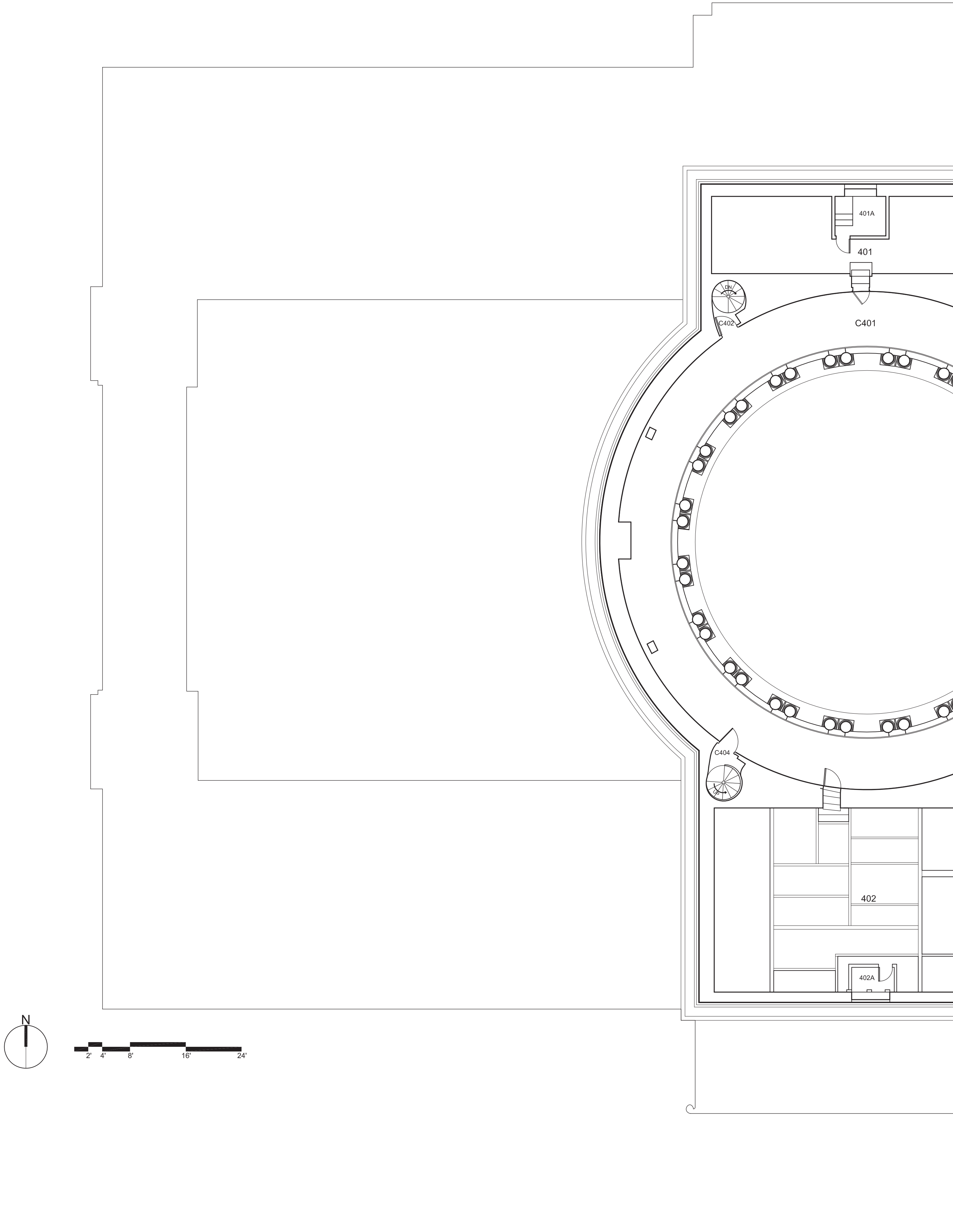
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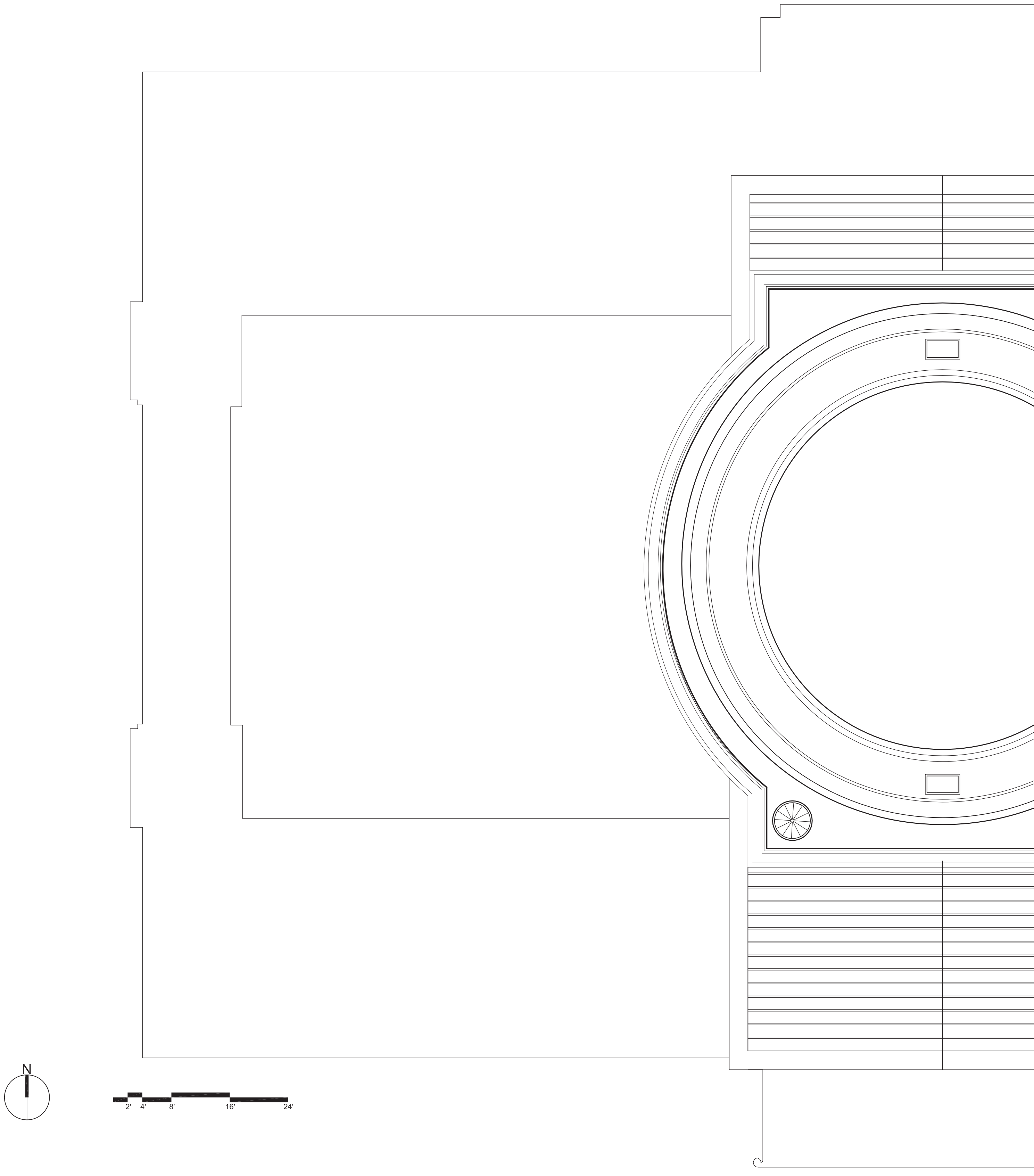
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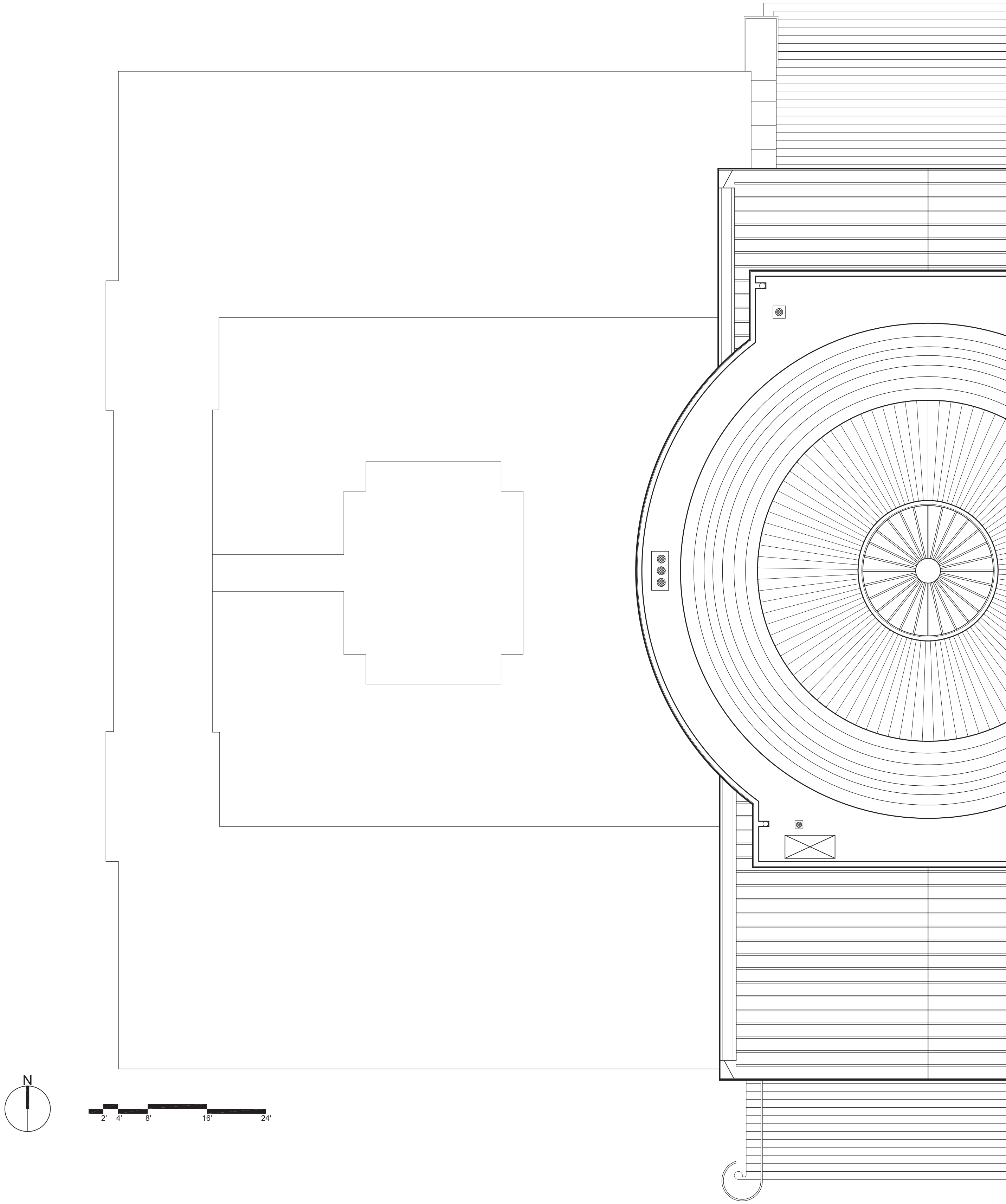
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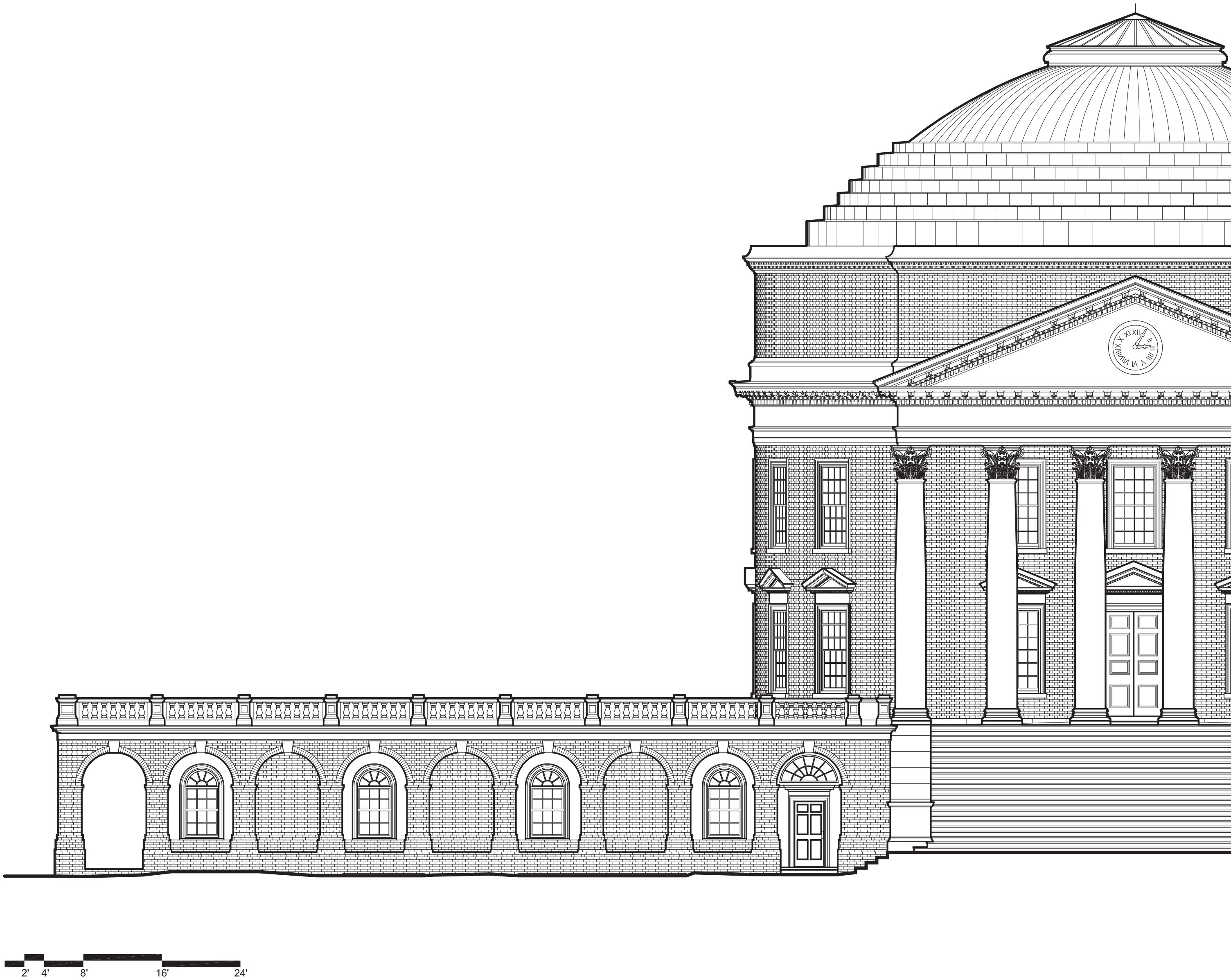
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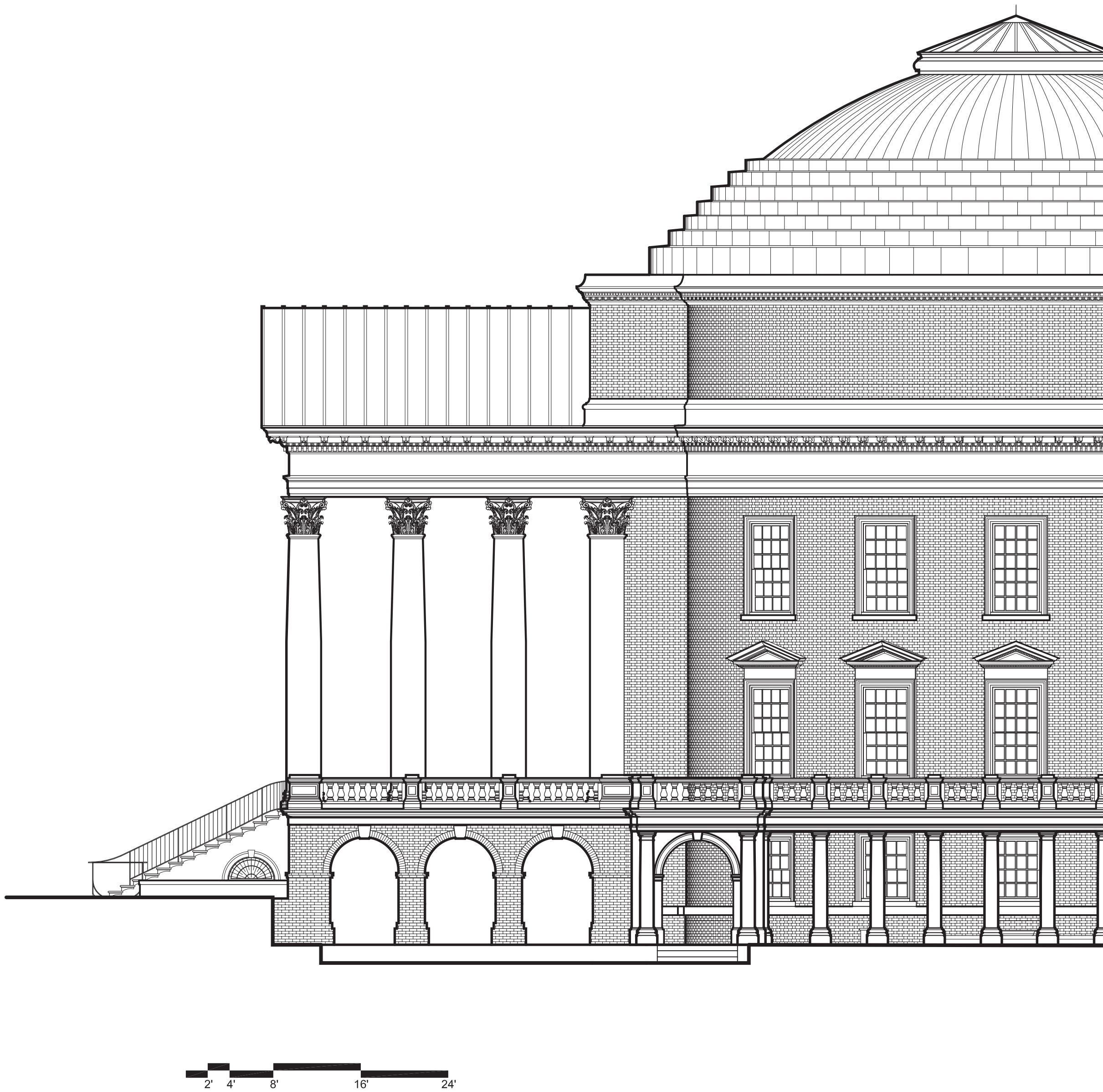
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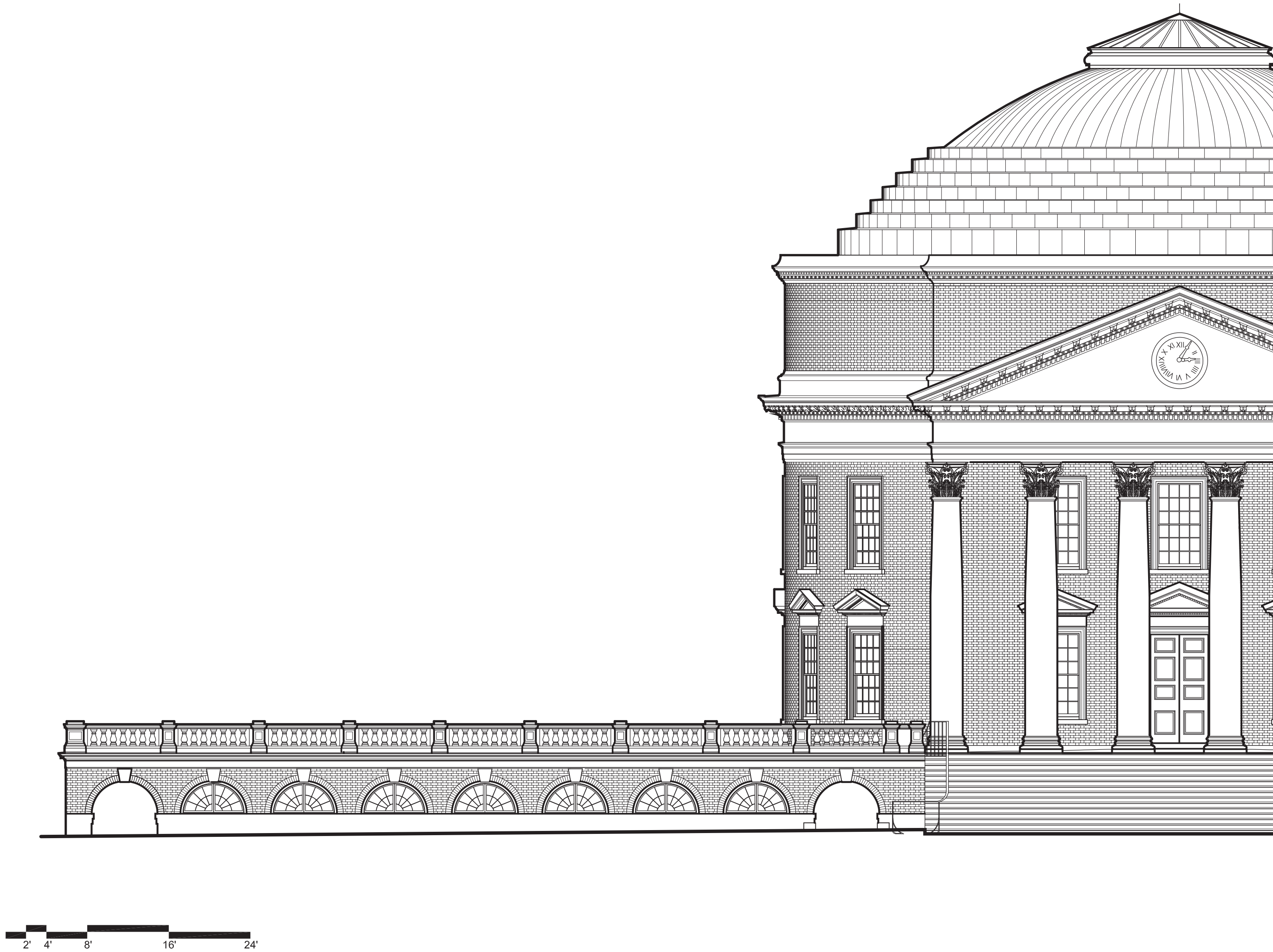
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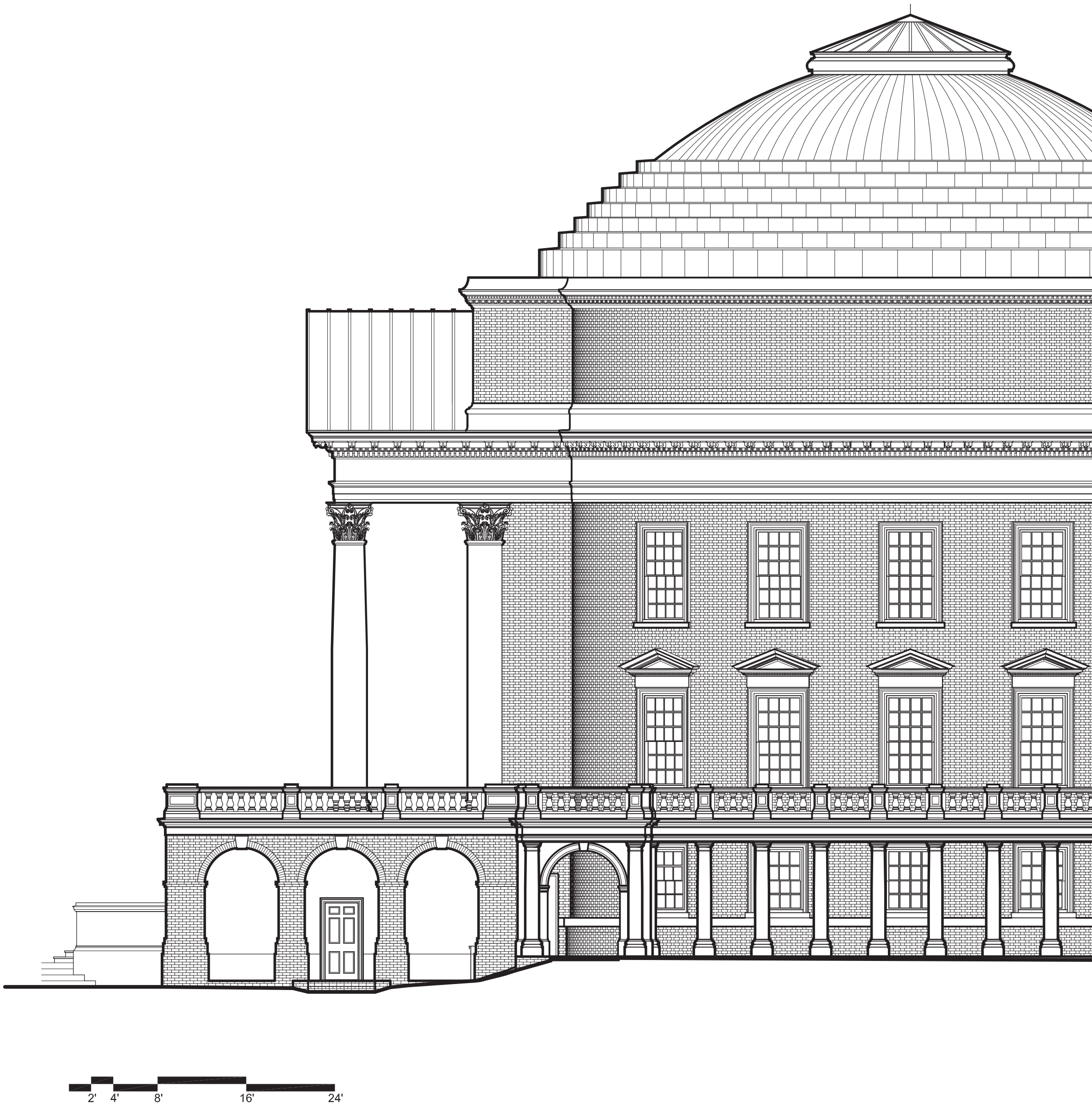
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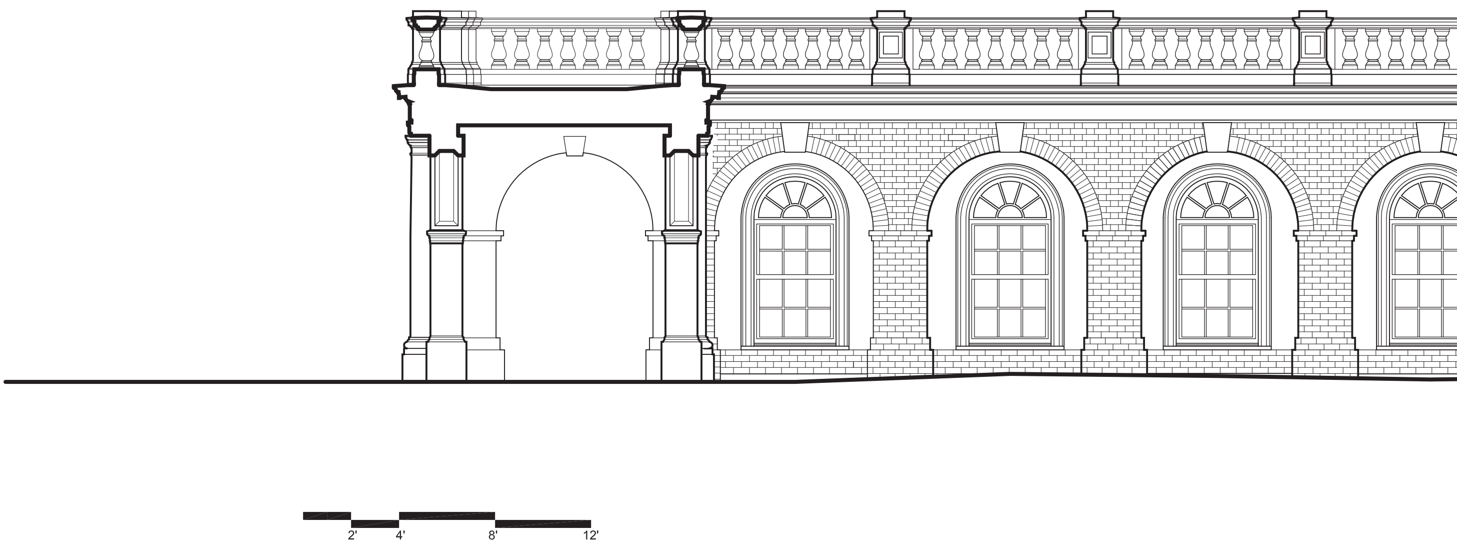
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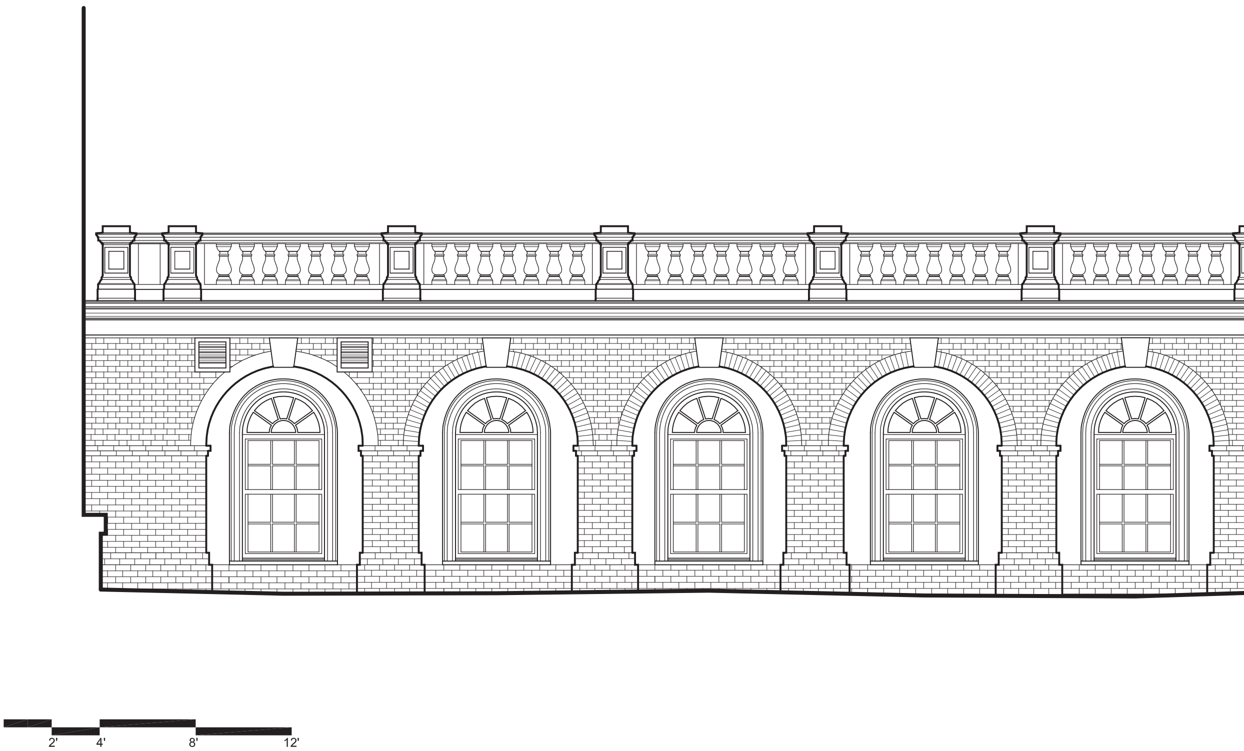

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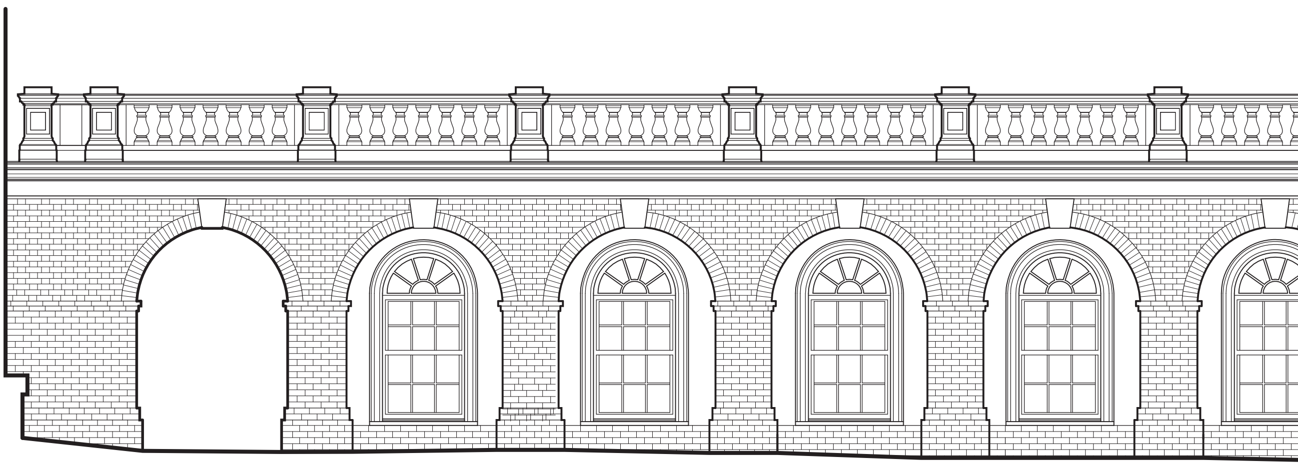

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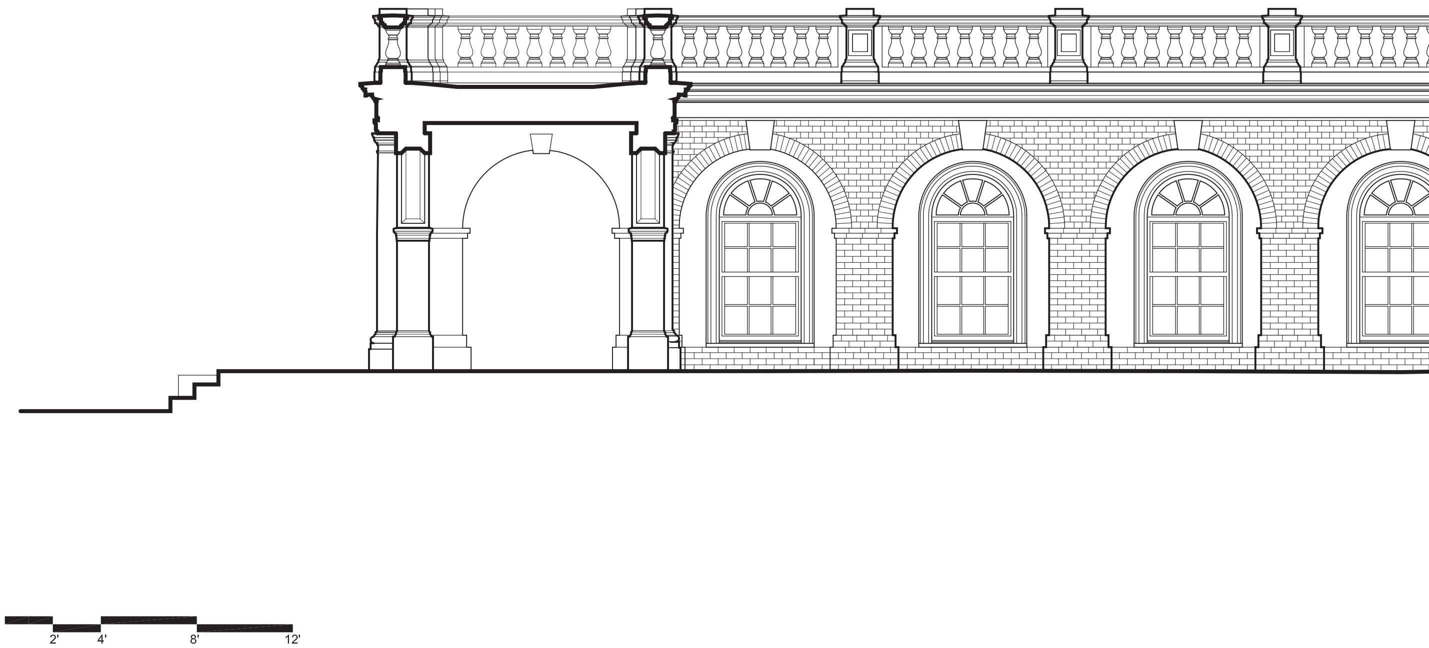
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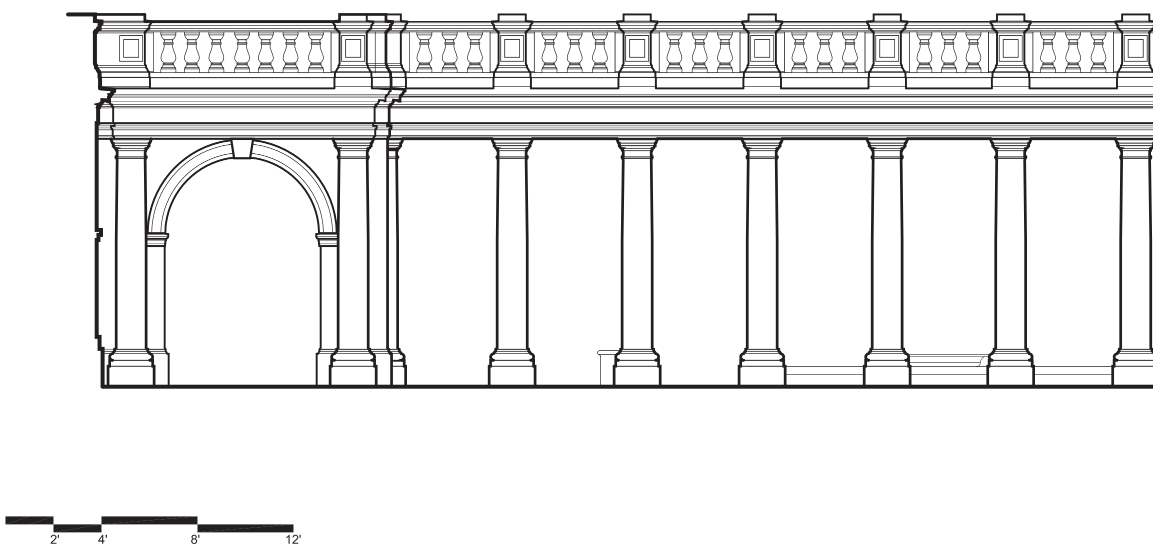
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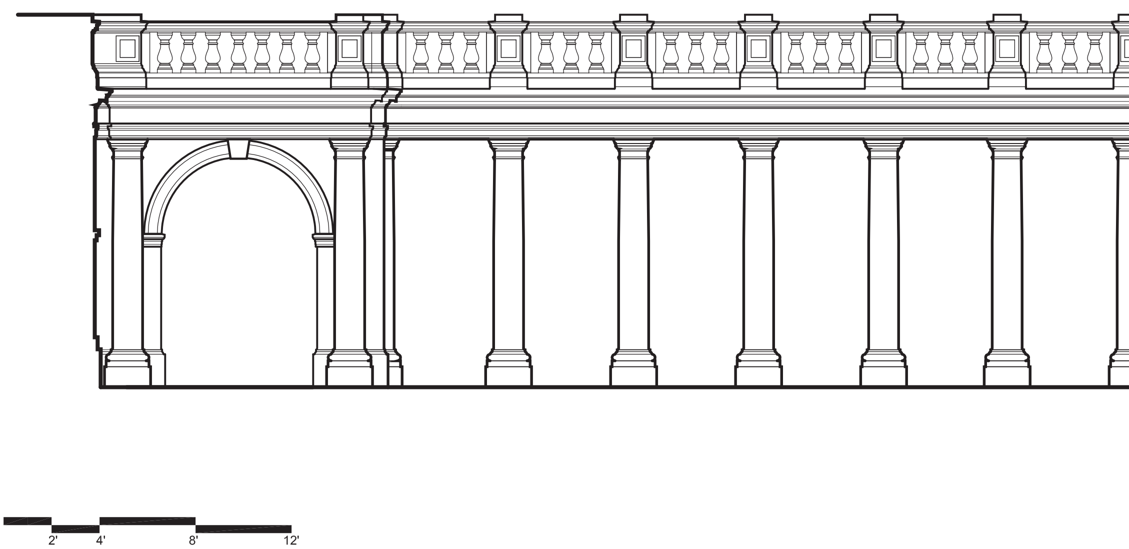

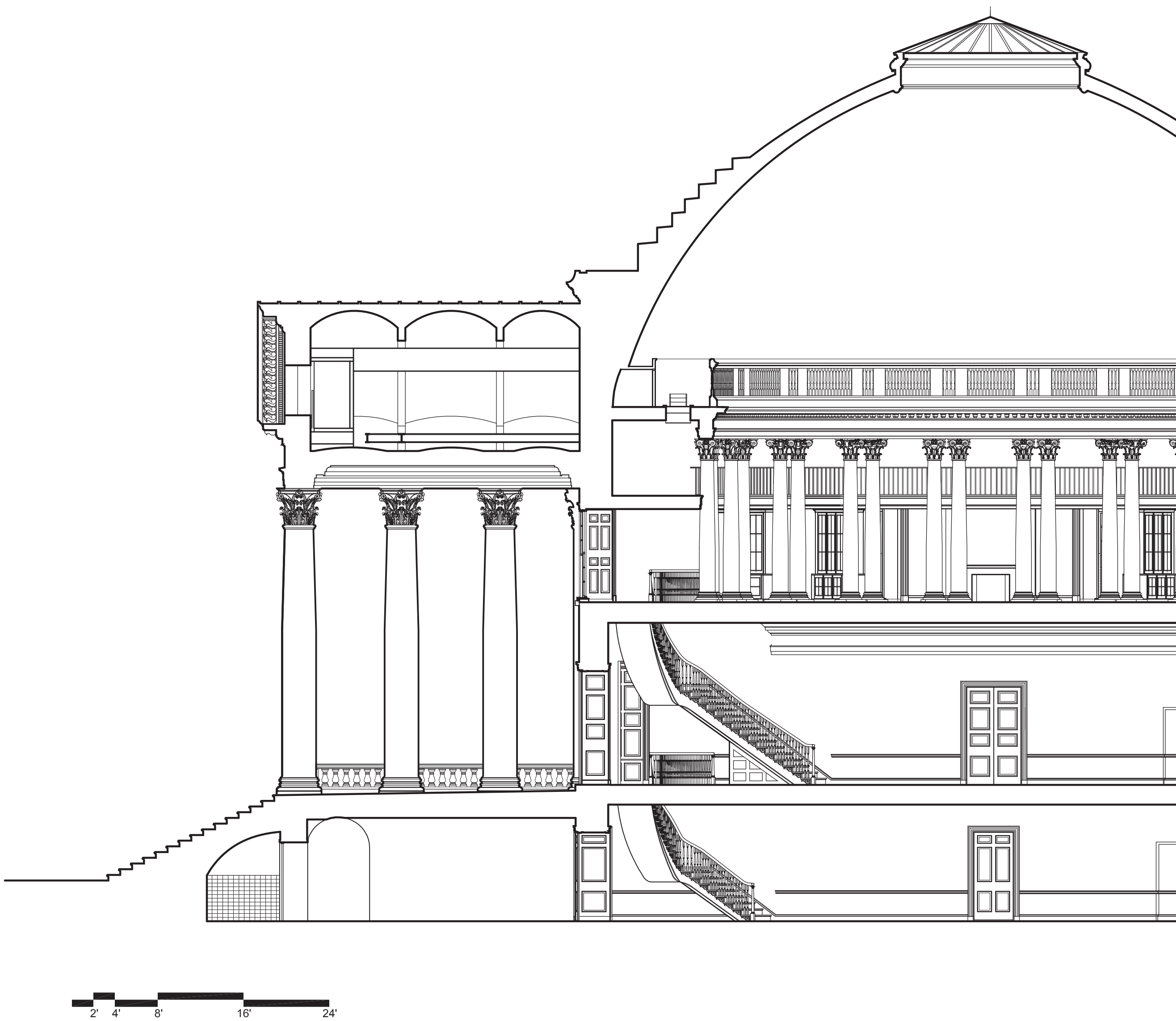
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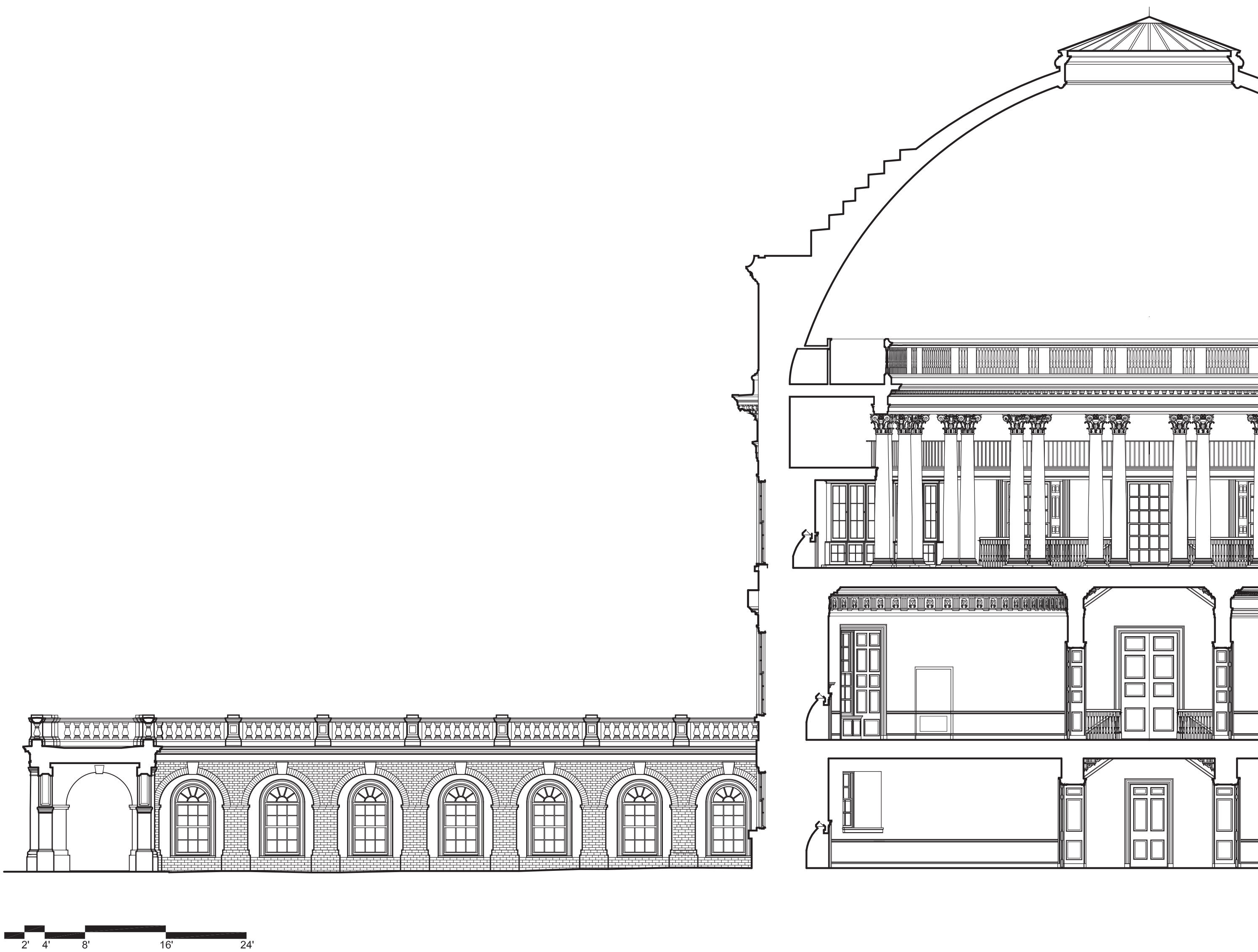
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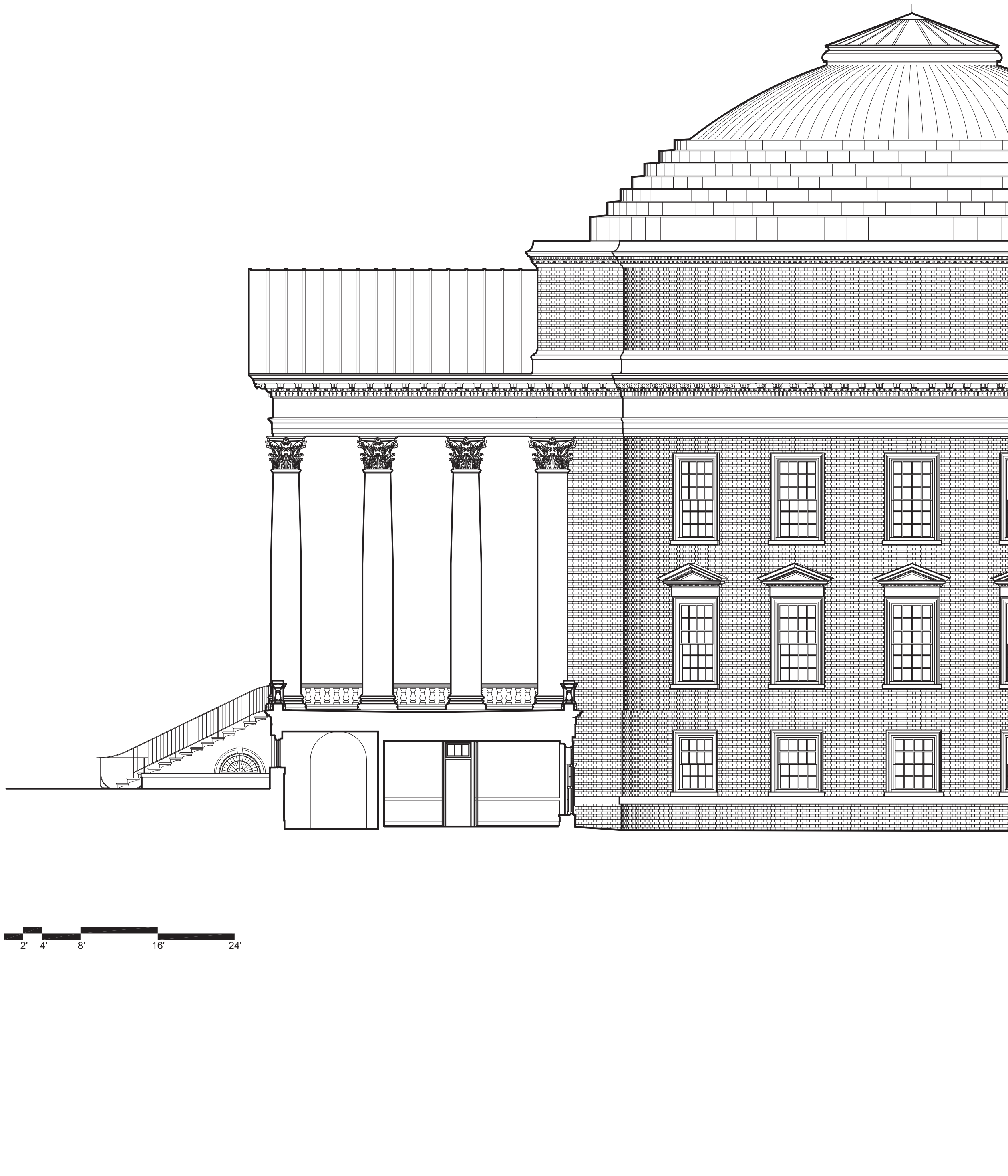

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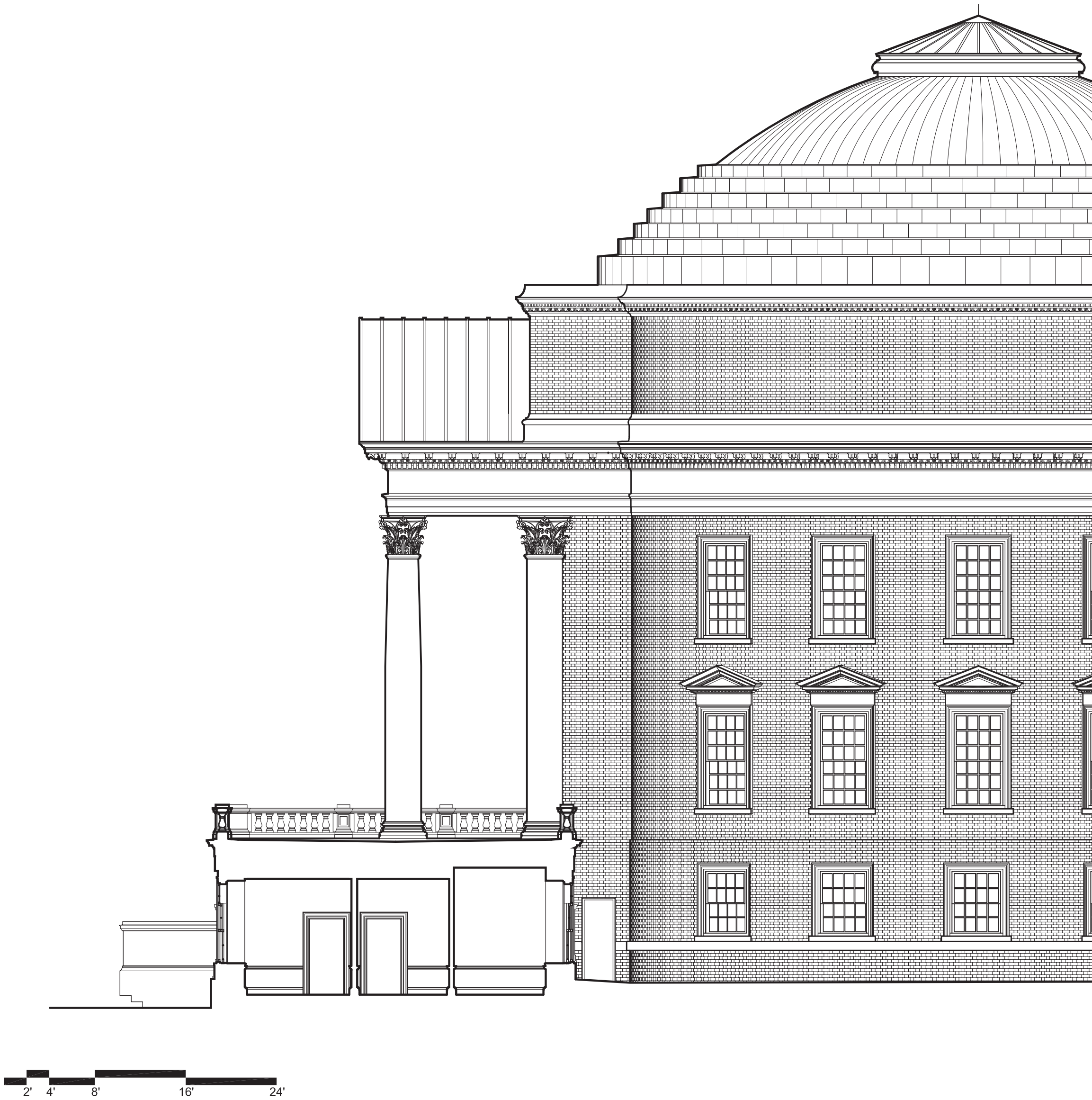
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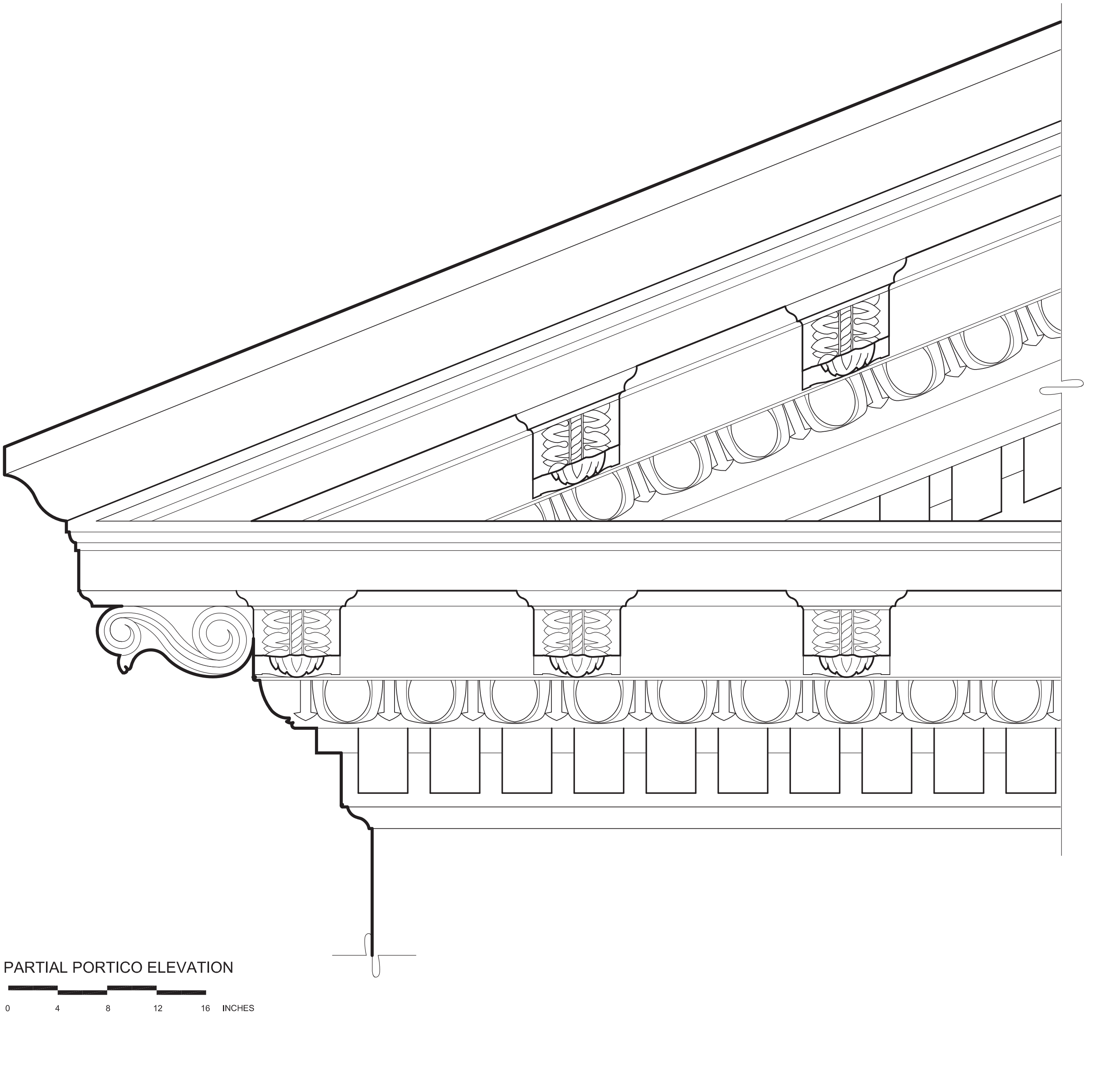

PARTIAL PORTICO ELEVATION

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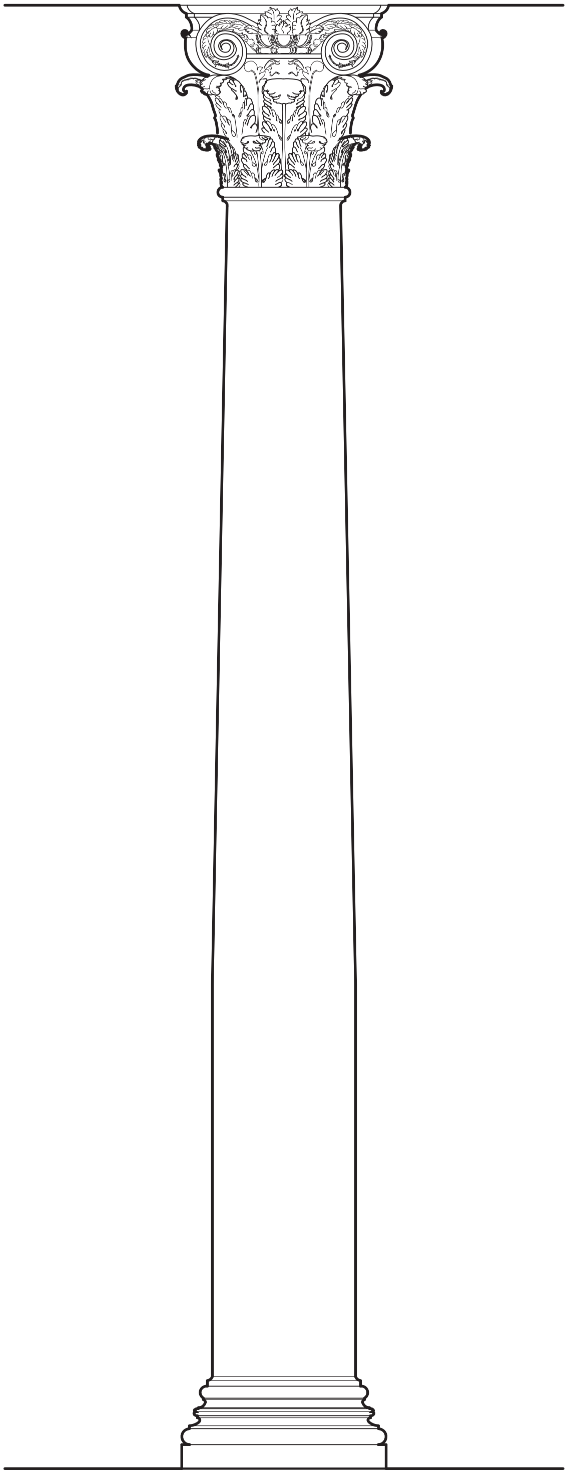

FRONT ELEVATION

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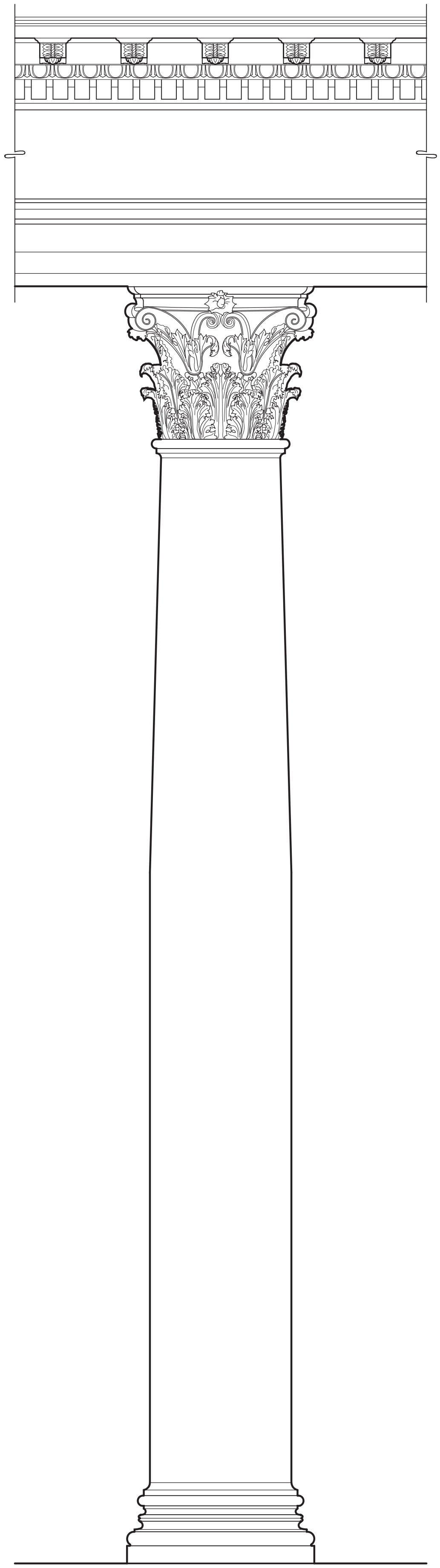

FRONT ELEVATION

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CAPITAL ELEVATION DETAIL

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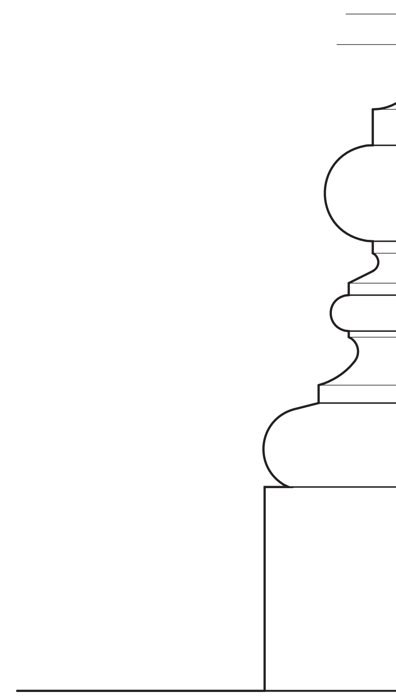

BASE ELEVATION DETAIL

0 2 4 8 12 INCHES

THE ROTUNDA

# APPENDIX B

***"Specifications of executing a certain Building proposed to be added to the Rotunda on the north side of the University Buildings"***
***January 3, 1851***
***Robert Mills, Architect***

THE ROTUNDA

# APPENDIX B

***"Specifications of executing a certain Building***
***proposed to be added to the Rotunda***
***on the north side of the University Buildings"***
***January 3, 1851***
***Robert Mills, Architect***

# SPECIFICATIONS

***Of the manner of executing a certain Building proposed to be added to the Rotunda on the north side of the University buildings; reference being had to the Drawings hereunto annexed :***

## GENERAL DIMENSIONS OF BUILDING.

**Main Building** 105 feet long, 55 feet wide.
**Colonnade between** 55 feet do., 25 feet do.
**Portico**—North End 55 feet do., 25 feet do.
**Sub-Basement** Story 14 feet high in the clear.
**Basement** Story 14 feet do. do.
**Principal** Story 21 feet do. do.
**Upper** Story to eaves and cove of roof, 18 to 20 feet high.

## EXCAVATION.

**Dig out the whole area**, designated on the drawing to the **depth, level with the surface** of the ground at the **north end of the building**, or **beginning** at 150 feet north of the **present Rotunda building**, and of a width between the terraces, **equal** to 185 **feet**, using the earth so excavated in raising and forming the **terraces designated** on the drawing.

After levelling off this area so excavated, dig out for the ***footings*** of the walls two feet deep, and of width corresponding to the thickness of the walls laid down on the Plans.—**Should the earth** thus taken out of this area not **suffice** to **make up** these terraces, other earth in the neighborhood to be **used** to complete the same. Should a ***wall*** front this terrace the **earth** will be **only** sloped ***outwardly***. After the **footings** of **the walls** are dug out the beds of the trenches are to be **beaten** down to a solid consistence to receive the **foundation walls**, and after they are laid and sett, to fill in and ram down the **ground** with wooden **rammers**. Should any springs of water be **met** with, proper drains are to be formed to lead off these and other waters. Level off and grade the sectional **ground** lines **designated** on the drawings. In the sub-basement, **no earth** is to be left nearer than 9 inches to any floor or **other timbers**,—such cavities to be filled in with ***dry materials***—broken stone, &c. No useless or other materials to be left on the ground, and should any water from rains, &c., settle in the foundations the same to be baled out or led off by under-drains, cess-pools, &c. The excavation will not commence nearer to the foundations of the present building than 20 feet.

## MASONRY AND BRICK WORK.

### *Dimensions of Walls.*



| | | |
|---|---|---|
| Footing of foundations outside, | 4 | Bricks. |
| Sub-basement Walls do. | 3 1-2 | do. |
| Basement " do. | 2 1-2 | do. |
| Superstructure do. to eaves, | 2 | do. |
| Partition Walls footing, | 2 1-2 | do. |
| Do. do. | 1 1-2 | do. |

All the bricks used in the building to be of the best hard burnt brick, and laid in the best and most workmanlike manner, in good mortar made with ***stone lime*** and ***sharp*** sand, in the proportion of ***not less*** than 4 to 5 of sand to one of unslacked lime—the lime to be first slacked in a box, and when thoroughly dissolved to be thrown into the bed of sand and well mixed and worked together. The facing the outside walls to be ***with pressed brick***, laid in Flemish bond, flat joints well settled down and bound with the interior part of the wall and prepared for painting. The other parts of the walls to be laid in American bond (3 stretchers to one header.)



When the foundations are laid, care must be taken that the ground has been well rammed and settled down previously to laying the brick.

The foundation walls will be so laid that the axis of both walls, upper and lower, shall be in the same plane or be perpendicular with each other, so that the bearing shall be equal on each side ; every course of brick laid throughout the building to be well bedded and joints flushed up with mortar ; no bats to be allowed except for closures, or where weight only is required, as in the spandrils of the arches forming the terraces of porticos. Provision is to be made in constructing the walls for all the furnaces &c , the smoke and air-flues required in the building, whatever chimnies are carried out the shafts to be raised to the height designated at least equal to those in the present building; all the flues to be 1 1-2 bricks square, well pargetted, and cleaned out after the chimnies are topped out ; dead arches to be thrown over all the openings inside, the outside to be finished as the openings in the present building. The bricks capping the chimnies must be laid with hydraulic mortar well pargetted, and where other walls are exposed to the weather, the same precaution is to be used.

To form the terraces or floors of the portico and colonnade, groin arches are to be turned, laid in hydraulic mortar, spandrils filled up with brick, flush and level, ready for paving with tile or brick.

Where fire places are introduced 4 inch Trimmer arches are to be turned for the hearths; care must be taken that no timbers be allowed to touch the smoke flues or fire places.

Bed, in mortar, all bond timber, wall, or other plates, lintels, wooden bricks, tamplates, stone or other work connected with the brick work ; all the door and window frames to be bedded in and pointed round with lime and hair mortar. Back up whatever of cut-stone work is laid in the walls.

*Portico and Colonnade.*—Provide and execute walls for piers and arches for carrying the columns, as shewn on the drawing. Carry up the columns of the same dimensions of those of the present Portico, the bricks solidly laid in hydraulic mortar, the facing prepared for stucco work, the bases and caps of these columns (to be formed of cast iron) to be built in with the brick work. Dead arches to be thrown above the architrave level of Portico to sustain the wall of the tympanum of pediment, which is to be faced in the same manner with the external walls described.

Form arch-way and terrace of entrance to the north, through and under the terrace on this side, with wing walls outside to sustain the sloping bank ; grade and pave the court all round the building, forming the necessary gutters and drains ; the bricks to be laid in clean sand, not less than 6 inches thick.

Lay whatever hearths are required in the building. Do whatever other brick work is required about the building, whether of walls or paving. All the above work to be done in the most substantial and workmanlike manner, with the best material, the contractor to secure the stability of his work from all settlement or other damage during the time of building, and to make good the same as the architect shall direct.

Provide good sound and sufficient scaffolding, which is to remain for the use of the other mechanics or artificers that may have occasion for the use of the same.

## CARPENTER AND JOINER.

All the floors throughout the building to be constructed of the best quality heart stuff, the joists to be all framed into girders supported by cast iron pillars or columns—the floors to be counter-ceiled, filled in with lime or refuse plaster, brick chips or such like material, and plastered over, leaving about 1-2 inch space below the top of the joists, the joists to have the usual camber (say 1-2 an inch,) and to be not more than 12 inches apart from each other; the floors to be laid with 1 1-4 inch narrow heart boards, secret nailed, cross-jointed, the ends tongued into each other, and the whole dressed off in the best manner.



The girders to be bridged and well tressed, the ends secured firmly in the walls. For the ground floor, dwarf walls will be built to receive the ends of the joists, which will be well bridged and counter-ceiled before the floor is laid.

The roof to be framed with principal rafters, with Queen posts, to admit of a cove ceiling to be executed; as the cast iron columns will extend up to the eaves of roof, these principals with their strut beam will rest or be supported 10 feet from each wall by these columns. (For the plan of this roof see drawing.)

The rafter stuff of this roof to be laid as purlieus on the rafters, so as to allow the boarding for the covering of the roof to range up and down, instead of cross-wise. Form the necessary gutter-ways on the roof



Rib the cove ceiling, formed of inch boards, doubled and cross-jointed, throughout the whole length of the building, including the Portico and Colonnade, the distance of the ribs not to exceed 16 inches from centre to centre and properly braced or bridged. Frame the ceiling of portico and Colonnade in a substantial manner to form a floor for that part of the upper story extending under the roof here, and lay a floor over the same equal to those before described.

Frame and set the galleries on the principal floor agreeably to drawing, all round the room, supported by the cast iron columns before described—floor the same, and enclose it with a light cast iron balustrade. For particulars refer to plans to be furnished by the Architect. Provide suitable benches to all the Lecture rooms, exhibition rooms and galleries, according to Plans. Provide rostrums to each of these rooms agreeably to drawings to be furnished; wide moulded skirtings to be carried round all the rooms. The finish of the windows and doors to correspond with those in the present building.



The dimensions of the basement windows to be increased in height as per drawing, more than those in this story of the present building. In the upper or museum story, alcoves are to be formed and shelved for mineral subjects, &c.; the divisions to be made according to plan, with a window in each.

Should additional space be required, the upper story or roof floor is to be fitted up by galleries, and alcoves or recesses extending over the ceilings of portico and colonnade, communicated with by the stair cases in the angles, and from the galleries of the Rotunda, lighted from above. Reference to the drawings will explain the whole arrangement. Form a *trap door* over one of the stair-ways with steps of communication with roof. Construct an open newel winding stair-way, triangular well-hole, mitred nosings and risers, plain brackets, continued cylinder hand-rails of mahogany, square balusters, dovetailed into steps with occasional iron balusters, double turned newels of large diameter, with a turned cap to suit the hand-rail, to mitre to; a little dress or declination to be given to each step, the rise not to exceed 7 1-2 inches. The stairs are to start from the sub-basement floor, and continue to the upper or eave floor or roof; the height of the hand-rail to be not less than three feet to 39 inches above the steps.

Provide, set, and remove all the centres of the arches under the porticos and terraces—lintels to all the windows and doors—wood-bricks, &c., for the bricklayer to wall in for securing the wood work inside.

Provide and set the entablature, soffets and architrave inside of the columns of portico—all round the building, with the raking cornice of the portico, pediment corresponding with that in the present building, except it should be deemed best to substitute stucco or mastic work in place of wood work in parts of the same, of which due notice will be given by the architect.

All the above work to be done in the best and most workmanlike manner, with the best quality heart or white pine.

The ironmongery, used to be of the best finish and quality.

## STONE CUTTER.

Prepare and assist the bricklayer to set all the window and door sills of cut stone, required about the building; the stone to be laid in the direction of its natural bed in the quarry.—Run a stone belting course, with a proper wash round the building of the height of the portico floor, 7 inches high, and in length not less than 4 feet, the vertical joints to be cramped with iron not less than 12 inches long. The curb-stone round the portico and colonnade to be brought to a width not less than 12 inches bed.

Provide and set in their places No. 14 stone plinths for columns and 6 for pilastres, of the dimensions of those in the Rotunda building, Portico, &c.

Prepare and set all such other cut stone work as may be ordered by the architect for other parts of the building.

## PLASTERER.



Plaster all the interior walls and ceilings throughout the building, with three-coat-work floated to a straight and smooth surface, with the best quality lime, sand and hair. Run a stucco moulded cornice around the ceiling of the exhibition room, and in such other rooms as may be directed by the architect. Form in stucco three centre pieces in the ceiling of the exhibition room, according to drawing to be furnished by the architect. Run projecting beads on all the outer angles. Run such mouldings as may be required round the openings of the sky-light. Do whatever other plastering in stucco work that may be required in and about the building, and clear off all plaster rubbish and scaffolding in and about the building.



## PAINTER, GLAZIER AND GLASS.

Glaze all the sashes about the building, after priming and sizing, with the best quality Redford crown glass—clear and free from spots or winds—bedded in putty, and back puttied and fastened. The sizes of the glass will be the same as in the adjoining building (Rotunda) according to their ranges, those of the basement and sub-basement excepted, which will be about as large as those above. All the sashes to be painted once in size and three coats in oil on the outside with the best quality of white lead. All the dressed wood work inside once in size and twice in the most approved manner, with or without oil, as may be directed by the architect; and all the outside wood and iron work three times in oil—using the best quality lead and oil.



If required, paint the whole of the exterior walls of the building with four-coat-work. 1st coat, saturating the brick face with oil; 2d, coating the whole with yellow ochre paint; 3d and 4th, coats of pure white lead and oil, with a tint of yellow ochre, forming a light stone color. Clean all the windows, at the finishing of the building, and if required, finish the principal story doors in oak or wood colors, as may be ordered.

## PLUMBER

Prepare and fix a metal roof of tin or galvinized iron, as may be hereafter directed, of the best quality, over the whole of this building; the carpenter to prepare the ground work for the same. Form the requisite gutters and down pipe, as may be directed by the architect. Finish round the sky-lights party walls and chimney stacks, and do whatever other work that is necessary to complete and secure the roof from leakage. Provide and fix to the walls, &c., the requisite pipes for the passage of the bell wires or speaking-tubes while the brick work is in progress—all to be done in the most workmanlike manner, and with the best quality material of the kind.



## IRON WORK.

Provide and assist to fix in their places all the wrought iron work required by the carpenter or bricklayer during the progress of the building, such as clamps, bolts, hold-fasts, window and chimney bars, and such other like work.

## FOUNDER.

Provide and fix in their places the requisite cast iron round columns of a neat pattern for the different stories of the building, the lengths corresponding with those named under the head of "*Carpenter*"—the diameters to be proportional to the weight to be sustained beyond the common proportion, which information will be hereafter furnished.



## IRONMONGERY.

The best quality ironmongery to be provided of such descriptions as may be required by the carpenter, who is to judge of the suitableness of the same.

ROBERT MILLS, Architect.

WASHINGTON CITY, Jan. 3, 1851.

THE ROTUNDA

# APPENDIX B

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***proposed to be added to the Rotunda***
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***January 3, 1851***
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# SPECIFICATIONS

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**Main Building** 105 feet long, 55 feet wide.
**Colonnade between** 55 feet do., 25 feet do.
**Portico**—North End 55 feet do., 25 feet do.
**Sub-Basement** Story 14 feet high in the clear.
**Basement** Story 14 feet do. do.
**Principal** Story 21 feet do. do.
**Upper** Story to eaves and cove of roof, 18 to 20 feet high.

## EXCAVATION.

**Dig out the whole area**, designated on the drawing to the **depth, level with the surface** of the ground at the **north end of the building**, or **beginning** at 150 feet north of the **present Rotunda building**, and of a width between the terraces, **equal** to 185 **feet**, using the earth so excavated in raising and forming **the terraces designated** on the drawing.

After levelling off this area so excavated, dig out for the ***footings*** of the walls two feet deep, and of width corresponding to the thickness of the walls laid down on the Plan.—**Should the earth** thus taken out of this area not suffice to **make up** these terraces, other earth in the neighborhood to be **used** to complete the same. Should a ***wall*** front this terrace the **earth** will be **only** sloped ***outwardly***. After the **footings** of the **walls** are dug out the beds of the trenches are **to be beaten** down to a solid consistence to receive the **foundation walls**, and after they are laid and sett, to fill in and ram down the **ground** with wooden rammers. Should any springs of water be **met** with, proper drains are to be formed to lead all these and other waters. Level off and grade the sectional **ground lines designated** on the drawings. In the sub-basement, **no earth** is to be left nearer than 9 inches to any floor or **other timbers**,—such cavities to be filled in with ***dry materials***—broken stone, &c. No useless or other materials to be left on the ground, and should any water from rains, &c., settle in the foundations the same to be baled out or led off by under-drains, cess-pools, &c. The excavation will not commence nearer to the foundations of the present building than 20 feet.

## MASONRY AND BRICK WORK.

### *Dimensions of Walls.*



| | | |
|---|---|---|
| Footing of foundations outside, | 4 | Bricks. |
| Sub-basement Walls do. | 3 1-2 | do. |
| Basement " do. | 2 1-2 | do. |
| Superstructure do. to eaves, | 2 | do. |
| Partition Walls footing, | 2 1-2 | do. |
| Do. do. | 1 1-2 | do. |

All the bricks used in the building to be of the best hard burnt brick, and laid in the best and most workmanlike manner, in good mortar made with ***stone lime*** and ***sharp*** sand, in the proportion of ***not less*** than 4 to 5 of sand to one of unslacked lime—the lime to be first slacked in a box, and when thoroughly dissolved to be thrown into the bed of sand and well mixed and worked together. The facing the outside walls to be ***with pressed brick***, laid in Flemish bond, flat joints well settled down and bound with the interior part of the wall and prepared for painting. The other parts of the walls to be laid in American bond (3 stretchers to one header.)



When the foundations are laid, care must be taken that the ground has been well rammed and settled down previously to laying the brick.

The foundation walls will be so laid that the axis of both walls, upper and lower, shall be in the same plane or be perpendicular with each other, so that the bearing shall be equal on each side; every course of brick laid throughout the building to be well bedded and joints flushed up with mortar; no bats to be allowed except for closures, or where weight only is required, as in the spandrils of the arches forming the terraces of porticos. Provision is to be made in constructing the walls for all the furnaces &c, the smoke and air-flues required in the building, whatever chimnies are carried out the shafts to be raised to the height designated at least equal to those in the present building; all the flues to be 1 1-2 bricks square, well pargetted, and cleaned out after the chimnies are topped out; dead arches to be thrown over all the openings inside, the outside to be finished as the openings in the present building. The bricks capping the chimnies must be laid with hydraulic mortar well pargetted, and where other walls are exposed to the weather, the same precaution is to be used.

To form the terraces or floors of the portico and colonnade, groin arches are to be turned, laid in hydraulic mortar, spandrils filled up with brick, flush and level, ready for paving with tile or brick.

Where fire places are introduced 4 inch Trimmer arches are to be turned for the hearths; care must be taken that no timbers be allowed to touch the smoke flues or fire places.



Bed, in mortar, all bond timber, wall, or other plates, lintels, wooden bricks, tamplates, stone or other work connected with the brick work ; all the door and window frames to be bedded in and pointed round with lime and hair mortar. Back up whatever of cut-stone work is laid in the walls.

*Portico and Colonnade.*—Provide and execute walls for piers and arches for carrying the columns, as shewn on the drawing. Carry up the columns of the same dimensions of those of the present Portico, the bricks solidly laid in hydraulic mortar, the facing prepared for stucco work, the bases and caps of these columns (to be formed of cast iron) to be built in with the brick work. Dead arches to be thrown above the architrave level of Portico to sustain the wall of the tympanum of pediment, which is to be faced in the same manner with the external walls described.



Form arch-way and terrace of entrance to the north, through and under the terrace on this side, with wing walls outside to sustain the sloping bank ; grade and pave the court all round the building, forming the necessary gutters and drains ; the bricks to be laid in clean sand, not less than 6 inches thick.

Lay whatever hearths are required in the building. Do whatever other brick work is required about the building, whether of walls or paving. All the above work to be done in the most substantial and workmanlike manner, with the best material, the contractor to secure the stability of his work from all settlement or other damage during the time of building, and to make good the same as the architect shall direct.

Provide good sound and sufficient scaffolding, which is to remain for the use of the other mechanics or artificers that may have occasion for the use of the same.



## CARPENTER AND JOINER.

All the floors throughout the building to be constructed of the best quality heart stuff, the joists to be all framed into girders supported by cast iron pillars or columns—the floors to be counter-ceiled, filled in with lime or refuse plaster, brick chips or such like material, and plastered over, leaving about 1-2 inch space below the top of the joists, the joists to have the usual camber (say 1-2 an inch,) and to be not more than 12 inches apart from each other; the floors to be laid with 1 1-4 inch narrow heart boards, secret nailed, cross-jointed, the ends tongued into each other, and the whole dressed off in the best manner.



The girders to be bridged and well tressed, the ends secured firmly in the walls. For the ground floor, dwarf walls will be built to receive the ends of the joists, which will be well bridged and counter-ceiled before the floor is laid.

The roof to be framed with principal rafters, with Queen posts, to admit of a cove ceiling to be executed; as the cast iron columns will extend up to the eaves of roof, these principals with their strut beam will rest or be supported 10 feet from each wall by these columns. (For the plan of this roof see drawing.)

The rafter stuff of this roof to be laid as purlins on the rafters, so as to allow the boarding for the covering of the roof to range up and down, instead of cross-wise. Form the necessary gutter-ways on the roof



Rib the cove ceiling, formed of inch boards, doubled and cross-jointed, throughout the whole length of the building, including the Portico and Colonnade, the distance of the ribs not to exceed 16 inches from centre to centre and properly braced or bridged. Frame the ceiling of portico and Colonnade in a substantial manner to form a floor for that part of the upper story extending under the roof here, and lay a floor over the same equal to those before described.

Frame and set the galleries on the principal floor agreeably to drawing, all round the room, supported by the cast iron columns before described—floor the same, and enclose it with a light cast iron balustrade. For particulars refer to plans to be furnished by the Architect. Provide suitable benches to all the Lecture rooms, exhibition rooms and galleries, according to Plans. Provide rostrums to each of these rooms agreeably to drawings to be furnished; wide moulded skirtings to be carried round all the rooms. The finish of the windows and doors to correspond with those in the present building.



The dimensions of the basement windows to be increased in height as per drawing, more than those in this story of the present building. In the upper or museum story, alcoves are to be formed and shelved for mineral subjects, &c.; the divisions to be made according to plan, with a window in each.

Should additional space be required, the upper story or roof floor is to be fitted up by galleries, and alcoves or recesses extending over the ceilings of portico and colonnade, communicated with by the stair cases in the angles, and from the galleries of the Rotunda, lighted from above. Reference to the drawings will explain the whole arrangement. Form a *trap door* over one of the stair-ways with steps of communication with roof. Construct an open newel winding stair-way, triangular well-hole, mitred nosings and risers, plain brackets, continued cylinder hand-rails of mahogany, square balusters, dovetailed into steps with occasional iron balusters, double turned newels of large diameter, with a turned cap to suit the hand-rail, to mitre to; a little dress or declination to be given to each step, the rise not to exceed 7 1-2 inches. The stairs are to start from the sub-basement floor, and continue to the upper or eave floor or roof; the height of the hand-rail to be not less than three feet to 39 inches above the steps.



Provide, set, and remove all the centres of the arches under the porticos and terraces—lintels to all the windows and doors—wood-bricks, &c., for the bricklayer to wall in for securing the wood work inside.



Provide and set the entablature, soffets and architrave inside of the columns of portico—all round the building, with the raking cornice of the portico, pediment corresponding with that in the present building, except it should be deemed best to substitute stucco or mastic work in place of wood work in parts of the same, of which due notice will be given by the architect.

All the above work to be done in the best and most workmanlike manner, with the best quality heart or white pine.

The ironmongery, used to be of the best finish and quality.

## STONE CUTTER.

Prepare and assist the bricklayer to set all the window and door sills of cut stone, required about the building; the stone to be laid in the direction of its natural bed in the quarry.—Run a stone belting course, with a proper wash round the building of the height of the portico floor, 7 inches high, and in length not less than 4 feet, the vertical joints to be cramped with iron not less than 12 inches long. The curb-stone round the portico and colonnade to be brought to a width not less than 12 inches bed.



Provide and set in their places No. 14 stone plinths for columns and 6 for pilastres, of the dimensions of those in the Rotunda building, Portico, &c.

Prepare and set all such other cut stone work as may be ordered by the architect for other parts of the building.

## PLASTERER.



Plaster all the interior walls and ceilings throughout the building, with three-coat-work floated to a straight and smooth surface, with the best quality lime, sand and hair. Run a stucco moulded cornice around the ceiling of the exhibition room, and in such other rooms as may be directed by the architect. Form in stucco three centre pieces in the ceiling of the exhibition room, according to drawing to be furnished by the architect. Run projecting beads on all the outer angles. Run such mouldings as may be required round the openings of the sky-light. Do whatever other plastering in stucco work that may be required in and about the building, and clear off all plaster rubbish and scaffolding in and about the building.



## PAINTER, GLAZIER AND GLASS.

Glaze all the sashes about the building, after priming and sizing, with the best quality Redford crown glass—clear and free from spots or winds—bedded in putty, and back puttied and fastened. The sizes of the glass will be the same as in the adjoining building (Rotunda) according to their ranges, those of the basement and sub-basement excepted, which will be about as large as those above. All the sashes to be painted once in size and three coats in oil on the outside with the best quality of white lead. All the dressed wood work inside once in size and twice in the most approved manner, with or without oil, as may be directed by the architect; and all the outside wood and iron work three times in oil—using the best quality lead and oil.



If required, paint the whole of the exterior walls of the building with four-coat-work. 1st coat, saturating the brick face with oil; 2d, coating the whole with yellow ochre paint; 3d and 4th, coats of pure white lead and oil, with a tint of yellow ochre, forming a light stone color. Clean all the windows, at the finishing of the building, and if required, finish the principal story doors in oak or wood colors, as may be ordered.

## PLUMBER

Prepare and fix a metal roof of tin or galvinized iron, as may be hereafter directed, of the best quality, over the whole of this building; the carpenter to prepare the ground work for the same. Form the requisite gutters and down pipe, as may be directed by the architect. Finish round the sky-lights party walls and chimney stacks, and do whatever other work that is necessary to complete and secure the roof from leakage. Provide and fix to the walls, &c., the requisite pipes for the passage of the bell wires or speaking-tubes while the brick work is in progress—all to be done in the most workmanlike manner, and with the best quality material of the kind.



## IRON WORK.

Provide and assist to fix in their places all the wrought iron work required by the carpenter or bricklayer during the progress of the building, such as clamps, bolts, hold-fasts, window and chimney bars, and such other like work.

## FOUNDER.

Provide and fix in their places the requisite cast iron round columns of a neat pattern for the different stories of the building, the lengths corresponding with those named under the head of "*Carpenter*"—the diameters to be proportional to the weight to be sustained beyond the common proportion, which information will be hereafter furnished.



## IRONMONGERY.

The best quality ironmongery to be provided of such descriptions as may be required by the carpenter, who is to judge of the suitableness of the same.

**ROBERT MILLS, Architect.**

WASHINGTON CITY, Jan. 3, 1851.

THE ROTUNDA

# APPENDIX C

***"Restoration of Rotunda"***
***[Specifications]***
***April 1896***
***McKim, Mead & White, Architects***

THE ROTUNDA

# APPENDIX C

***"Restoration of Rotunda"***
***[Specifications]***
***April 1896***
***McKim, Mead & White, Architects***

# SPECIFICATION

of Work and Materials required in the erection and completion of the Masonry, Fireproofing, Cut Stone, Plastering & Guastavino Arch Work.

for Rotunda.

at Charlottesville, Va.

in accordance with the plans prepared by, and under the general superintendence of

McKIM, MEAD & WHITE, *Architects.*
No. 160 Fifth Avenue, New York City.

PROPOSALS.

Parties estimating will do so with the understanding that the owner will not necessarily accept the lowest or any bid.

CHARACTER OF WORK AND MATERIALS.

All the work described in the Specifications or shown in the drawings, and all work dependent upon or necessary to the complete finish of the work so described or shown, is to be executed in a workmanlike manner and of the materials best adapted to the purpose, when such labor or material is not specially mentioned.

All the materials are to be the best each of their respective kinds and in ample quantities, and the workmanship is to be thorough and equal to the best in every respect.

The personal and constant attention to the work by the contractor is here stipulated and guaranteed.

The drawings, and such writing, interlineations, figures and details as may be upon them are to be considered as part of and as illustrating these specifications. In the plans, elevations, sections, and detail drawings, the materials are designated by the following colors, unless otherwise specified : Blue indicates stone ; red brick ; yellow, wood ; though all materials may not be colored. Contractors are requested and expected to carefully examine the contents of these specifications, whether printed or written, as every word is to remain in full force unless it is erased before execution of contract.

Contractors will be required to follow the plans strictly, and to furnish all materials and execute all work in strict accordance therewith, and with the quality and kind of material set forth in the following specifications, and shown by the aforesaid drawings, using for data and dimensions the figures marked thereon, in preference to what the drawings may scale, and the same where the figures on one drawing differ from the scale of another drawing for the same part of the work. The detail drawings shall, in each case govern in preference to what the general drawings may show for the same part of the work.

The contractor will distinctly understand that the works described and shown are to be perfect and finished of their kind, and he is therefore enjoined to use all diligence to inform himself fully as to their construction and finish, and in no case to proceed with the different parts of the work without obtaining first, from the architects, at their office, such directions or drawings as may be necessary for the proper execution of the works.

ACCESS TO BUILDINGS, ALTERATIONS, &c.

The Architects, or any agent that they may appoint, shall have free access at all times to the building and to the shops of the contractor, to view the preparation of the work in its various stages, and shall be at liberty to order any alterations, additions or omissions of any kind, giving their order in writing ; and the contract shall not be vitiated by any such act, but a fair addition or deduction is to be made in the payments to the contractor, according to such alterations increase or diminish the cost of the work.

The contractor for this part of the work is to co-operate with the contractors for the other parts, so that as a whole, the work shall be finished and complete one of its kind, and is to arrange and carry on his work in such a manner that any of the co-operating contractors shall not be hindered or delayed at any time; and when his part of the work is finished, he shall remove from the premises all tools, machinery, debris, etc., and, so far as he is concerned, leave the job free and clear from all obstructions and hindrances.

VARIATIONS, IMPROPER WORK, &c.

If the contractor shall vary from the drawings or specifications in the form or quality of any work, or in the amount of value of the materials therein used, the Architects or their agent shall be at liberty at any time, before or after the completion of the work, to order such improper work to be removed, re-made and replaced, and all works disturbed by the alteration made good at the contractor's expense; or to receive from the contractor , for their client the owner , a sum of money equivalent to the difference in value between the work performed and that called for by the specification or shown by the drawings, it being optional with the owner to pursue either course.

REASONABLE INTERPRETATION.

This specification and the drawings are intended to co-operate, so that any work exhibited in the drawings and not mentioned in the specifications and *vice versa*, is to be executed in the same manner as if mentioned in the specification or set forth in the drawing to the true meaning and intention of said drawing and specification, without any extra charge.

MATERIALS, SCAFFOLDING, &c., AND ASSISTANCE TO OTHER MECHANICS.

The contractor, at his own proper cost and charge, to provide all manner of materials and labor, scaffolding, centres, implements, moulds, models of every description and cartage, for the due performance of the several works, and to assist heating men, plumbers, gas fitters, and all other tradesmen employed on the work, and do all usual cutting, fitting and making good after them as may be required.

PERMITS.

The contractor will be held responsible for all violations of city ordinances, as regards construction, or clearing the obstructions of streets and sidewalks, either by tearing up the same, or the accumulation of materials, and shall, in all cases, carefully repair and make good any damage to the street and pavement that may be caused by any operation connected with the work.

The contractor to give all necessary notices and obtain permits for obstructing streets and sidewalks, for connecting with water-mains, etc., etc., and pay all fees for same.

To provide and pay for all water used in the erection of the building, to provide and keep in repair during the progress of the work, all fences, temporary sidewalks, guards, lights, etc., for the protection and convenience of the public, as required by law or police regulations and directed by the owner or Architects.

It is understood by the contractor that the building or work is entirely at his risk, until the same is accepted, and he will be held liable for its safety to the amount of money paid him by the proprietor on account of the same.

All drawings and specifications of every kind that the contractor may have received must be *preserved* and return to the Architects before the final certificate is given. When the work is complete, the owner, or his legally authorized agent or agents, must be notified by the contractor that he is ready to have a settlement, so that if the owner or parties in interest have any bills to file, or statements to make, they can do so before the superintendent makes his final certificate or adjustment between the parties.

Wherever the words "building" or "contractor" are used in the specifications, they shall be held to apply to one or more buildings or contractors.

SPECIFICATION for Masonry, Fireproofing, Plastering, Cut Stone and Guastavino Arch Work in connection with the Restoration of the Rotunda for the University of Virginia, at Charlottesville, Va. to be built according to the plans and specifications prepared by and under the general superintendence of

McKim, Mead & White, Architects,
150 Fifth Avenue,
New York City.

GENERAL CONDITIONS:

All contractors estimating on this work will visit the site of the present building and thoroughly familiarize themselves with the present condition of the Rotunda Building, present lecture room buildings at both sides of the South entrance steps and the grounds at the North side of the Rotunda.

These specifications and the drawings are intended to comprise, illustrate and include all work and materials required to restore all damaged work in the present Rotunda and lecture room buildings and to complete and finish all new work in connection therewith in every particular. Everything indicated on drawings or mentioned in these specifications shall be furnished of the BEST MATERIALS for the purpose and provided in a good and workmanlike manner, NOT WITHSTANDING EVERY ITEM NECESSARILY INVOLVED BY THE WORK MAY NOT BE

PARTICULARLY AND SPECIALLY MENTIONED and no advantage can be taken of omissions as a claim for extras; bidders are cautioned to examine the old work and the drawings and specifications with great care and to consult the Architects upon all points not thoroughly understood, as, under the contract, the decision of the Architects is final and conclusive.

On the drawings, gray color will indicate old work; red will indicate new brick work; green will indicate Guastavino and fireproofing work; light blue will indicate copper work; dark blue will indicate marble; brown will indicate granolithic work and concrete; yellow will indicate wood and plaster; dotted lines will indicate old work to be removed.

This contractor shall comply with all corporation ordinances State and other Laws and is to be held liable for all penalties and damages to life, limb and property that may occur through his negligence or that of his employees during the erection of the building. No extra work will be allowed unless ordered by the Architects in writing as agreed upon in contract. No bill for extra work so ordered will be approved by the Architects unless it is rendered immediately after the execution of said extra work.

SUB-CONTRACTS:

All sub-contracts are to be submitted to the Architects for approval before any work is started and in no case will the work of any sub-contractor not so approved in writing be accepted. Any work made without or not in strict conformity to Architect's drawings or differing from the requirements of same, will be rejected and must be removed and replaced by work conforming to the requirements of said drawings and all other work marred or destroyed thereby must be made good by this contractor without extra charge.

Shop drawings, copies of drawings made by the Architects, templets, reverse templets, patterns, models and all necessary measurements at the building are to be made by this contractor at his own expense.

PAYMENTS:

Payments will be made only on the certificates of the Architects and as agreed upon in the contract. No certificate will be given upon any work and material not in strict conformity to drawings and specifications or until defective work has been removed and replaced as specified to the satisfaction of the Architects.

REMOVING AND CHANGING OLD WORK:

All excavation of whatever character and filling required, either to clear away debris or to prepare for new work, will be done by the owners.

This contractor will take down and rebuild such portions of the outside walls at the N.W. corner of the building and elsewhere as found damaged in any way and as directed by the Architects. Build up brick wall around dome from level of present iron ring to top of same to full thickness as shown.

Also take down all interior brick walls of Rotunda to level shown on sections for Guastavino arch work of first floor and remove all old curved walls in basement corridor. Take down and remove old pilasters on North Front of Building. Fill up all holes in old brick work where wood furring, blockings, etc. were built in and fill up all beam holes, chases, etc. as directed with hard common brick laid in cement mortar. Take down and remove all old fireplaces and chimneys in the building and fill up all flues leading from old fireplaces with brick laid in cement mortar. Cut out all old brick work required to open old windows back of fireplaces where shown and re-build jambs of same with brick laid in cement mortar. Cut out all chases required for heating and plumbing pipes, electric wires, etc. in old walls wherever required. Cut recesses in old walls where shown on heating plans from a point below basement floor level to and above level of third gallery. There are eleven (11) such recesses, 8" x 8". The total length of same is about five hundred (500) feet. Cut all openings in old walls required for cold and warm air ducts. These openings average 3' x 3' and there will be about three required in 48" walls and about seven in 16" walls where shown. Cut holes for main steam and return pipes in old and new walls wherever required for the heating and ventilating work. Cut away brick work in old walls where required for bonding in new brick pilasters on North front and for changing position of windows on North side of building as shown, re-building jambs with brick work laid in cement mortar. Cut openings in present North retaining wall, doorway of stair well to boiler room and repair jambs of same. Take off temporary wooden roof of Rotunda and prepare present scaffolding for Guastavino arch work. Fill up all holes in exterior walls above grade with face brick similar in every respect to present work and laid in Flemish bond to correspond with present work.

EXCAVATION: All excavation and filling required either to prepare old work for finishing or required in connection with new work to be done by the owners.

PUMPING: This contractor will provide all necessary apparatus required to keep trenches and excavated surfaces dry until concrete footings have set and foundation walls built.

SHORING AND SHEATH PILING:

Do all shoring and sheath piling required to prevent banks from caving around excavations, etc. All sheath piling to be done with strong plank set edge to edge, tongued and grooved where necessary and provided with all necessary breast pieces, foot blocks, braces, wedges, etc. All sheath piling to remain in place until directed to be removed by the Architects.

SPRINGS:

Should any springs or running water be encountered in excavating, this contractor will give free vent to same and drain the water to the outside of the building as directed with glazed earthenware sewer pipes of proper size with joints well filled with Portland cement.

CONCRETE FOOTINGS:

After all trenches for new walls, piers, etc. are levelled off to proper depths, tamp the earth solidly with heavy wooden rammers and put down concrete footings of widths and thicknesses shown, which are to be kept in place during construction by strong plank curbing. All concrete footings to be laid in layers from 6" to 8" thick with level top surfaces and thoroughly rammed until moisture begins to show on upper surface. If work is suspended on any footing while in an incomplete condition, top surface of concrete must be thoroughly cleaned with stiff wire brushes or brooms before the new layer is added. All concrete for footings to be composed of one part Portland cement, three parts clean sharp sand and five parts broken stone not larger than 2" in any way. All concrete must be measured dry in barrels.

## STANDARD OF MASON'S MATERIALS.

All mason's materials shall be subjected to the following mentionedtests from time to time as the work progresses and conform to the following mentioned requirements before acceptance. Any and all work done with inferior cement or other materials will have to be removed and rebuilt at contractor's expense.

PORTLAND CEMENT:

All Portland cement will be best quality imported Portland cement and of either of the following brands: Dyckerhoff's, Alsen's or "Germania". Not less than 95% in weight must pass through a standard sieve having 5776 meshes to the square inch. All cement muststand the cracking or checking test recommended by the Committee of the American Society of Civil Engineers on Uniform Tests of Cements.

HYDRAULIC CEMENT:

All American natural hydraulic cement shall be either F.O. Norton's, "Brooklyn Bridge" brand or best quality Louisville or "Antietam" brands, free from lumps and freshly ground. Not less than 95% in weight of test samples must pass through a standard sieve with 2500 meshes to the square inch.

SAND:

All sand required for all parts of the work on the buildings will be delivered f.o.b. cars at University siding to this contractor by the owners at sixty cents per ton of 2,000 pounds.

**LIME:** All lime required for use in the building will be delivered at the site of the building to this contractor by the owners at 67 1/2¢ per barrel.

**COMMON BRICK:** All common brick shall be hand made, hard burned brick, of good even dark red color, square and well shaped and free from swollen, refuse or clinker brick and not more than 5% to be bats. All common brick will be delivered f.o.b. cars at University siding to this contractor by the owners at $6.37 1/2 per thousand.

**FACE BRICK:** All face and radius brick required for the exterior walls of Rotunda, lecture rooms, arcades, etc. will be similar in every respect to face brick in present building and will be delivered at the site of the building to this contractor by the owners at [illegible] 00 per thousand.

**BROKEN STONE:** All broken stone shall be sound material, either granite, trap rock or gneiss, or sound local stone, if approved by the Architects, and screened free from dust and dirt or decayed stone.

**PLATFORMS, STAGING, SCAFFOLDING AND CENTERS:** All platforms and scaffolds, swinging scaffolds, derricks and crane derricks, etc. required for the erection and completion of the buildings are to be furnished by this contractor.

NOTE: The present scaffolding supporting temporary roof of Rotunda may be used by this contractor, if desired, and same will be taken down and delivered to the owners in good condition at the completion of the work.

CONCRETE:

The several ingredients of all concrete for footings above specified are to be accurately measured in barrels and mixed as follows:

One barrel of Portland cement to three barrels of sand to five barrels of broken stone; cement and sand are to be thoroughly mixed together dry and then spread upon the requisite amount of broken stone previously spread into a layer about 6" thick. The proper amount of water is then to be sprayed upon the mass from a hose fitted with a suitable sprinkler and all three ingredients are to be carefully and uniformly turned over two or three times or until a thorough and uniform admixture has been made. Care must be taken to use only sufficient water to give a proper consistency without making the concrete quake under the rammers. Any unused concrete that has begun to take the initial set must be immediately removed from the work and must not be used for any purpose whatever. No remixing or retempering will be allowed.

MORTARS:

In all cases the ingredients of cement mortar are to be measured in barrels as follows:

For Portland cement mortar, one barrel of Portland cement to three barrels of sand.

For hydraulic cement mortar, one barrel of hydraulic cement to two barrels of sand.

All the above proportions are dry measure.

All lime must be mixed with the proper quanity of water and allowed to slake a reasonable time before mixing with sand

Provide proper mortar boxes made of strong plank for mixing all mortars and concrete. No mortar or concrete to be mixed on the bare ground.

DAMP PROOFING:

After all new foundation walls and piers in Rotunda and new lecture room buildings have been built up to a level about 6" below finished floor levels of boiler room and lecture rooms, level off same and build a key in center of all such walls and piers at least 8" wide and two courses of brick high. Then put on a waterproof damp course across all the above walls and piers composed of four layers of best quality heavy asphalt roofing felt, laid in and well cemented together with hot asphaltic cement and coated with same on top surface. Samples of felt and asphaltic cement to be submitted to the Architects for approval before work is started. Damp course to extend 4" beyond outer and inner faces of all walls and piers. After all new walls around boiler room and stairway to same have been built up to finished grade levels, continue the waterproofing above specified up the outside of all old and new walls around boiler room from level of damp course to finished grade levels. The vertical damp course to be properly connected with damp course on walls and all to be made perfectly water tight. This contractor will guarantee all the above foundation walls to be absolutely water tight and moisture proof for a period of five years from date of five years from date of completion. Care must be taken in filling in around outsidewalls not to break the waterproofing.

BRICK WORK: Build all new walls, piers, etc. and the repairing and rebuilding of all old work, colored red on plans, of size and height indicated, of first quality hard common brick, (sample), all to be laid with full shoved joints, well finished with mortar, thoroughly bonded and laid with heading courses of full size brick through the walls every sixth course; all brick work to be laid straight to a line on both sides of the wall, in level courses, all to be straight, plumb and true. All brick work to be laid in regular bond including filling in of walls and brick to be well wet before being laid, except in cold weather. All joints of the face of all walls, piers, etc. to be neatly struck and pointed except where indicated to be plastered. All rough brick work to be laid in hydraulic cement mortar. Turn relieving arches of not less than two row locks over all openings in walls as directed. Build in all chases and fluesrequired for hot air flues, vent ducts, steam andplumber's pipes, electric wires, etc. Do all cutting of mason work required inconnection with the above work.

Set all granite templates, pier caps, iron templates under beam girders and columns, etc. that may be required, except for Guastavino arch work, all to be bedded in cement mortar. Lay all brick work so close that nine courses of brick laid with mortar joints will not measure more than 2 1/2" more than nine courses laid dry. Build all walls as far as practicable at same height. Rack back unconnected work to secure good and firm bond. No bats to be used whatever except as closers.

ANCHORS: All new and old walls to be properly bonded together and anchored every six feet in height with wrought iron tie anchors furnished by the iron contractor. All anchors required for cut stone work will be galvanized wrought iron furnished by the iron contractor.

MORTARS:

All mortar for rough brick work except the backing up of all marble work will be composed of one part Rosendale cement to two parts sand. All mortar for backing up the entire thickness of brick walls next to marble work will be composed of one part La Farge cement to three parts mixed lime mortar. Cement to be mixed with lime mortar and immediately used. All mortar for facebrick work will be composed of one part La Farge cement to three parts mixed lime mortar made from lime putty and selected coarse white or light colored sand. Mortar for face brick to be approved by Architects before work is started.

before work is started.

All mortar for setting marble work will be composed of La Farge cement mortar mixed in proportions as directed by the Architects after testing sand and lime. All lime mortar to be composed of one part lime putty to two parts sand.

WATERPROOFING FLOORS, ROOFS AND STEPS:

After the floor of boiler room has been levelled off about 8" below finished floor level, ram the earth solidly and put down three inches of concrete same as specified for concrete footings on page 5, well tamped and levelled off. Then cover the entire floor of boiler room with a waterproof damp course same as specified under damp proofing, page 9, thoroughly connected to damp course on walls, making floor of boiler room perfectly water tight. Floor of boiler room will be finished with granolithic as hereinafter specified. After the entire floor of basement in Rotunda building and the two old and two new lecture room buildings have been levelled off 8" below finished floor level, ram the earth solidly and put down three inches of concrete same as specified for concrete footings, well tamped and levelled off. Then cover the entire floors of old and new lecture room buildings and the entire floor of basement of Rotunda including all pipe trenches, with a waterproof damp course same as specified under damp proofing, page 9, thoroughly connected to damp course on walls, making floors of lecture rooms perfectly water tight and moisture proof.

When the fireproofing contractor has graded concrete on roofs of arcades and new lecture room buildings to take water to the different gutter outlets, cover the entire surfaces of roofs of arcades and old and new lecture room buildings with a good coat of hot asphaltic cement. (The roofs of old lecture room buildings are already covered with a coat of mastic. The new waterproofing will be applied directly on top of the present work). Then put on at least four layers of best two-ply roofing felt solidly cemented together with hot asphaltic cement. Flash around all openings in roofs and around all walls of balustrades with 16 oz copper, flashing to turn out on roofs and gutters at least 4" and up against balustrade walls at least 12". Put on the flanges of all flashings two layers more of felt solidly cemented down to the flashings with hot asphaltic cement. Form all gutters in concrete before roofing felt is put down and grade same as directed to the different outlets. Put in outlets for inside leaders of 16 oz copper with heavy wrought iron strainers covered with same weight copper and of proper size. Then cover the entire surface of roofs with a good coat of hot asphaltic cement. Before granolithic pavement is put on all the above roofs, cover same with a coating of cement mortar at least 1/2" thick, composed of one part Portland cement to three parts sand, left ready for granolithic work.

After Guastavino work in connection with North porch and steps to same has been finished, cover the entire roof of boiler room, passage and toilet room under North porch and steps with a water proof damp course same as specified under damp proofing, page 9, thoroughly connected to damp course on walls, making roofs perfectly water tight.

After marble tiling of South porch floor has been taken up by the mason, level off the concrete about 4" below finished floor level of porch and lay a waterproof damp course all over same as above specified and connect same with damp course on lecture room roofs, making porch floor perfectly water tight.

BRICK COLUMNS:

Build brick cores for columns of North and South porches as shown, cores to be tapered to follow outline of entasis of finished columns. Build rough brick pilasters on North front of building as shown, thoroughly bonded into old work.

NOTE: Contractors in estimating will state what the difference in cost will be if the shafts of all porch columns be made of cast Beton built up in drums and finished with stucco finish as hereinafter specified, instead of brick cores as above specified. (The capitals and bases of all columns and pilasters in either case will be of white marble as hereinafter specified.)

FACE BRICK:

All face brick required for repairing the Rotunda building and facing of new walls of same and the facing of all new work of lecture room buildings will be delivered at the site of the building to this contractor as hereinbefore specified. Build the facing of all outside walls of Rotunda building wherever required and the facing of outside walls of new lecture rooms and both sides of walls of lobbies and arcades in connection with same of face brick as above specified laid in Flemish bond in regular courses. All face brick work to be laid from the outside and to be first class trowel work laid with La Farge cement mortar with joints similar to old work. All joints to be neatly pointed on completion as directed and all face brick to be gauged to a thickness and to be well wetted before being laid except in cold weather. Build all arches in arcades and lecture room walls for windows as shown.

CLEANING DOWN:

After the roofs of Rotunda, arcades and lecture room buildings are on and all gutters connected with leaders, clean down the entire outside face of all the above walls with water, acid and bristle brushes and remove all mortar or other substances from the brick work, repointing all joints in old and new work wherever required and leaving same clean and perfect on completion.

CONCRETE FILLING:

After the floor of boiler room has been covered with waterproof damp course, put down 2" of concrete composed of one part Portland cement, three parts sand and six parts crushed stone, well tamped and levelled off ready to receive granolithic finish.

After all floors of basement of Rotunda have been waterproofed, put down 4" of concrete same as specified above in all parts of basement, except lecture rooms and toilet rooms, well tamped and levelled off ready to receive granolithic flooring.

After the floors of all lecture rooms have been waterproofed and 3" x 4" sleepers laid in same for wood floors by the carpenter, fill in between sleepers to within 1/4" of top of same with concrete composed of one part Rosendale cement, two parts sand and four parts clean cinders from hard coal burning boilers. Ram same in place and level off ready for flooring. Fill in on top of waterproofing in floors of toilet rooms to within 1 1/2" of finished surface with concrete composed of one part Portland cement, three parts sand and six parts crushed stone, well tamped and levelled off ready to receive mosaic flooring.

After the floor of South porch has been waterproofed, fill up on top of same to within 2" of finished floor level with concrete same as specified above for toilet rooms.

Also fill up on top of waterproofing on old lecture room roofs to within 1" of finished roof levels with same concrete graded for granolithic finish as directed.

Build all steps and platforms in Garden on North side of Rotunda building with concrete same as above specified and form treads and risers of same ready for granolithic finish 1 1/4" thick.

NOTE: All concrete filling required throughout the first floor of building and third gallery floor will be done by the contractor for Guastavino arch work.

FIREPROOFING FOR COLUMNS:

Cover the four columns in basement corridor of Rotunda with hardburned hollow terra cotta furring blocks securely anchored with wrought iron straps and left ready for plastering.

PARTITION BLOCKS:

Build about 200 running feet of partitions in old South lecture rooms of hard burned hollow fire clay blocks and hardburned porous hollow terra cotta blocks 4" x 6" x 12", of approved quality, blocks to be laid plumb and straight well bedded in cement mortar and with joints well filled. Secure heads and intersections with proper blockings or toothings. Do all cutting and fitting required in connection with work of other contractors where coming in contact with fireproofing and make good after them, leaving entire work in perfect condition ready to receive plastering, floors or other work. All fireproofing materials must be of best quality and of approved manufacture.

## GRANOLITHIC WORK.

### GRANOLITHIC FLOORS:

The following floors will be finished in granolithic, the entire basement and boiler room floors of Rotunda buildings (except lecture rooms and lavatories) and steps from corridor under North porch. After the above floors have been concreted and levelled off as hereinbefore specified, finish same with granolithic wearing surface 1" thick of Matt Taylor's best manufacture or equal thereto, composed of one part imported Portland cement and two parts fine crushed granite or quartz, troweled down perfectly smooth and true and graded as directed. Also form steps as above specified in corridor of same granolithic with risers 1" thick and treads 1 1/4" thick with rounded edges.

### GRANOLITHIC ROOFS:

After the roofs of all arcades and old and new lecture room buildings have been waterproofed and covered with cement as hereinbefore specified, finish same with a granolithic wearing surface 1" thick same as above specified.

### GRANOLITHIC STEPS AND PLATFORMS:

After the roof under North porch and steps has been waterproofed and graded up with concrete as hereinbefore specified, this contractor will finish North porch platforms and steps with granolithic 1 1/4" thick as shown, steps to have rounded nosings with cove moulding under same and treads of upper flight of steps to have returned nosings as shown. Also build granolithic steps in arcades and at entrance to lobbies of North lecture rooms and finish Guastavino arch steps to boiler room same as above specified.

Build all steps and platforms in Garden on North side of Rotunda with granolithic finish 1 1/4" thick same as above specified.

GRANOLITHIC PAVEMENTS:

After floors of all arcades and lobbies to North lecture rooms have been excavated to a depth 12" below finished level of ~~xxxx~~ walk, fill in with 7" of small broken stone well tamped and levelled off. Then put down 4" of Portland cement concrete same as specified for basement floors and form all steps as shown. Finish pavements with granolithic wearing surface 1" thick of Matt Taylor's best manufacture or equal thereto.

Cut out all broken surfaces of old granolithic work in South entrance steps and in basement of Rotunda and South lecture room buildings and arcades and steps in connection with same and repair the above damaged work in the best manner with granolithic same as above specified. All granolithic work as above specified to be guaranteed by this contractor to be free from cracks, discolorations or other defects for a period of five years from date of completion.

ALTERNATE ESTIMATE:

Contractors, in estimating, will state what the difference in cost will be if "Granitoid" be substituted for granolithic for all floors, steps, platforms, roofs, etc. wherever specified, "Granitoid" estimate to include all concrete filling required for same, same as specified under "CONCRETE FILLING" and also, to include iron stiffening bars laid in concrete under all outside pavements of arcades, dividing same into 6" squares. Alternate estimate for "Granitoid" work to be made in detail with specifications attached and all "GRanitoid" work to be guaranteed same as specified for granolithic work.

TRENCHES FOR STEAM PIPES:

Build all trenches under basement floor of Rotunda and old and new lecture room buildings required for return steam pipes as shown on heating plans. Trenches to be water-proofed on bottom same as specified for floors and to be 12" x 12" inside with side walls of brick work 8" thick laid in cement mortar and of proper height; brick walls to finish level with tops of sleepers where wood floors occur.

NOTE: The iron covers for steam pipe trenches will be furnished and set by the iron contractor.

PUMP PIT:

Build pump pit in basement for pump and governor where shown on heating plans about 3' x 6' x 2'-6" deep with

12" brick walls at sides of same laid in cement mortar.

MOSAIC FLOORS:

Provide and lay marble mosaic floorsin toilet rooms of basement and floor of third gallery in Rotunda, of terrazza marble mosaic laid in Portland cement mortar mixed in proportions of one part cement to three parts sand; mosaic to be equal to sample to be seen in our office and to cost 40¢ per square foot laid. On completion of mosaic floors, repair all damage caused by the work of other trades to same, clean off thoroughly and rub down with grit stone and sand bringing same to a dead smooth surface equal to our sample. After all other work is completed, finish all mosaic floors with two coats of oil as directed.

NOTE: Contractors, in estimating, will state what the difference in cost will be if the entire first floor of Rotunda building be finished with terrazza mosaic as above specified instead of wood flooring as specified in carpenter's specification.

## STUCCO WORK.

SCAFFOLDING:

This contractor will provide and maintain all necessary strong pole scaffolding, with platforms, braces, ladders, etc. required to do the entire outside stucco work and keep same in place until directed by Architects to remove it.

the ceilings of North and South porches, and wherever else furring is required for plastering, with heavy wire lathing of Roebling's or other approved make, Expanded Metal lathing or Bayes' patent lathing; all wire lathing to be bent to required shapes and securely fastened to iron work. Also cover all recesses in walls for steam pipes, hot air ducts and vent ducts and plumbing, gas and electric pipes with same wire lath.

PLASTERING.

The entire walls and ceilings of basement of Rotunda, lavatories and corridors in connection with same, and ceiling of boiler room, soffit of [illegible] stairs to same, and walls and ceilings of North lecture rooms and the walls and ceilings of old South lecture rooms, the entire walls of rotunda building above reading room floor level, including under side of roofs of porches and inner side of dome of roof and under surface of inner ceiling of dome, and the walls of corridors and recesses, will be plastered with good three coat work with hard cement finish. The inner surface of dome ceiling will not be plastered above springing line of dome. All mortar for plastering to be mixed in boxes made of strong plank. Use only fresh, clean water for mixing with mortar. All mortar used throughout the entire work is to be what is known as "dry mortar", that is, mortar mixed with sand by the manufacturers and ready for use with the addition of water. All plastering work to be done strictly in accordance with instructions given by the manufacturer. The first coat is to be worked to a good clinch where wire lathing occurs and to be thoroughly cross scratched. Set screeds around all margins at intervals of not more than five feet apart, accurately trimmed by straight edges and plumbs. Fill [illegible] with screeds and carefully hand float to a [illegible] and even plane. Finishing coat to be worked thoroughly and rendered hard and smooth with a trowel and to be left perfectly smooth, free from [illegible], breaks, blisters, [illegible], waves, rusts or other spots and unsightly imperfections. Allow each coat to dry thoroughly before applying another coat. Carry all plastering to the floor and to the [illegible] surfaces of openings. Round all exposed angles in plastered surfaces throughout the building and jambs of all door openings where there is no trim with bull noses of 1 1/2" radius.

All plastering is to extend close around all openings at the [illegible] of all [illegible] flush with the grounds. In no case shall any setting be finished until all pipes, wires, etc. that are required to pass through same are in and fixed to the approval of the Architect. No plastering is to be put on during frosty weather without heat [illegible] building and the building is to be enclosed by the carpenter with temporary enclosures as directed by the Architect.

ORNAMENTAL PLASTERING:

Provide all necessary light iron furring, covered with wire lath and run moulded cornice around reading room.

at the building, and in addition, do all cutting and fitting necessary to make his work come right in connection with the work of other contractors.

MODELS

All ornamental plaster work is to be done strictly in accordance with plaster models made from full size drawings. All models to be made by modellers selected by the Architects but who will be paid by this contractor, and any work not made in accordance with the approved models will be rejected. These models are to be set in place in the building as directed and changed, if necessary, until entirely satisfactory to the Architects. All ornamental [illegible] plaster work will be thoroughly backed up with heavy burlaps used in backing.

KEENE CEMENT COLUMNS

Provide and set cement bases and capitals of Keene cement run with moulds and cast from models for all columns in [illegible] cement to be composed of one part Portland cement to two parts sand, mixed to be same as specified for stucco work. Also cover all shafts of columns with Portland cement stucco and form flutes as shown. (The cores of all columns will be built up of [illegible] this work as shown on details.)

The caps of all columns will be cast in four pieces and the bases will be made in two pieces.

Finish the entire columns in reading room, including caps, shafts and bases with white Keene's cement, put on in the best manner by thoroughly competent parties, cement to be White's manufacture.

Also cover the fireproofing around columns in basement corridor with moulded caps and bases made of Portland cement sand as above specified and cover the shafts of same with Portland cement mortar. Finish the entire columns with White's Keene's cement finished same as above specified.

PATCHING:

The plasterer will repair and make good all plastering work damaged by the work of other contractors after same is finished and leave all plaster work clean and perfect at completion. The plasterer shall try all grounds set by the carpenter to see if same are plumb and true before floating and flush with same on finish coat and to notify carpenter to make same good if required.

CLEANING OUT:

The plasterer shall remove from time to time all superfluous material and rubbish left and accumulated about the building and keep same clean and free from rubbish at the time when the plasterer commences his work whether same which is caused by the mason or not. From the time the plastering is begun, the plasterer must clean out all rubbish caused by his work, each floor to be cleaned out after each coat of plaster is put on. After the plastering is finished the plasterer must remove from the building all superfluous material and debris, leaving entire building broom clean.

and cut to marble sills. Also provide and set marble sills for all windows in new Lecture room buildings. The bases and capitals of sixteen porch columns and the bases and caps of four porch pilasters, will be of [illegible] ed and set by this contractor. All [illegible] bases of columns and pilasters will be made in single stones. All marble window and door sills will be finished in fine hand tooling equal to best eight-cut work. All [illegible] mouldings of bases and capitals of columns and pilasters, will be [illegible] finish. No machine cutting will be allowed. Each stone to be worked out in strict accordance with details and each projection to be provided with wash cut on top and drip [illegible] [illegible] each stone to hold its actual dimensions called for by [illegible] [illegible] [illegible] [illegible] and all [illegible] must [illegible] with a clearance of [illegible] beyond the [illegible] projection. All [illegible] and [illegible] be [illegible] [illegible] as shown on [illegible]. All mouldings must be [illegible] and true [illegible] [illegible]. Cut all marble where necessary for anchors and [illegible] [illegible]. [illegible] all [illegible] to be of [illegible] [illegible] and [illegible] [illegible]. All [illegible] have wash cut on top and [illegible] in [illegible] at [illegible] and [illegible] [illegible] [illegible] [illegible] for [illegible] marble [illegible] cut on top and in [illegible] where they will be covered by [illegible] work at least 2" all around. All marble work to be [illegible] directly from a derrick and dropped into its natural bed [illegible] place from above. Each piece of marble to be laid on [illegible]



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and the modeling and carving of the marble being approved exactly with models approved by the Architects.

ALTERNATE ESTIMATES:

Contractors, in estimating, will give separate prices for all marble work from each of the following quarries: [illegible] Vt., [illegible], N.Y., [illegible], or Georgia quarries.

All marble to be first quality selected stock free from dark veins, spots, or other imperfections.

2nd. Contractors, in estimating, will state what the difference in cost will be if the column caps and bases and the pilaster caps and bases be made of first quality Italian [illegible] marble, carved and finished in Italy by a first class carver. The plaster models of the above work will be made in Italy from full size details furnished by the Architects and photographs of all models must be submitted to and approved by the Architects before any cutting or carving of marble is done.

CLEANING DOWN:

After all marble work on the building is completed and cleaned down, clean all marble work with clean water and bristle brushes, remove all mortar or other substances from marble work, point up all joints where required and leave same clean and perfect on completion.

This contractor will take up and remove all marble floor tiling on South porch of Rotunda building that has been damaged in any way by the fire and will replace same by marble floor tiling 12" x 12" x 1 1/4" thick in selected first quality Georgia white marble. All joints in floor tiling to be rubbed to a [illegible] of tile and no [illegible] surface will be allowed. Set all floor tiling in a good bed of Portland cement mortar composed of one part Portland cement to three parts sand and point all joints neatly in cement as directed. Also do all levelling up required for setting the above work.

Level up and re-set old stone sills under the water table and windows of Rotunda wherever required.

The ceilings of North Museum rooms to be composed of a series of tile extending between beams and ribs as shown on sections. Between the ribs, a series of one-course arches (domes) will be built by this contractor and left ready for plastering. On top of tile ceilings, fill up with concrete and grade same ready for finished roof. The Greek ceilings to be a continuous barrel arch built with Guastavino tile similar to those of Madison Square Garden arcade, the arches to be two courses thick, the second course to be of rough tile and 6" iron beams are to be laid across this barrel arch from wall to wall and a second tier of arches built between said beams of rough tile, graded with concrete ready for finished roof. The Auditorium ceiling arches to be built as shown on sections, leaving a hollow space using angle irons as per plans and sections.

STAIRS TO POTTERY ROOM

Stairs to Pottery room to be built of two courses of rough tile, the first course laid in plaster and the second in Portland cement mortar and the steps to be built of common brick finished 1 1/4" below step line, the soffit of said stairs to be left ready for plaster.

NORTH ENTRANCE STEPS

The steps from main stairs on North front to be built with brick same as above specified, finished 1 1/4" below finished step line.

DOME ROOFS.

All the surfaces of main dome and roof space where copper is to be laid, will be finished with porous terra cotta so that the same will be easy to roofs over [illegible]. The porous terra cotta to be laid with Portland cement mortar and [illegible] from buckles, leaving a true and straight surface.

All floors, roofs, ceilings, and similar marked on plans, [illegible] work", and colored green on drawings, are to be constructed in the system and to be built in perfect shape free from buckles and from lines which are not true, and [illegible] as to be [illegible] surface that can be covered by or with [illegible] of [illegible] plaster. The floor construction to be [illegible] to carry and give loads in addition to the weight of construction, as follows:

[illegible] 200 lbs. per square foot.

[illegible] to support [illegible] [illegible] 150 lbs. per square foot. All other rooms 150 lbs. per square foot.

All calculations of strength for [illegible] beams necessary for floors, roofs, [illegible] and [illegible] is left to the [illegible] subject to the approval of the Architects.

All [illegible] work [illegible]

basement over areas are cheaper than 8", concrete floors on fills and flat work will be built by this contractor similar to the flat work over graded areas under the Section [illegible] Library, erection and court. This construction to be [illegible] ribs 6" thick and 25" on centers with [illegible] of [illegible] laid flat over same and well bedded in Portland cement [illegible] composed of one part cement, two parts clean sharp sand [illegible] marble, mosaic or granolithic floors are to be applied [illegible] underlying such work, the same can be laid directly upon the two courses of flat work. Where wooden floors are to be applied, the sleepers will be laid over the two courses of flat work as above specified, provided with iron plates or anchors by the carpenter and after said sleepers are laid, this contractor will lay one course of [illegible] over each [illegible] piece anchor between sleepers as directed.

[illegible]

The entire work must be done in a careful, workmanlike manner, [illegible] control of the Architect [illegible] and to the entire satisfaction of the Architects.

CARPENTRY, ROOFING & GLAZING.

Restoration of Rotunda.

University of Virginia,

Charlottesville, Va.

SPECIFICATION for Carpentry, Roofing and Glazing, in connection with the Restoration of the Rotunda for the University of Virginia, Charlottesville, Va. to be built according to plans and specifications prepared by and under the general superintendence of McKim, Mead & White, Architects,

160 Fifth Avenue,

New York City.

GENERAL CONDITIONS:

The same general conditions mentioned in the specification for Masonry, etc. will also apply to all parts of the work included in this specification.

The carpenter's work will include all sleepers, window frames, sashes, partitions frames, grounds, flooring, all mill work, such as door and window trim, base, chair rail, jambs, panel work, panel backs, casing over chases, all copper work, roofing skylights, hardware glazing and jobbing.

CUTTING AND FITTING:

This contractor will promptly do all cutting and fitting that may be required to make the work of other contractors come right with his work and will repair all damage to his work caused by the work of other contractors after same is finished.

PARTITIONS FRAMES:

Provide 3" x 4" well seasoned, merchantable, Virginia white pine studs set around all door openings in fireproof partitions securely spiked together and strongly set, stayed and braced to receive same. Studs to have sills and plates 2" thick where desired and all to be secured to beam filling and walls and well anchored. Provide and set all necessary pine blockings behind wood jambs to receive nails and screws of hinges.

WINDOW FRAMES:

All outside window frames constructed for sliding sash will be built with 1 1/2" pulley stiles and heads and 3/4" parting strips of selected first quality Georgia yellow pine, 1 1/4" white pine outside casings and 7/8" inside casings and 2 3/4" thick rebated and weathered clear white oak sills. All outside window frames to have heavy moulded first quality white pine hanging stiles and moveable pockets for weights in pulley stiles, fastened with countersunk brass screws. All window frames to be as per details to be furnished. Provide and set casement window frames for all windows in boiler rooms and in lecture room buildings where so indicated casement frames to be made of 1 3/4" rebated first quality Virginia white pine plank stiles and heads and to have 2 3/4" thick straight grained, clear white oak sills, casement frames to be arranged for sash to hinge or pivot as directed. Set all window frames straight and plumb and secure same to masonry with wrought iron holdfasts.

Provide and set clear Virginia white pine frames 1 3/4" thick rebated for sash for all windows in interior partitions where shown, all to be as per details.

Prime all white pine parts of window frames with one heavy coat of best Atlantic white lead and pure linseed oil paint and oil all white pine parts with one coat of pure linseed oil before frames are set.

CAULKING WINDOW AND DOOR FRAMES:

After all outside window and door frames are set and the mason and marble work finished, fill in space between brick work and window and door frames with yellow pine strips if space is too large caulking and then fill in tightly and caulk thoroughly with clean picked oakum entire around inside of all window and door openings in outside walls as directed, making same perfectly wind and weather proof.

CENTERS AND TEMPLATES:

This contractor will furnish and set all centers and templates required for mason and marble work and stucco work of walls, ~~xxxxxxxxx~~ arches, etc. all centers and templates to be made of sound, strong material, thoroughly braced and no centers to be eased or struck until directed by architects.

PROTECTION OF STONE WORK:

Provide all board protection required to protect all projecting courses, mouldings and ornamented parts of stone and marble work while the building is in progress and provide proper board covering around all entrance door ways and

3. window openings used for taking in materials and maintain

work accepted. Where circular work is indicated or required, it shall be worked, in each case, from the solid. No kerf sawing will be allowed. Where members are formed of more than one piece, all wood shall be screwed together and all heading joints throughout the entire work shall be dowelled with hard wood dowels with each joint glued. All panel work to be full framed work, made and fitted at the shops as far as ~~xpmmk~~ possible.

DOORS AND FRAMES:

Construct all doors through the building with frames and jambs, panelled and moulded soffits and architraves complete, of first quality Virginia pine. All outside doors to be 2 1/2" thick, except main entrance doors to Rotunda on 1st floor which will be 3" thick. All inside doors except water closet doors will be 2" thick panelled and moulded as shown. Main entrance doors for 1st floor will have heavy moulded raised panels and all other doors will have flat panels with slightly raised mouldings. Provide and set all door frames and doors required for inside openings throughout the building. Door frames to be 1 3/4" thick double rebated and all door frames in openings in brick walls, except main entrance doors to Reading Room will have panelled jambs and soffits.

Provide and clear white oak doors of sizes shown to all water closet compartments in toilet room, doors to be 1 1/4" thick with flat panels in lower part and fixed oval slats in

ROOFING AND COPPER WORK.

ROOFING, ETC.:

Cover the entire surface of dome roof, including steps at base of dome, the roofs of North and South porches and the flat portion of main roof at base of dome after [illegible] work is finished and joints of same well filled and made smooth with cement, with best quality two-ply asphalt roofing felt laid with joints lapped at least 3" and thoroughly cemented together with hot [illegible] cement. Fasten roofing felt to [illegible] blocks with [illegible] nails and large tin washers, making roof perfectly water tight. All roofing to [illegible] out and close around all openings and tight against all walls.

COPPER ROOF:

Cover all roofs of Rotunda building including roofs of North and South porches with 16 oz copper tiles made to special design, [illegible] details furnished by the Architects on elevations. All copper tiles to be laid in regular courses, each tile to be fastened to roof with two copper nails with large headed copper [illegible] on dome roof to be laid radiating as shown.

Cover all flat surfaces of dome roof and stepping at base of same and vertical [illegible] wall above main gutter with 16 oz copper laid with [illegible] locked and soldered seams.

Line all gutters of Rotunda building and gutters of arcade

Provide and set copper rosettes and mouldings in panels of dome ceiling in Reading Room, securely put up and ornamented as shown, all to be of 16 oz copper.

NOTE: Contractors, in estimating, will note that the [illegible] work to roof will be of 12 oz copper, to be used for all copper work instead of as specified.

GUARANTEE:

This contractor must guarantee all copper work to be perfectly water tight for a period of five years from date of completion.

SKYLIGHT:

After curbs for skylight in dome roof are set with heavy angle irons on top, furnish and set in place complete copper skylight of size shown on roof plans and sections, all as per details. Skylight to be constructed with heavy [illegible], [illegible] and to be provided with all necessary condensation bars, drips, weep holes and [illegible] and to have [illegible] copper ventilator in center of same with damper operated from gallery by [illegible], all to be covered with 16 oz copper. Skylight to have roof glazed with best quality hammered plate glass 1/4" thick, well bedded in putty and made perfectly water tight. Skylight to be of [illegible] make or [illegible] to the judgment of the Architects and will be guaranteed by this contractor to be absolutely water tight and free from drips [illegible].

from water of condensation for a period of five years from date of completion.

BOOK LIFT ENCLOSURE:

Provide and set first quality Virginia white pine enclosures around book lifts with sliding doors in same arranged to slide up and down with weights on each floor level. Enclosures to be strongly framed together, panelled and moulded on three sides and sheathed inside with 7/8" x 2-1/2" first quality Virginia white pine. Enclosures to extend from first floor level up to a point 18" above level of 4th gallery and to have one door opening into same on each floor level. Doors to be 1 1/4" thick, panelled and moulded and arranged to slide up and down with pulleys, sash cord and properly balanced counterweights, all to be as per details.

BOOK LIFTS:

The two book lifts will be run by electric power and will be furnished complete, including all machinery, weights, etc. in connection with same under another contract.

DUMB WAITER:

All dumb waiters required for Rotunda building will be furnished and set under another contract.

OUTSIDE SHUTTERS:

Provide and set complete to all outside windows in new lecture rooms and North windows in old lecture rooms wherever required, first quality Virginia white pine outside

**BOLTS:**

Provide heavy bronze barrel bolts for fastening all casement sash in boiler room.

All hardware throughout the building to be of best quality, manufactured by either of the following makers: Yale & Towne Manufacturing Co., A.G. Newman, P. & F. Corbin, & Geo. Beyer. A complete line of samples covering the intention and meaning of the bidder is to be submitted with the estimate and those of the accepted bidder to remain on file in the office of the Architects until the completion of the building and such samples are to constitute the standard of allhardware to be furnished. If, in violation of this specification, other goods are substituted, this contractor will be required, at his own expense, to take off such substituted goods and replace them with goods in conformity with samples and make good at his own expense all damage or injury to any part of the building involved in making such changes. Provide any and all other hardware necessary for the complete finish of the building whatever specially mentioned or not.

**PAINTING:**

All painting of Rotunda building, lecture room buildings and arcades, except priming coat on all window frames and sash, will be done by the owners under another contract.

## G L A Z I N G .

Glaze all exterior sash throughout the building and the upper panels of all doors where so indicated with strictly first quality double thick French sheet glass, free from all imperfections. Glaze all windows in boiler room with first quality double thick American sheet glass, free from waves, specks or other imperfections.

Bed all glass in best whiting putty and bead with zinc brads. Make good all breakage and leave glass clean and perfect on completion, free from paint or other spots.

ENCLOSING BUILDING:

Enclose building with rough board doors and close up all window openings with old sashes and doors with sufficient glass area to give good light to the interior and keep this enclosure in good serviceable state, making building wind and weather proof until permanent doors and sash are in position.

Board all granolithic work of steps, platforms, and all exposed portions of stucco work of columns, balustrades, etc. and maintain same until directed to be removed by the Architects on completion.

JOBBING:

Do all cutting of wood work and repairing same required by plumbers, steam and gas fitters, electric wire men, masons, iron workers and all other trades employed on the building. This applies also to all changes made in gas and electric outlets during the progress of the work.

CLEANING OUT:

The carpenter is to remove from time to time all superfluous materials and rubbish that may accumulate about the building and keep same free and unincimbered during the progress of the work and cleanout and keep the building free from rubbish after the plasterer has finished his work whether such rubbish is caused by the carpenters work or not and finally clean out the entire building on completion leaving same broom clean, with all windows washed and all paint and other spots removed from the glass.

FINALLY:

The entire work to be done in a careful, skillful and workmanlike manner, of the best materials and workmanship and to the entire satisfaction of the Architects.

STRUCTURAL & ORNAMENTAL IRON WORK.

Restoration of Rotunda,

University of Virginia,

Charlottesville, Va.

to be otherwise as shown on drawings and to have a bearing of not less than 8" at each end. All lintels having 20" bed or over to have at least two ribs and all ribs to have a height of 4" at ends and an additional height at centers of one-eighth the clear span. Also provide cast iron lintels over all openings of heat and vent flues in walls and over all register openings as required by the heating plans.

CAST IRON COLUMNS:

Provide and set four cast iron columns in basement of Rotunda building where shown on plans and of dimensions indicated. Columns to be cast full thickness, straight and smooth with all necessary sixty-degree brackets and lugs for beams, base plates, etc. and with ends faced off the exact lengths and square with axis. Bed plates for columns to be of dimensions shown with top surface planed and to be bedded to proper level in Portland cement. All holes in columns for connections for beams, girders, etc. are to be drilled. Also drill holes 1/4" in diameter in columns wherever required by Architects for testing thickness of metal.

CAST IRON TEMPLATES:

Provide and set cast iron templates at least 1" thick and 12" square under each end of each iron strengthening beam in roofs of South lecture rooms, templates to be bedded to proper level in Portland cement. Also provide cast iron base plates under all columns in basement of Rotunda, of sizes shown on iron drawings. All cast iron templates

cast iron frames. Perforated iron floors to be cast in special designs furnished by the Architects.

LIBRARY FLOOR LIGHT:

Provide and set iron frame in center of Library floor with ribbed panels rebated for glass floor lights. Provide and lay glass floor lights of sizes shown, made of best quality hammered plate glass 1 1/2" thick, well bedded in metallic cement; floor light to be flush with finished floor of Library and to be built according to details and to have finished surface underneath.

GALLERY RAILINGS:

Provide and set ornamental cast iron railings around 1st and 2nd galleries between columns as shown on sections, railings to be securely fastened at ends to columns and bolted to gallery floor framing. All cast iron work of the above railings to be double face and to have all rough spots filed smooth and to be equal in every respect to the finest machine castings.

Provide and set heavy moulded brass cap railing on top of iron core rail of 1st and 2nd gallery railings, cap railings to be securely bolted to core rail as directed. Provide and set moulded cast iron fascias around fronts of 1st and 2nd gallery floors, properly bolted to floor construction.

Provide and set wrought iron railing around front of 3rd gallery as shown on section, railing to have 1" square bar uprights every two feet apart and 3/4" square intermediate bars spaced as shown.

Provide plain wrought iron core rail and cover same with heavy brass moulded cap rail same as specified for 1st and 2nd galleries. All gallery railings to be properly braced wherever required by heavy wrought iron scroll braces. All the above gallery work to be made strictly in accordance with full size details to be furnished.

CAST IRON THRESHOLDS:

Provide and set moulded cast iron thresholds for all dooropenings throughout the building that communicate between rooms or corridors having wood floors on one side of the opening and torrazza mosaic or granolithic on theother side of opening. Also provide similar thresholds for all outside entrance doors in basement and 1st floor of Rotunda building and lecture room buildings. All thresholds to be properly secured with countersunk brass screws as directed.

CURBING FOR SKYLIGHTS:

Furnish and set all angle and tee iron framing required for curbing around skylight in dome roof, left ready to receive fireproofinh. Do alldrilling required to properly secure skylight to curbing as directed.

CAST IRON COVERS:

Provide and set cast iron covers 1/2" thick with diamond ribbed top surface in lengths as directed over all trenches for return steam pipes, drip pipes, etc. on connection with heating and ventilating system of Rotunda & lecture



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5 reports

room buildings; trench covers to be 14" wide and have angles pieces properly fitted and to be provided with rings set in grooves for lifting same; covers to be cast with rebated lugs on same to rest on brick work and to be provided for all pipe trenches shown on heating plans. There will be about 1,400 linear feet of trenches required.

MAIN DOUBLE STAIR CASE:

Provide and build main stairs from basement to 1st floor as shown with ornamental cast iron mouldings and panelled strings and moulded and panelled cast iron fascias around well holes. Platforms to be framed with ornamental cast iron borders and diagonal ribs; soffits of above stairs will be exposed to show slate treads and platforms; stairs and well holes to have ornamental wrought iron balustrades to cost Five Dollars per linear foot and to be made from special design. Provide flat bar hand rail on top of balustrade properly drilled to receive wood hand rail; newels to be of cast iron with ornamental tops and drops, and panelled, moulded and ornamented shafts. Provide ornamented, moulded and panelled cast iron risers with brackets cast on same to receive treads and platforms. All the above stair work to be made strictly in accordance with full size details and all to be securely framed together.

SLATE WORK:

Provide and set treads and platforms on main staircase from basement to 1st floor of best quality dark purple or black Vermont slate, neatly sand polished or rubbed and all treads and platforms to have rounded nosings. All treads and platforms to be 1 3/4" thick. Bed all treads and platforms in metallic cement and secure same to iron work with brass screws leaded into slate from the under side. All castings required in connection with the above stairs to be of best quality stove castings with neatly finished joints and all rough spots either filed or chiseled to a true smooth surface.

CIRCULAR STAIRS:

Furnish and build circular stairs from 1st floor to 4th gallery as shown on plans, stairs to have 4" diameter extra heavy wrought iron columns in extra long lengths, jointed with interior ferrules and to have curved channel beam strings with wrought iron brackets bolted to same to receive treads and risers, risers to be cast iron, panelled with brackets and lugs cast on same to receive wood treads and to fasten to center newel, channel beam strings to be supported by heavy expansion bolts fastened into mason work where possible. Provide panelled ~~mxt~~ cast iron fascias around well holes and bolts for securing wooden treads to stairs.

BOILER ROOM STAIRS:

The steps to boiler room will be furnished and built by the contractor for Guastavino arch work, but this contractor will furnish and set all hand rails, newels, etc.

in connection with same. Provide and set wrought iron balusters of 3/4" round iron with collar forged on same for hand rail and provide 1" gas pipe hand rail with cast iron connections for balusters, one to each step.

All the above stair work to be built strictly in accordance with detail drawings to be furnished.

Provide and set 2" gas pipe railing around pump pit, railing to have 2" uprights and top and bottom rails with flanged bases bolted to floor and pipe fittings for all connections.

PAINTING:

paint all structural and ornamental iron work included in this specification throughout the building two heavy coats of best red lead paint mixed with pure linseed oil. All structural iron work except cast iron columns and lintels, which will be delivered unpainted for inspection, will be painted one coat before delivery at the building, and one coat after inspection. All cast iron work will be painted one coat after inspection at the building and one coat after erection. All assembled parts will be painted two coats before assembling.

On completion of mainstaircase, clean off all slate thoroughly and give same two coats of oil on top and bottom surfaces and protect all slate from damage by proper board protection until completion of the work.

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MEASUREMENTS:

Dimensions of all iron work that is to be fitted to other work, must be taken from the actual work on the building and this contractor will be required to make good any error arising from incorrect measurements. All holes in iron work whether for use of iron workers, masons, carpenter, or other tradesmen employed on the building, will be punched, drilled or cut by the contractor for iron work.

ALTERNATE ESTIMATES:

Contractors, in estimating, will give separate price, 1st, for four circular stairs in corners of Reading Room, 2nd, for main double stair case from basement to 1st floor.

FINALLY:

The entire work to be done in a careful, skillful and workmanlike manner, of the best materials and workmanship and to the entire satisfaction of the Architects.

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April 27th, 189[illegible]

# PAINTING & POLISHING.

Restoration of Rotunda,

University of Virginia,

Charlottesville, Va.

SPECIFICATION for Painting and Polishing in connection with Restoration of Rotunda for the University of Virginia, at Charlottesville, Va. to be built according to plans and specifications prepared by and under the general superintendence of McKim, Mead & White, Architects,

160 Fifth Avenue, N.Y. City.

GENERAL CONDITIONS:

The general conditions set forth in detail in the specification for Masonry, etc. are hereby included and made a part of this specification.

NOTE: All window frames and sash will have one priming coat of paint put on by the carpenter before being brought to the building. All other wood work throughout the building will be primed or filled and finished by this contractor as hereinafter specified.

Bring all exposed portions of wood work to a fine smooth surface and sand paper same. Prime all rough parts and backs of casings, jambs, door frames, architraves, base, and the back of all other finished wood work generally with one heavy coat of Prince's metallic paint and pure linseed oil without admixture of either benzine or petroleum. Paint or finish all surfaces of wood work except as noted above one coat immediately after delivery at the building.

EXTERIOR WOOD WORK:

After all white pine wood work is put in place, putty stop all nail holes smoothly and neatly before apinting and finishing proceeds. Clean out all mouldings and paint all exterior white pine wood work three coats of best quality Atlantic white lead and pure linseed oil paint, colored as directed.

COPPER WORK:

Paint all exterior copper work of building, except copper tile of all roofs, and all other copper work on dome roof above level of upper gutter at base of same, with one good coat of the Eureka Chemical Co's roof paint and three coats of best quality Atlantic white lead and pure linseed oil paint colored cream white as directed.

NOTE: Samples of color for all painted work to be submitted to and approved by the Architects before work is started.

PAINTING IRON WORK:

Paint all exposed structural iron work and all ornamental iron work both interior and exterior, two coats of best Atlantic white lead and pure linseed oil paint after same has been painted by the iron contractor.

HARD WOOD POLISHING:

After all yellow pine and oak work of window frames has been filled with Wheeler's patent wood filler by this contractor, finish all yellow pine work of window frames with two coats of pure boiled linseed oil, rubbed after each coat. (Oak sills will be painted as specified for exterior wood work.)

After all oak work in lavatories is cleaned off, fill same thoroughly with Wheeler's hard wood filler and stain same if required. Carefully rub off filler after applying same and cover all oak work throughout with one coat of best quality white shellac neatly flowed on and rubbed down smooth with fine sand paper. Then put on one coat of Murphy Varnish Co's transparent interior wood finishing varnish neatly flowed on. Allow same to dry thoroughly for forty-eight hours and then rub down with pumice stone, oil and hair cloth to a smooth finish. Then put on a finishing coat of varnish and rub to a dull smooth finish as directed. Finish wood hand rails on all stairs same as above specified.

INTERIOR WOOD WORK:

Cover all knots in interior pine wood work thoroughly with first quality white shellac and prime all interior white pine wood work with one heavy priming coat of best quality Atlantic white lead and pure linseed oil, allowed to soak thoroughly into the wood. Putty stop all nail holes after priming and rub down all white pine wood work smooth with fine sand paper after priming coat. Then put on two coats of best Atlantic white lead and pure linseed oil paint, colored as directed, neatly brushed on, allowing each coat to dry thoroughly before the next is applied. After the 2nd coat has dried, rub down all wood work with fine sand paper lightly and put on a finishing coat of white lead and linseed oil paint neatly brushed on and colored as directed.

FINISHING FLOORS:

Stain, if required, and after staining, coat all flooring of first floor with two coats of best quality wax polish thoroughly rubbed in and leaving a smooth polished surface on completion. Finish all other flooring throughout the building with a coat of stain if directed and two coats of linseed oil and turpentine, neatly brushed on.

After all treads and platforms of circular stairs have been cleaned off, fill same thoroughly on all sides with Martin Process Co's. Fireproof HardwoodFiller and stain if required. Carefully rub off filler after applying same and cover all wood work of circular stairs with two coats of best quality wax polish neatly rubbed in.

COPPER WORK OF DOME:

Paint all copper rosettes and copper mouldings in panels of dome over reading room with one coat of Eureka Chemical Co's. roof paint and three coats of white lead and linseed oil paint, colored bronze green as directed.

BRONZING PLUMBING PIPES:

Paint all iron plumbing pipes with one coat of Eureka Chemical Co's. paint and then finish all plumbing pipes with two coats of best quality silver bronze put on in the best manner.

STUCCO WORK:

All stucco work on exterior of buildings will be painted with four coats of best Atlantic white lead and pure linseed oil in color as directed. All columns to have shafts rubbed smooth before being painted.

SCAFFOLDING:

All scaffolding of whatever character required for exterior painting will be furnished by this contractor.

All scaffolding required for painting copper work on interior of dome will be furnished by other contractors, but all painting of dome must be done by this contractor while said scaffolding is in place.

FINALLY:

The entire work to be done in a careful, skillful and workmanlike manner, of the best materials and workmanship and to the entire satisfaction of the Architects.

XII

3

# HEATING & VENTILATION.

Restoration of Rotunda,

University of Virginia,

Charlottesville, Va.

SPECIFICATION for Heating and Ventilating apparatus required in connection with the erection and completion of the Rotunda for The University of Virginia, Charlottesville, Va. to be built in accordance with plans and specifications prepared by and under the general superintendence of

McKim, Mead & White, Architects,

160 Fifth Avenue, N.Y. City.

The heating and ventilating apparatus to be furnished for this Building is to include all that is necessary for heating and ventilating the Rotunda, the two lecture rooms in the basement, and the four lecture rooms in the wings. Steam is to be carried from the boilers in the boiler house and carried at high pressure to the blower room where it is to be reduced to low pressure and distributed through a system of supply and return piping to the various radiators and heater stacks, the return being automatically pumped back to the boiler house by means of a pump and pump governor, located in the blower room. The ventilating apparatus is to be connected with the library and with the two lecture rooms below.

RADIATORS.

Furnish and locate where shown on plans, a total of seventy-eight (78) direct radiators of the American Sectional pattern, distributed as follows:-

1.

Basement:

4 lecture rooms in wings - A total of 32 direct radiators, containing a total heating surface of 1440 square feet.

Lecture Rooms under Library - A total of 6 direct radiators, containing a total heating surface of 360 square feet.

Toilet rooms - a total of 2 direct radiators, containing a total heating surface of 60 square feet.

First floor:

Library - A total of 38 direct radiators, containing a total heating surface of 1600 square feet.

These radiators are to be located generally as shown on plans or in such other positions as may be directed during the progress of the work, and will conform to the height of the various window sills. The radiators in the basement rooms are to have extra high legs, so as to be at least one foot above the floor level, and insure the easy draining of the same.

PIPING:

Furnish all the materials for and erect a complete system of steam supply and return piping, connecting all the above radiators and the heater stacks with the high pressure steam pipe brought from the boiler room, the main steam supply being 5" in diameter, reducing gradually to smaller sizes as branches to the several risers and radiators are taken off.

The main return pipe is to be 3" in diameter and connected to the steam pump. It is to be run below the basement floor level in trenches provided by other contractors.

The piping is to be run generally as shown on plans and of the sizes there shown or larger as may be necessary for securing a complete circulation of steam in all parts of the heating apparatus at a pressure of two lbs. per square inch.

Make all steam and return connections between the various risers and the radiators on the upper stories, these connections to be generally 1" x 1".

The main steam supply pipe for the Rotunda is to rise to the ceiling of the 3rd gallery where it will distribute through a circular 3" pipe around the entire outside of building, connecting to the several risers, as shown, these risers being 1 1/2" for the steam throughout their entire length and 1 1/4" for the return.

All piping throughout is to be of the standard weight and quality and all fittings are to be of extra heavy pattern, made of best gray cast iron.

All piping is to be put up at such grades with relief pipes for all steam risers and elsewhere so that all water of condensation will easily drain from them and a noiseless apparatus be secured.

The steam pipes generally, excepting those for the Rotunda proper, will be run on the ceiling of the basement and return pipes in trenches, as above specified.

8.

VALVES:

Furnish and place on the connections to each radiator, a set of Jenkins Bros.' or Fairbank's Valves, with removable elastic discs, to be of the full size of the connections and to be made of best steam metal with nickel plated trimmings and polished wood wheel handles.

Also place an Onderdonk "Reliable" automatic air valve on each radiator.

Furnish and place a set of valves on each set of steam and return risers.

Furnish and place valves on the main pipes wherever required for properly controlling the apparatus.

REDUCING VALVE:

Furnish and place in the main steam heating pipe, a 5# Kieley reducing valve. Also furnish the materials for and make a pass-by around the same, placing a full size gate valve on either side of the reducing valve and a globe valve on the pass-by.

BLOWER, HEATER AND ENGINE:

Furnish, deliver and erect in basement where shown on plans, doing any excavation and building any foundation required, a B.F. Sturtevant, Boston Blower or Buffalo Forge Co's as directed by the Architects, steel plate ventilating fan, to have blast wheel 4 1/2' in diameter and 30" wide, and to be encased in full steel plate housing with top horizontal discharge, 30" wide and 36" high.

This fan to be provided with a steel shaft and B.F. Sturtevant's patent brush oiling bearings, and to be directly connected with a 10 H.P. C. & C. or Crocker-Wheeler electric motor, arranged to develop this power at a blower speed of 350 revolutions per minute. The motor is to be arranged so that it can be run at four different speeds from 350 down to 200 revolutions per minute.

Also furnish, erect and connect with fan, a B.F. Sturtevant, Boston Blower Co. or Buffalo Forge Co's. improved corrugated sectional base heater, as directed by the Architects, containing not less than 600 square feet of heating surface. This heater is to be jacketed in steel plate of #12 gauge, properly stiffened at the corners with angle iron, said jacket extendingup to the ends of the group and over the top of same, also over space between the heater coils and fan, thus forming a suitable air connection between the blower outlet and the heater casing.

Build a brick foundation for the heater and for electric motor, erecting all the apparatus pertaining to the blower, motor and heater in a complete and thorough manner, except the wiring, which will be done by other contractors.

FRESH AIR REGISTERS:

Furnish and place in the floor of the library, four (4) fresh air registers, size 24" x 24", to be of Tuttle & Bailey's standard patterns and manufacture, black japanned finish , with valves for control.

Furnish four (4) similar registers in the two lecture rooms under the Library, each register opening being 12" x 24". These registers to be connected with the hollow space between the floor of the Library and the tile arches, this hollow space provided by other contractors being used as a fresh air duct to supply air to these registers.

GALVANIZED IRON AIR DUCTS:

Furnish all the materials for and put up (2) two galvanized iron fresh air ducts, connecting the heater stack with the two air spaces of blower, as above specified, these ducts conveying the air from the heater stack to these spaces. Furnish and put up a cold air duct extending from out of doors to the inside of the blower room. These warm and cold air ducts are to be made of #24 and #22 galvanized iron, of sizes shown on the plan, to be double seamed and tacked with solder where required. The several sections are to be made with slip joints, ducts being securely hung by means of heavy iron hangers, as directed. Tight fitting cleanout doors are to be placed in the bottom of warm air ducts where required. Provide a damper in the main cold air duct, so that it may be entirely shut off when not in use.

The blower, motor, heater stack and cold and warm air ducts in connection with same, are to be located generally as shown on plans and of the sizes there shown, it being understood, however, that the arrangement may be slightly changed, so as to accommodate other requirements of the building.

STEAM GAUGES:

Furnish and properly connect two (2) steam gauges, one high pressure and one low pressure, for indicating the pressure in the high pressure main and that carried in the heating apparatus.

PUMP CONNECTIONS:

Furnish materials for and make all steam supply, return and drip connections to the pump governor and pump with all necessary valves for controlling same.

STEAM PUMP:

Furnish and set on solid brick foundation, coped with blue stone, one Worthing ten Duplex steam pump, size 6 x 4 x 6 for returning the water of condensation from the heating apparatus to the boiler house.

PUMP GOVERNOR:

Furnish and connect with the pump for automatically controlling the same Fisley automatic pump governor.

MAIN HIGH PRESSURE SUPPLY AND MAIN RETURN.

Furnish the materials for, including all pipes, fittings, hangers, stands, and other appurtenances, and extend a 3" high pressure main from main steam pipe in boiler house to blower room in Rotunda. The owners will provide a suitable tunnel or conduit in which to run this pipe, the contractor furnishing all materials and doing all labor incidental to the introduction of the piping. Also furnish all materials for and extend a similar discharge or return pipe from the

discharge of the pump - - - -

to the main boiler feed pipe, this return pipe being 2" diameter, the owners likewise furnishing conduits or tunnels in which to run this piping.

Furnish valves on either end of both these pipes and proper expansion joints and all necessary anchorages for securing the pipe in place and providing for expansion and contraction.

PIPE COVERING:

Cover all the main high pressure steam supply piping and the main return or discharge piping throughout their entire lengths from the boiler house to the blower room in the Rotunda, with Carey's magnesia sectional covering, 1" thick, brass banded, and covered with canvas neatly sewed on

PAINTING AND BRONZING:

Paint all piping in the basement and all iron work in the blower room, with best black Japan varnish or other suitable color, as may be directed; and paint all piping above the basement and all radiators with yellow ochre and then finish in bright gold bronze.

PROTECTION:

Wherever pipes pass through floors or near wood work, protect the same with iron collars and shields, in accordance with the Regulations of the Board of Fire Underwriters; also place neat brass escutcheon plates around all radiator connections.

FINAL:

The plans and specifications are intended to include all materials and work required for the entire completion of the heating and ventilating work and other work in connection therewith, and any work or materials necessary for the execution of the same even if not specially named herein or shown on the plans, must be furnished and done as part of the contract without any extra charge, excepting only such as are specifically agreed upon under separate contracts.

The contractor must put his work in place as fast as the progress of the work requires and when directed by the Architects. All dirt, rubbish, refuse and other materials must be removed from the premises on the completion of the work.
The steam, return and power mains, and branches are to be properly supported with suitable hangers, clamps, etc. and are to be graded so as to secure an easy and rapid circulation of steam and a prompt removal of all water of condensation, and all necessary and proper relief pipes are to be provided in all cases where required.

The total heating surface placed in the radiators and indirect coils must be guaranteed to warm all parts of the building to which they are connected to a temperature of 70 deg. Fahrenheit when the outside temperature is at 20 degrees above zero.

Before commencing the work, the contractor shall prepare complete detail plans showing the exact location and size of all the various parts of the apparatus, together with all sizes of radiators, pipes, appurtenances, etc. for the approval of the Architects, and such detail drawings and sizes are to be made with the approval of the Architects and are subject to such alterations as they may direct or think necessary.

FINALLY:

The entire work to be done in a careful, skillful and workmanlike manner, of the best materials and workmanship and to the entire satisfaction of the Architects.

THE ROTUNDA

# APPENDIX D

***Mechanical, Electrical, Plumbing, and***
***Fire Protection Findings & Recommendations***
***2007***
***Plus Group Consulting Engineering, PLLC***

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Consulting Engineering PLLC
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# UNIVERSITY OF VIRGINIA
# ROTUNDA

## MEP/FP FINDINGS
## &
## RECOMMENDATIONS

Feb 12th 2007

Prepared for
**John G. Waite Associates, Architects**
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Albany, NY 12207

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# 1. INTRODUCTION

The University of Virginia – Rotunda

The Rotunda has three main floor levels: the Ground Floor (basement), the Main Floor (first floor), and the Dome Room (second floor). The Ground Floor and the Main Floor are subdivided into North, East, and West Oval Rooms with a central hourglass-shaped Stair Hall. A pair of stairways are located at the south end of the stair hall to interconnect the floor levels. The Dome Room is located at the second floor level and is open to the dome above. There are two gallery levels within the Dome Room: the Middle Gallery and the Upper Gallery.

The single-story terrace construction surrounding the Rotunda houses university administrative offices. The wings of the terrace construction are identified as the Northeast (NE), Northwest (NW), Southeast (SE), and the Southwest (SW) wings.

A major restoration and adaptation of the Rotunda was undertaken in 1974. This work included the reconstruction of the dome room. New building systems, including HVAC, fire protection, and electrical systems were introduced. The wings were not part of the restoration and adaptation project.

Plus Group has surveyed the Rotunda and surrounding terrace wings to assess the existing mechanical, electrical, and fire protection systems, to provide an overview of existing system conditions, and to formulate recommendations for improved building system performance.

In addition to a visual survey, information was obtained from the university's facilities management personnel, and from the 1974 restoration and adaptation plans of Ballou & Justice, Architects and Engineers.

# 2. MECHANICAL

A survey of the heating, ventilation, and air-conditioning (HVAC) equipment in the Rotunda and adjoining wings was carried out on October 17, 2006. The survey consisted of an inspection of equipment rooms with the university's facilities management staff. The intent of the inspection was to understand the existing HVAC system configuration, to note issues related to the existing system, and to assess the condition of equipment.

## 2.1 Summary – Observation

The key observations from the survey and analysis of the existing system may be summarized as follows:

- The existing HVAC system in the Rotunda is at the end of its useful service life; some of the equipment components are obsolete and are no longer available for replacement. With continuing maintenance the system can remain functional at reduced efficiency.
- The HVAC system in the wings dates to different periods; it has been added to and/or modified. Some of the equipment is in fair condition, and some of the equipment is nearing the end of its useful service life.
- The existing air conditioning system uses condensation on cold surfaces (i.e. a cooling coil in an AC unit) to remove moisture (dehumidification) from the air stream. The colder the cooling medium, the more effective the moisture removal, and the drier the air. However, the university's central chiller plant control strategies were developed to save energy, and the cooling medium runs warmer on mild days. Therefore, the current dehumidification process does not work well on mild and humid days; this results in poor humidity control.
- Prior to the December 2006, mold remediation project in the Dome Room (301), there was visible mold growth on the finished surfaces of the Upper Gallery. High relative humidity (>60%RH) and abundant vegetation on campus provide the necessary mold spores and nutrients for mold growth.
- Stable humidity control, not exceeding 50% RH in building spaces, is the most effective method of preventing mold growth.
- The buoyancy effect inherent in the Rotunda's design draws substantial amounts of untreated air into the building. This infiltration can add significantly to the humidity in the space. Proper sealing of entrance doors and windows, and the provision of a conditioned air supply in adequate amounts to maintain positive pressurization, must be achieved to offset infiltration.
- The air distribution ductwork installed during the 1974 renovation of the Rotunda was designed and installed to conform to the original building layout. The existing air distribution ductwork at the Ground Floor and Main Floor of the Rotunda can be reused.
- The air distribution at the perimeter of the Middle Gallery, high above the floor of the Dome Room (301), is unnecessary and may be promoting condensation and conditions for mold growth.

## 2.2 Summary – Recommendations

With the potential health risks of mold growth, and with the short life expectancy of the existing HVAC equipment, a new mechanical system should be designed for the Rotunda. Proven HVAC technologies, developed over the last thirty years, can be introduced to provide better comfort and indoor air quality, eliminating the health risks associated with the current system. The key recommendations are summarized below:

- High efficiency filtration should be incorporated in the air-conditioning (AC) system to filter out mold spores and nutrients. Ultra Violet (UV) light treatment should be incorporated to render mold spores ineffective.
- Modern desiccant (water absorbing) air-conditioning technology allows the process of moisture removal to be independent of the temperature cooling medium (i.e. central chiller plant control strategies). Desiccant technology can achieve stable humidity control; it should be incorporated in the design of a new HVAC system.
- The existing overhead air distribution in the Dome Room (301) counters the natural buoyancy of air flow. A low-level supply and high return will provide better comfort and air quality, and eliminate conditions for mold growth at the Upper Gallery level.

## 2.3 Existing System

The mechanical system configuration and survey observations for the Rotunda and wings have been separated for clarity of presentation.

### 2.3.1 HVAC System Utilities

Chilled water from a central campus plant enters the building at northwest corner of the basement mechanical room beneath the north portico stair. The 1974 restoration and adaptation plans show a chiller and cooling tower located in this space to generate chilled water for the building's air handlers. Subsequently the chiller and cooling tower were removed, and chilled water was supplied by a central campus chilled-water plant.

Steam from a central campus plant is supplied to the basement mechanical room. Steam-to-hot water converters are used to generate hot water for the heating system. The hot water for the heating system is distributed to the air-handling units.

The chilled water and medium-temperature hot water that are supplied to the building are not metered.

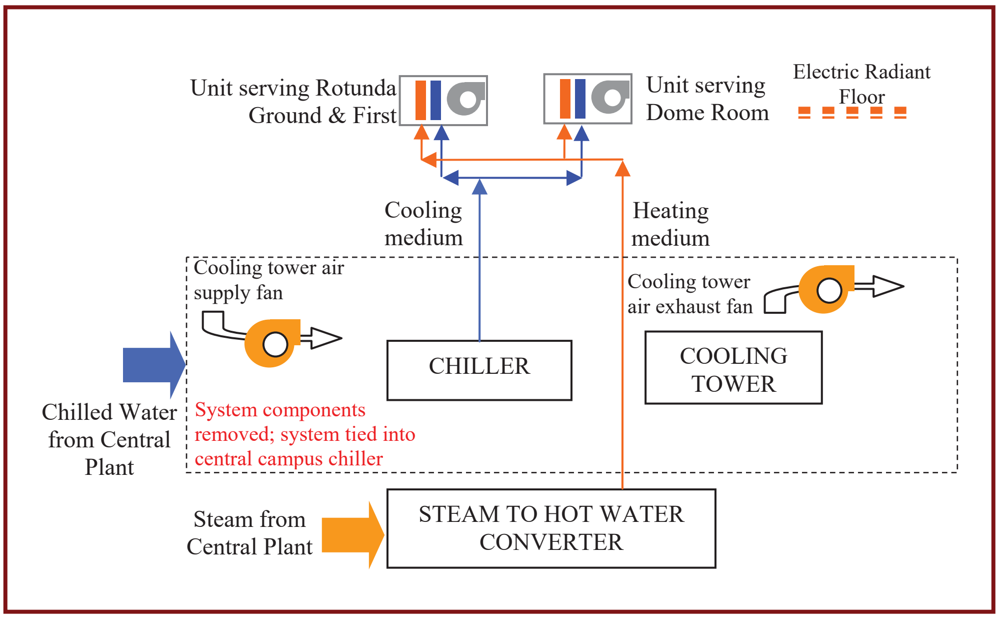
### 2.3.2 Rotunda HVAC System Configuration

The existing heating, ventilation, and air-conditioning (HVAC) system for the Rotunda was installed during the 1974 building renovation. The system included the following major components:

- An electric chiller and cooling tower were installed in the basement mechanical room beneath the north portico steps to generate the system's cooling medium. The chiller and cooling tower, and the cooling tower supply and exhaust fans, were later removed (components in dashed box in figure below); and the cooling medium (i.e. chilled water) was supplied from a central campus chiller plant. Chilled water is circulated to the air-handling units for cooling.

- Steam supplied from the central campus heating plant was converted to hot water for heating the building; this system remains in use. Hot water is circulated to the air-handling units and hot water coils for heating.
- Air-handling units were installed to supply cooled air in summer and warmed air in winter. Air handler AC-2, located in Mechanical Room (108), serves the ground floor and main floor of the Rotunda. A separate air handler, AC-1, is located in the South Portico Attic (402) and serves the Dome Room (301).
- Electric radiant floor heat was provided at the perimeter of the Dome Room (301).

The 1974 HVAC system configuration and later modifications are illustrated below.




The Rotunda spaces are served by two built-up air-handling units, AC-1 and AC-2. AC-1 serves the Dome Room (301) and AC-2 serves all the spaces at Ground Floor and Main Floor levels.

Air handler AC-1 is located in the South Portico Attic (402); this air handler serves the Dome Room (301). The unit consists of filters, a hot-water heating coil, and a chilled-water coil. The chilled-water coil removes moisture from the air stream through condensation on the cold coil surfaces in the same manner as moisture in ambient air condenses on the cold outside surface of a glass filled with ice. This process of removing moisture (dehumidification) is dependent on the temperature of the cooling medium. The colder the medium, the better the moisture removal, or dehumidification process.

Air handler AC-1 was configured for an economizer cycle during moderate months to meet energy code conservation requirements. During normal operation, a minimum amount of outdoor air is admitted to the system for ventilation, typically about 25%, as mandated by building codes. During moderate weather, an increased volume of outdoor air is admitted, reducing the load on the chiller plant (central or local), and thereby reducing energy consumption. In free cooling mode, when the outdoor temperature is about 55ºF, 100% of supply air is drawn from outdoors and the chiller is shut down.

One of the drawbacks of free cooling on mild but humid days is the large amount of moisture that is drawn in with the outdoor air. Also, on mild days the chilled-water plant controls are normally set to generate a warmer cooling medium than on hot days. The warmer medium is not capable of removing moisture effectively from a humid air stream; this results in increased humidity in the conditioned space.

As a larger percentage of outdoor air is drawn into the system, it must be relieved. The excess amount of outdoor air is exhausted through the relief-air grille. Both the outdoor-air intake and relief-air grille are located in the ceiling of the south portico. It appears that one of the remedial measures instituted to address mold growth was to forego free cooling, and limit outdoor air to the minimum ventilation air required by code. Thus the relief-air grille has been shut, and the relief-air duct capped.

A separate return-air fan, RAF#1, returns air from the Dome Room (301). Both the supply-air and return-air fans were equipped with vortex dampers. Vortex dampers were installed to regulate the amount of air supply for partial load and full load conditions. While this was an appropriate technology during the 1970s, the vortex dampers are inefficient devices; therefore, they were subsequently replaced with variable speed drives (VSD) which are both more efficient and provide more stable control.

The perimeter duct and sprinkler piping chase at the Upper Gallery (C501) of the Dome Room (301) houses the supply and return ductwork. Air is distributed through a slotted opening in the cornice beneath the Upper Gallery, and through grilles located on top of the duct chase. The air from the grilles is directed upward over the surface of the dome. Return-air ducts are run in vertical chases housed in bookcases at four locations in the Dome Room (301). The return-air grilles are located at the base of the bookcases, near floor level.

Air handler AC-2 is located in the ground floor Mechanical Room (108); this air handler serves the all the oval rooms and the hallways at the Ground Floor level and at the First Floor level. The unit consists of filters, electric preheat coils, and a chilled-water dehumidification coil. The air supply and return ductwork is located in the sub-basement. The air supply ductwork is divided to serve ten zones. The air-supply main to each zone is equipped with a hot-water reheat coil to control zone temperatures.

### 2.3.3 Rotunda HVAC System Assessment

The mechanical system selection for the 1974 renovation was appropriate. The equipment layout and air distribution were developed to conform to the building design. The cooling tower was installed indoors to keep it out of sight. However, it was not prudent to discharge air saturated with cooling tower chemicals close to the building. Cooling tower discharge air that infiltrates the building and the building mechanical systems can create a health risk for building occupants, increase the potential for mold growth, and contribute to the deterioration of building materials. The chiller and cooling tower were later removed when chilled water from a central campus plant was introduced.

The existing air-conditioning system design assumes the cooling process will remove any moisture needed to control humidity. However, when fresh air is both cool and humid, the cooling process may not operate as intended because the air-conditioning load is low or the cooling medium from the central plant is not cold enough. This allows moisture to build up, and indoor humidity rises when outside temperatures drop. We propose incorporation of desiccant (hygroscopic substance that absorbs moisture) wheel technology in the new HVAC system to achieve consistent removal of moisture from the air supply. The desiccant wheel technology is explained later in this report. However, it must be noted that no HVAC system can cope with large external sources of moisture, such as those introduced by leaks in the building envelope.

The current air distribution system in the Rotunda uses overhead air supply. This method of air distribution, and the existing ductwork, can be reused at the ground floor and main floor levels. However, we suspect that the flow pattern resulting from overhead supply in the Dome Room (301) is contributing to the development condensation and promoting the growth of mold. We recommend reversing the air distribution in the Dome Room, providing a low-level air supply and high-level air return, and completely shut off the air supply at the base of the dome. The cool air supply will spread along the floor and rise as a plume around the occupant (heat source) to provide comfort and improved air quality.

Inherent in the design of the building is the buoyancy effect of natural ventilation. The warm air mass directly under the dome was vented through the skylight, creating buoyant forces that drew significant amounts of unconditioned outdoor air from the lower levels and openings. Untreated outdoor air mixing with the cold air stream produced by a modern air-conditioning system, or coming into contact with surfaces cooled by an air-conditioning system, can cause condensation and create the potential for mold growth. An adequate amount of treated air must be introduced in the building to positively pressurize the building envelope and counter the infiltration of untreated air.

Most of the existing mechanical equipment can be considered near the end of its useful service life, and in some instances replacement parts are no longer available. However, the existing equipment can continue to function at reduced efficiency with an increasing level of maintenance.

### 2.3.4 Terrace Wings HVAC System Configuration

The terrace wings were not part of the 1974 restoration and adaptation campaign. The original system consisted of steam radiators and operable windows for ventilation and no provisions for cooling. The original steam piping has failed in some instances, and cooling has been introduced. The heating, air conditioning, and ventilation systems in the terrace wings vary, and appear to be retrofitted in response to the condition or state of the original systems. The systems for each wing are described below:

#### 2.3.4.1 Existing System - Southwest (SW) Wing

It appears that the piping buried in the floor for the perimeter radiation heating of this wing had failed. The radiators were removed and the piping has been abandoned. A 3 ton heat pump unit with an auxiliary electric coil serves this wing. Supply air is ducted to the various offices with plenum return. There is no provision for mechanical outdoor air ventilation.

#### 2.3.4.2 Existing System - Southeast (SE) Wing

The perimeter radiation heating is still active in this wing. The original cast-iron radiators have been have been retained and supplied with low temperature hot water. A 3 ton cooling only unit provides comfort cooling. Supply air is ducted to the various offices with plenum return. There is no provision for mechanical outdoor air ventilation.

#### 2.3.4.3 Existing System - Northeast (NE) Wing

The perimeter radiation heating was removed. Two-pipe fan-coil units are provided under the windows. Low temperature hot water is supplied for heating and chilled water for cooling. A stand-alone dehumidifier is located in the northeast corner room. This room has direct access to the exterior, so the dehumidifier augments the dehumidification provided by the fan-coil units.

Dedicated run/standby circulators are used to distribute hot water for heating to the northeast and northwest wings.

#### 2.3.4.4 Existing System - Northwest (NW) Wing

This wing is similar to the northeast wing. The perimeter radiation heating was removed. Two-pipe fan-coil units are provided under the windows. Low temperature hot water is supplied for heating and chilled water for cooling. A stand-alone dehumidifier is located in the southwest corner room. This room has direct access to the exterior, so the dehumidifier augments the dehumidification provided by the fan-coil units.

### 2.3.5 Other Systems

All of the exhaust air from the building is ducted down to the sub-basement level, and an exhaust fan, EAF#1, in the sub-basement relieves the exhaust air into the mechanical room beneath the north portico stair.

Toilet Room (T101), Toilet Room (T102A), and Catering Servery (106) are served by dedicated fan-coil units.

Unit heaters are provided in the mechanical rooms to temper the mechanical spaces.

There are no smoke purge systems. Smoke/fire dampers and smoke detector shutdown interlocks are undetermined.

### 2.3.6 Controls

The 1974 controls were all pneumatic. It appears that they have been changed to electronic sensors with pneumatic actuators. The compressor and refrigerant air dryer for control air is located in Mechanical Room (108) and provides compressed air for valve actuation.

## 2.4 Condition Overview of Existing Equipment

All of the equipment that was surveyed appears to be approximately 20-30 years old. Based on visual observation they are in fair to poor condition, and should provide few more years of useful service life. Given the age of these units, a coherent system that encompasses both the Rotunda and the Wings should be considered in the near future.

| Service / System | General Condition | Overall Condition Rating<br>Good / Fair / Poor |
|---|---|---|
| Chilled Water pumps | > 15 years | Fair. Replacement recommended |
| Heating Hot Water Pumps | > 15 years | Fair. Replacement recommended |
| AC#1 | ~ 30 years | Built up unit. Extremely limited access for service and maintenance.<br>Two stages of the electric pre-heat |

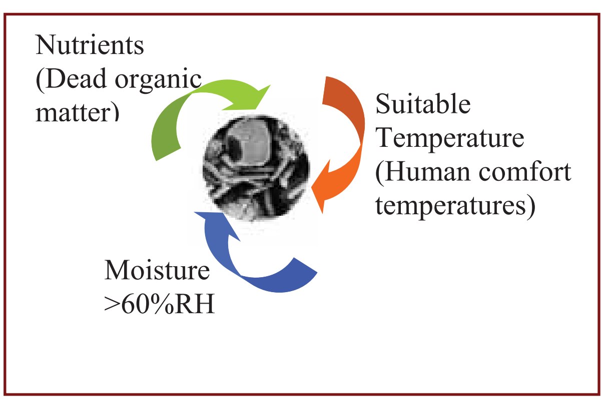
| Service / System | General Condition | Overall Condition Rating<br><br>Good / Fair / Poor |
|---|---|---|
| | | coils are inactive. Obsolete, parts are unavailable.<br><br>Moving components can be expected to be past their useful life. |
| AC#2 | ~ 30 years | Built up unit. Fair access for service and maintenance.<br><br>Vortex dampers subsequently retrofitted with variable speed drives<br><br>Moving components can be expected to be past their useful service life. |
| Exhaust Fan | > 15 years | Moving components can be expected to be past their useful service life. |
| SW Wing Heat Pump | > 15 years | Fair. Can be considered close to end of its useful service life. |
| SE Wing AC unit | > 15 years | Fair. Can be considered close to end of its useful service life. |
| NE & NW Wing Fan Coil Units | > 15 years | Fair. Can be considered close to end of its useful service life. |
| | | |

### 2.4.1 Mold Growth in Dome Room

One of the issues with the Dome Room (301) is mold growth; this was particularly evident on the painted wood railings of the upper gallery.

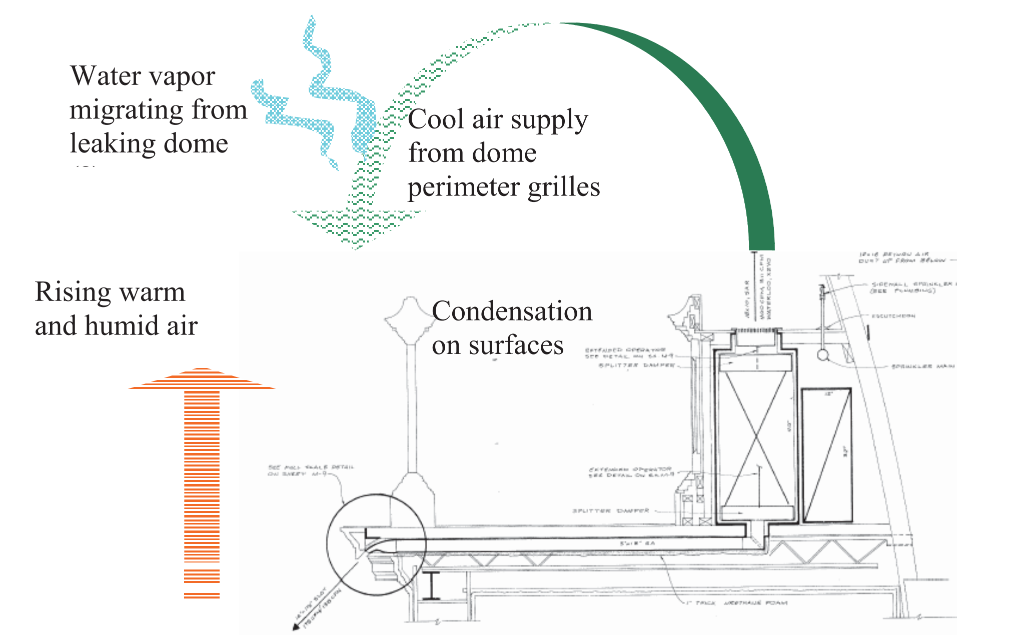
#### 2.4.1.1 Mold Growth - Analysis

The following analysis is not a result of exhaustive research and testing. It attempts to outline the potential factors contributing to the mold problem based on a review of existing conditions and existing HVAC system design and operation.



Mold growth generally results from a combination of mold spores, food sources in the form of organics and dust, temperatures between 65ºF and 90ºF, and relative humidity above 65%. Since mold spores, favourable temperatures, and food sources exist in most buildings, controlling relative humidity is the only means available to avoid microbial growth problems. The potential factors contributing to mold problems are outlined below:

- The air-handling unit, AC#1, serving the Dome Room has a chilled-water cooling coil for dehumidification and cooling. It is likely that the chilled water supply temperature during moderate outdoor conditions is not low enough to provide adequate dehumidification. Relative humidity levels in the Dome Room (301) may exceed 60%~70% for extended periods.
- Mold spores are in relative abundance during mild seasons.
- Any source of water leakage and infiltration of moisture must be investigated.
- Abundant vegetation on the campus provides the necessary mold spores. This combined with relatively high humidity levels can result in microbial growth problems.



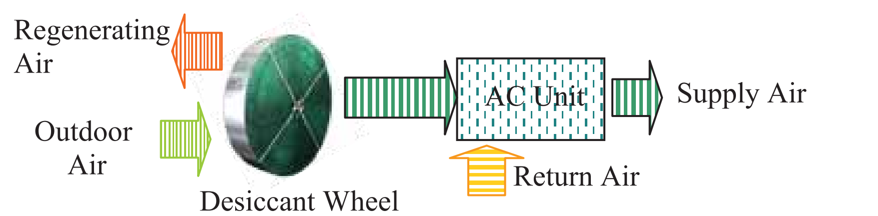

EXISTING AIR DISTRIBUTION IN DOME ROOM

- It is also likely that the current air distribution is suspect. The cold air supply at the dome perimeter mixes with the rising warm and humid air in the upper gallery zone leading to surface condensation on railing surfaces. This promotes conditions conducive to microbial growth. This may be checked by measuring the temperature and humidity profile three feet on either side of the upper gallery railing.
- Infiltration of untreated air due to the buoyancy effect inherent in the Rotunda's design must also be investigated. Untreated air with high moisture content will raise the relative humidity in the space. When untreated outdoor air comes in

contact with cold surfaces (cold air from perimeter dome supply) it can cause condensation, promoting conditions for mold growth.

#### 2.4.1.2 Mold Growth Remediation- Recommendations

As noted in the analysis above, stable and low relative humidity is the most effective means available to control microbial growth in buildings. The proposed desiccant technology utilizes a wheel coated with a hygroscopic substance that absorbs water to remove moisture. The desiccant, which can be silica gel, lithium chloride or a molecular sieve, is infused into an inorganic composite material that resembles the honeycombs of a beehive, and this is formed into a wheel. The wheel rotates slowly between the outdoor air and the reactivation or regenerating air stream. Moisture extracted from the outdoor air is removed from the desiccant by the heated regenerating air stream. The function of drying the air is totally separated from cooling the air with the cooling medium to meet the space cooling load.



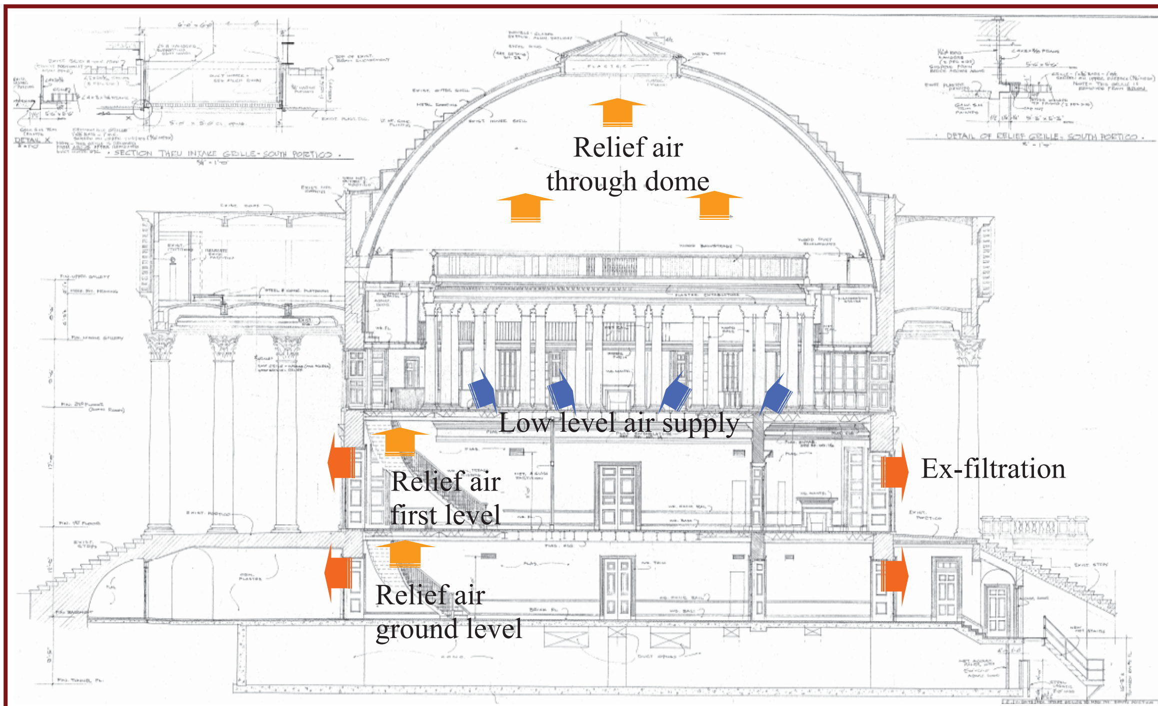

DE-COUPLED MOISTURE REMOVAL SYSTEM

## 2.5 HVAC System Recommendations

### 2.5.1 Dome Room AC System

The Dome Room air-conditioning system should be replaced with a new system that incorporates desiccant dehumidification technology. The air distribution in the Dome Room should be reversed. The existing perimeter supply at the base of the dome is not necessary. More effective air distribution, known as displacement ventilation, would provide low-level supply air and relief-air in the same direction as the buoyant forces (see illustration below). This will provide better comfort both in summer and winter. It will also provide improved indoor air quality, natural rise of warm air for relief through the dome skylight, and warmer air temperatures which results in lower relative humidity.

We also anticipate a lower volume of air supply with the implementation of a displacement ventilation system. This will need to be confirmed during the design phase.




PROPOSED AIR DISTRIBUTION AND INFILTRATION CONTROL

### 2.5.2 Rotunda Ground Floor and Main Floor AC system

We recommend that the air-conditioning system for the Ground Floor and Main Floor levels of the Rotunda also incorporate desiccant dehumidification technology. This will insure dryer air in the building and provide stable humidity control throughout the Rotunda.

The current air distribution system for the Ground Floor and Main Floor levels can be maintained. Air distribution terminal types may be changed and air flow quantities adjusted to meet new programmatic requirements.

### 2.5.3 Terrace Wings – HVAC System

Considering the historic context of the building a more compact system type is proposed for the terrace wings. It consists of a dedicated outdoor air unit to supply pre-conditioned ventilation air. The ventilation air is supplied at a neutral temperature of about 70ºF.

A separate parallel system, in the form of a ceiling induction unit, a floor-mounted displacement induction unit, or a floor or ceiling-hung fan-coil unit is proposed. The parallel system is a four pipe system that is used to satisfy the loads independently in each of the thermal zones.

The ventilation air supply is decoupled and is distributed independently of the parallel system. The air can be supplied either at floor level or at ceiling level, and the ductwork can be located as required.

The system configuration described above has the following advantages over a conventional all-air system:

- It keeps the ductwork to a minimum in comparison to an all-air system because only the ventilation air is distributed.
- It allows flexibility in the location of ductwork.
- The compactness of ductwork and the choice of a parallel system makes integration with the architectural demands of a historic structure more manageable.
- Improved zoning and improved air quality.

# 3. ELECTRICAL

The electrical system survey of the Rotunda and adjoining terrace wings was carried out on October 17, 2006. The survey was made in the presence of the architect and the university's facilities management staff. The intent of the survey was to provide an overview of existing conditions for the electrical, lighting, and life-safety systems.

## 3.1 Summary and Recommendations

An overview of the survey and summary recommendations are provided below:

- The existing electric service capacity appears adequate unless new program requirements impose significant additional loads.
- The power distribution equipment is at least 30 years old, and the reliability of some of the components is questionable. The original equipment manufacturer is no longer in business. Major pieces of equipment can be retrofitted; however, a new distribution system with new panels and conductors is recommended.
- The existing electrical system power quality may not meet current industry standards. Transient voltage surge suppression devices should be incorporated.
- The electrical panels in the terrace wings are generally full; they have little or no spare capacity. New distribution panels with adequate space and new electric feeds commensurate with program requirements are recommended.
- Some of the lighting fixtures in the Rotunda are old, and the wiring to these fixtures is suspect. With no replacement parts available, the fixtures are rendered obsolete. New or historic replica lighting fixtures, meeting UL standards, with new wiring are recommended.
- Building life-safety lighting and exit signs are not connected to an emergency power source. An emergency power source such as a central uninterruptible power supply (UPS) or individual battery back-up supplies, should be used for life-safety lighting.
- Emergency lighting levels appear inadequate. Layout and lighting levels must be reviewed to meet code requirements.
- Currently there is no fire alarm system in the building. As a place of assembly, the Rotunda is required to have a fire alarm system.
- An air terminal on the dome skylight is provided for lightning protection. A more comprehensive lightning protection system should be considered for the building.

## 3.2 Overview of Existing Systems

### 3.2.1 Power

The Rotunda and terrace construction may be divided into three areas for the purpose of electrical system description: the Rotunda, the north wing, and the south wing.

The building derives electrical power from a 1600Amp, 120/208Volt switchboard located in the mechanical room beneath the north portico stair. Much of the power distribution system equipment is manufactured by Kinney, a company that is no longer in the business. Some panels are retrofitted with Westinghouse circuit breakers. The power distribution system equipment was upgraded approximately 30 years ago, and it appears to be in fair working condition. However, the reliability of these components (over-current devices, wiring, wiring devices, and lighting fixtures) and overall system performance becomes questionable.

The Rotunda power distribution system consists of panels located in electric closets at the Ground Floor and Main Floor levels and panels located in the attic spaces above the north and south porticos. All of the panels in the Rotunda are fed from the main switchboard in the mechanical room beneath the north portico stair. Power distribution system feeders are installed in conduits.

The following electric distribution panels are located in the Rotunda:

a. Ground Floor: Two panels are located in the northwest hallway closet (101A). One panel is serving receptacle, appliance, and miscellaneous small power loads. The second panel is serving lighting loads.

b. Main Floor: Two panels are located in the northwest hallway closet (203). One panel is serving receptacle, appliance, and miscellaneous small power loads. The second panel is serving lighting loads.

c. North Portico Attic: Two panels are located in the attic. One panel is serving appliance and miscellaneous small power loads. The second panel is serving lighting and receptacle loads.

d. South Portico Attic: One panel is located in the mechanical space. The panel is serving receptacle, appliance, and miscellaneous mechanical system loads.

The north wing office spaces are served by three (3) lighting and appliance panels located on the ground floor at various locations. The mechanical room beneath the north portico stair is served by two panels. One panel serves mechanical system loads; the second panel is sub-fed from the first panel and serves lighting and receptacle loads. These panels are fed from the main switchboard.

The south wing office spaces are served by four (4) lighting and appliance panels. Two of these panels are located in Mechanical Room (108) and the other two (2) panels are located in the southwest and southeast office spaces. One additional panel is provided for exterior events. These panels are served from a distribution panel located in Mechanical Room (108). The distribution panel is fed from the main switchboard located in the mechanical room beneath the north portico stair. The distribution panel feeder is installed in the sub-basement tunnel beneath the Rotunda, connecting the north and south wings.

The installation of some of the existing power distribution system equipment is not in compliance with working clearances imposed by code. These conditions pose safety risks to the service personnel.

The university's facilities management staff expressed concerns about the lack of adequate capacity in the existing panel boards to serve increased loads in the office spaces.

### 3.2.2 Grounding

The effectiveness of electrical grounding of the buildings was not determined at the time of the survey. Testing of grounding is recommended.

### 3.2.3 Lighting

The lighting fixtures in the Rotunda are old, and it appears that replacement parts are no longer available. Concerns have been expressed about the fixtures meeting current UL standards, and the wiring is suspect. The fixtures and wiring may pose safety risks for the university's facilities management personnel. New or historic replica lighting fixtures, meeting UL standards, with new wiring are recommended.

Lighting illumination levels in the Rotunda appear to be adequate. Generally, lighting in the public spaces of the Rotunda is controlled by dimmers. There are wall dimmers, as well as dimming panels in various locations. The dimming equipment is manufactured by Parlights, Inc.; and it appears to be in a good working condition.

Manual switches are used to control lighting in the north and south wings.

The building life-safety lighting and exit lights are not emergency lighting units with integral batteries and inverters. The life-safety lighting fixtures and exit signs derive power from a disconnect switch connected to the line side of the main switchboard service switch.

### 3.2.4 Emergency Power System

The building is currently not provided with an emergency, or standby, generator or uninterruptible power supply (UPS).

### 3.2.5 Fire Alarm

The building is not provided with a fire alarm system.

## 3.3 Electrical Recommendations

### 3.3.1 General

The overview of the building electrical system and deficiencies is based on a visual inspection. The major components of the system are in good working order. Some parts of the distribution system are fully loaded, and there is no room for expansion. Replacement of the existing power distribution system should be considered. A new system will provide improved operational reliability and additional capacity for future expansion.

### 3.3.2 Power

The existing electric service feeder size and capacity appear adequate, unless new program requirements impose significant additional loads.

The existing electrical system components are at least 30 years old. The reliability of these components (over-current devices, wiring, wiring devices, and lighting fixtures) is questionable. Major equipment, such as the main switchboard, can be retained and upgraded if necessary; however, the electrical panels, over current devices, and wiring should be replaced.

The existing system power quality may not meet current industry standards required for modern office equipment. The new switchboard and panelboards serving data equipment should incorporate transient voltage surge suppression (TVSS) devices.

The existing panels in the terrace wings have little or no capacity for expansion. All new power distribution system equipment and feeders should be sized with 20% spare capacity for future use.

Currently, there is no metering of the building's electric use. This should be incorporated, in accordance with university standards.

An emergency power source in the form of a generator or central uninterruptible power supply (UPS) should be considered for life-safety systems. Alternatively, battery ballast type fixtures may be used for life-safety systems.

### 3.3.3 Grounding System

The main switchboard should be provided with a new grounding bar connected to ground electrodes. Effective grounding is required to enable protective devices to operate within a specified time period during fault conditions. A dedicated technical ground system should be provided for telecommunication system equipment.

All extraneous conducting metalwork within the building should be bonded with a ground conductor. All feeders and branch circuit wiring systems should be provided with equipment grounding conductors. Additional isolated ground conductors should be provided for select equipment and devices as required.

### 3.3.4 Lighting

The university's facilities management staff is concerned about the availability of replacement parts and the safety compliance of existing lighting fixtures and wiring in the Rotunda.

Historically significant light fixtures should be replicated, and the existing light fixtures should be replaced or upgraded, making them compliant with current UL standards. The wiring should be upgraded as well.

The lighting systems should be reviewed for compliance with the latest applicable energy conservation code.

### 3.3.5 Lightning Protection System

Though not mandated by applicable codes, a comprehensive lightning protection system can reduce the risk of personal injury and property damage from lightning. Provision of a modern lightning protection system should be considered in the context of building preservation.

### 3.3.6 Emergency Lighting and Exit Signs

Based on visual inspection, it appears that the emergency egress lighting and signage is not sufficient and is not code compliant.

A new emergency lighting system and exit signs should be provided in compliance with applicable codes. Emergency lighting fixtures and exit signs should be provided with integral batteries / ballasts, or connected to a central emergency lighting inverter or other source of emergency power.

### 3.3.7 Fire Alarm and Smoke Detection System

A new addressable fire alarm system is required in accordance with applicable codes. The system should consist of a main Fire Alarm Control Panel (FACP), remote annunciators, audible and visual devices, manual pull stations, smoke and heat detectors, and an interconnecting wiring system installed in conduit. The system can be interfaced with building management, security, elevator recall, and sprinkler systems as required.

The system may be connected to the Facilities Management Systems Control Center (FMSCC) as required by university standards.

Additionally, a voluntary early smoke detection system may be considered appropriate considering the historic value of the building.

### 3.3.8 Miscellaneous Low Voltage Systems

The existing low voltage wiring systems in the Rotunda and wings are visually obtrusive.  New low voltage systems (telecommunications, security, audio/visual) should be incorporated in any planned building renovation.

# 4. PLUMBING

## 4.1 Summary and Recommendations

A visual survey was made of the plumbing systems in the Rotunda and terrace wings on October 17, 2006. A summary of observations and recommendations is made below:

- The existing domestic water service and water pressure appears to be adequate for its intended purpose. If no additional demand is made, the existing service may be sufficient.
- The service needs to be metered and protected from cross connection.
- The water service for the fire suppression system appears to be adequately sized; however, a hydrant flow test is recommended to ensure that sufficient pressure is available to protect the building.
- The existing plumbing fixtures are of various makes and models. The fixtures and faucets are in good working condition. ADA compliance must be reviewed. The installation of water conserving fixtures should be considered when the bathrooms are upgraded or renovated.
- The sanitary system is a gravity type, fully-vented system that appears to be functioning without problems. The piping is of different ages, and some of it may require replacement.
- The terrace storm water drainage system is susceptible to clogging. Sand from the setting bed beneath the terrace paving appears to be infiltrating the drains.

## 4.2 Existing Plumbing Systems

### 4.2.1 Utilities

The existing building has all of the basic utilities: domestic water, fire suppression sprinkler service, sanitary sewer, and storm water drains.

Combined sprinkler and domestic water service is brought to the building from a 10" water main located to the east of the Rotunda. The existing water service for the Rotunda is 5" diameter line that enters the mechanical room beneath the north portico stair.

The existing 6" diameter sanitary sewer pipe runs through the sub-basement utility tunnel and exits the building at the north end of the tunnel. Apparently it is connected to the street sewer beneath University Avenue.

The routing and the exact locations of the building storm water drains were not determined during the survey. The information is provided on the campus utility map.

There is no gas service to the building.

### 4.2.2 Existing Domestic Water System

The existing 5" diameter combined water service splits into a 2" diameter domestic water line and a 5" diameter sprinkler service line at the point of entry in Mechanical

Room (108). The domestic water service is provided with a shut-off valve; the service is not metered.

The domestic water service appears to have an adequate capacity for the current load. The university facilities management staff confirmed that water pressure is adequate.

Domestic water is distributed to the plumbing fixtures located throughout the building and to the mechanical equipment rooms. A reduced pressure zone backflow preventer is provided on the cold water branch supplying make-up water to the mechanical equipment.

The condition of the existing water distribution piping could not be observed due to the presence of pipe insulation. The water service and the majority of the distribution piping are approximately 30 years old. The age of the piping supplying plumbing fixtures in Toilet Rooms (T112) and (T113) is not known. Toilet Room (T112) was recently renovated; therefore, the water piping for this bathroom is relatively new and expected to be in good condition. The piping for Toilet Room (T113) is assumed to be at least 30 years old.

The existing domestic hot water supply is generated by electric storage type water heaters. A 30 gallon, 4.5 KW electric water heater serving Toilet Rooms (T101) and (T102A) is located in Closet (T102B) at the entrance to the women's toilet room (T102A). A 20 gallon water heater is located in Storage/Janitor's Closet (110).

Apparently, there is no hot water recirculation system. As a result, hot water to the lavatory faucets on the upper floors appears with delay, after all of the standing cold water in the piping is discharged.

#### 4.2.3 Existing Sanitary System

The existing sanitary system is a fully-vented system, provided for all toilet rooms, pantries and mechanical rooms.

The 4" diameter sanitary building drain line runs under the slab in the utility tunnel, than drops down beneath the slab in the mechanical room beneath the north portico stair. Prior to exiting the building the 4" diameter drain line transitions to a 6" diameter line. No house trap was found.

It appears that the sanitary system is gravity type throughout the building. No sewage ejector or sump pumps were located during the survey.

It is our understanding that the majority of the sanitary pipe was installed during 1974 restoration. The sanitary pipe for recently renovated Toilet Room (T112) is new; the sanitary piping for Toilet Room (T113) appears to be at least 30 years old. It appears that the 4" diameter sanitary pipe for Toilet Room (T112) is plastic, while the rest of the system is cast iron.

Floor drains are installed in Toilet Room (T102A), in rooms with hot water heaters, and in the mechanical rooms. There are no floor drains in Toilet Room (T101), Catering Servery (106), Toilet Room (T112), Toilet Room (T113) and the toilet rooms on the upper floors of the Rotunda.

There is no grease trap for the double-compartment sink in Catering Servery (106).

#### 4.2.4 Existing Storm Water System

The storm water from the Rotunda roof is being collected into the perimeter gutter and discharged via external downspouts to the campus drainage system.

The storm water from the terraces above the wings is collected at promenade type roof drains. The terrace drains are susceptible to clogging; sand from the setting bed beneath the terrace paving appears to be infiltrating the drains.

Area drains are provided at ground level in the cryptoporticus.

### 4.2.5 Existing Plumbing Fixtures

The type, model, and make of the plumbing fixtures vary throughout the system and reflect upgrades through the years.

All of the existing toilet rooms are located in the Rotunda. One drinking fountain and a pantry sink are located in the northwest wing. No plumbing fixtures are located in the other wings.

The water closets in Toilet Room (T112), Toilet Room (T101), and Toilet Room (T102A) are floor-mounted and equipped with flush-o-meters. The flush-o-meters in Toilet Room (T102A) are the automatic sensor type; manual types are used in all other locations. The water closets in Toilet Room (T113) and in the toilet rooms on the upper floors of the Rotunda are the floor-mounted, tank type.

All lavatory faucets are manual.

Toilet Rooms (T102A) and (T112) appear to be ADA compliant. Toilet Room (T113) does not comply with ADA standards. The toilets rooms on the upper floors of the Rotunda are not ADA compliant.

All plumbing fixtures and faucets are in good condition and operational.

## 4.3 Plumbing System Recommendations

### 4.3.1 Utilities

The capacities of existing utilities are adequate for the current loads. If the domestic, fire, or sanitary building loads are increased the capacities of the existing utilities will need to be re-evaluated.

The age of the domestic and sanitary piping varies. We recommend that a video survey of all existing sanitary and storm water building drain lines be undertaken to evaluate the condition of the existing piping. If the existing pipes are found to be deteriorated, they may have to be replaced.

A hydrant flow test should be performed to confirm that the pressure in the water main supplying the Rotunda is adequate for the automatic sprinkler system.

### 4.3.2 Domestic Water System

Domestic water has to be metered and protected from cross-connection. A metering and cross-connection arrangement should be provided in accordance with local water department requirements. The typical arrangement consists of providing a meter and backflow preventer on the combined sprinkler/domestic water service (inside or outside of the building), or providing a meter and backflow preventer on the domestic water service and a double check detector (with meter on by-pass) on fire protection service.

The 2” diameter domestic water service appears to be adequate for the current load only. If the current load is increased, the service and water main should be replaced with larger service.

The domestic water piping installed as part of the 1974 renovations should be replaced.

The hot water delay in the toilet rooms is a concern. To improve this condition we propose providing water circulation for the hot water branch for the lavatories. This will also allow the use of water efficient metering valves in the toilet rooms.

We recommend replacing water heaters that have been in service for more than 10 years.

We also recommend providing wall hydrants at the perimeter of the building for exterior water use.

#### 4.3.3 Sanitary System

The existing sanitary system, installed as part of the 1974 and later renovations, is sufficient for the current building configuration. If a major renovation of the building is undertaken, this piping should be completely replaced.

All new plumbing fixtures should be the water-conserving type.

#### 4.3.4 Storm Water System

With the proposed restoration of the dome roof a new storm water drainage system should provided.

The storm water drainage system for the terrace requires attention. The drains should be replaced with new ones that prevent the permeation of sand. Additionally, the terrace paving tiles may need to be re-laid on a new setting bed that is not susceptible to decomposition.

#### 4.3.4 Plumbing Fixtures

All new plumbing fixtures should be the water conserving type.

ADA compliance for existing and future toilet rooms should be reviewed as part of the overall strategy of ADA compliance for the building.

## 5. FIRE PROTECTION

### 5.1 Summary

The fire protection survey of the Rotunda and terrace wings was carried out on October 17, 2006. The intent was to review the existing fire protection system, to assess the condition of the existing equipment, and to provide an overview of issues related to the existing system design and equipment. A summary of our observations is provided below:

- A combined water service provides water for both domestic use and for the fire suppression system.
- The building has partial, automatic sprinkler system protection. An automatic deluge water system, activated by a smoke detection system, is provided along the south stairs. Previously, a false smoke alarm activated the deluge system and flooded the ground floor of the Rotunda. The deluge valve has been disabled.
- Based on current configuration and use, sprinkler protection is required for the Dome Room (301).
- No fire department connection was found during the survey. A fire standpipe system is required by code.
- The introduction of a fire protection system, based on prescriptive code requirements, is not always effective and practical in a historic structure. A performance based, comprehensive fire protection approach is recommended.

### 5.2 Existing Fire Protection System

The Rotunda is provided with a partial automatic sprinkler system. There is no fire standpipe system in the building.

The existing sprinkler service is combined with domestic water. Upon entering the building in Mechanical Room (108), the 5” diameter combined service splits into a 2” diameter domestic water service and a 5” diameter sprinkler service. Sprinkler service is not metered, and no backflow preventer device is provided.

A building control valve and an alarm check valve are installed on the sprinkler service. The alarm check valve serves the entire building; there are no floor control valves or floor water switches elsewhere in the building.

The sprinkler system is installed in the hallways and oval rooms on the ground floor and main floor, in Mechanical Room (108), Toilet Rooms (T101) and (T102A), beneath the Middle and Upper Galleries of the Dome Room (301), and at the base of the dome on the Upper Gallery. There are no sprinklers in the toilet rooms, corridors, storage rooms, or mechanical room of the north terrace wing.

In areas where sprinklers are provided the sprinkler coverage appears to be adequate for the occupancy hazard levels.

An automatic deluge system is provided along the south stairs at the ground floor level, apparently to create a fire separation between the main floor and ground floor so that the stair can be used for fire egress. According to the university facilities management staff, the deluge system is activated by the building smoke detection system (i.e. activation of any smoke detector in the building triggers the deluge valve and allows water to flow into the system). Previously, a false smoke alarm activated the deluge system and flooded the ground floor. After this incident, the deluge valve was disabled.

Sprinkler heads in most of the areas are the pendent, concealed type. The sprinkler heads at the base of the dome are the vertical, sidewall type. The deluge sprinklers are the open type. All sprinklers appear to be in good condition.

No fire department connection was found at the building during the survey.

## 5.3 Fire Protection System Recommendation

### 5.3.1 Fire Standpipe System

Based on the International Building Code, all buildings with floor levels located more that 30 feet above the fire department access should be provided with an Automatic Wet Fire Standpipe System. The Rotunda appears to fall under this category and may be required have a Fire Standpipe System.

Introducing a new Fire Standpipe System into a historic building is not always practical. A variance, based on a comprehensive fire protection strategy developed by Fire Engineer in consultation with the local Fire Department, is recommended at an early stage of design.

### 5.3.2 Sprinkler System

The requirements for the Automatic Sprinkler System depend on the Building Use and Occupancy. It is our understanding that the Rotunda occupancy can be considered as Assembly Group A-3, while the terrace wings occupancy may be classified as Business Group B.

According to the International Building Code, Group B occupancies do not require sprinkler protection unless space does not have required openings or the building is of high-rise type; Group A-3 Occupancies must be protected with sprinklers if one of the following conditions exists:

- The fire area exceeds 12,000 square feet
- The fire area has an occupant load of 100 or more
- The fire area is located on a floor other that the level of exit discharge

The second and third conditions apply for the Rotunda; it has to be fully protected by an automatic sprinkler system.

The terrace wings do not have to be sprinklered if full fire separation is provided between the wings and Rotunda. Currently there is no full fire separation between the Rotunda and the wings.

To fully comply with prescriptive requirements of the Code, the following upgrades may have to be provided:

- Fire separation between the Rotunda and the wings
- Sprinkler protection for the entire Dome Room in the Rotunda
- A Fire Standpipe System

These measures are not always practical in the context of a historic building. A fire protection scheme should be developed based on a comprehensive fire protection strategy developed by a Fire Engineer, in consultation with the local Fire Department.  It is recommended that this occur at an early stage of design.

THE ROTUNDA

# APPENDIX E

***Structural Assessment***
***2007***
***Robert Silman Associates, P.C.***

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# UNIVERSITY OF VIRGINIA ROTUNDA
## HISTORIC STRUCTURE REPORT:
## STRUCTURAL ASSESSMENT

RSA PROJECT NO. W1821
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# Introduction

Robert Silman Associates (RSA) has been retained as consultant to John G. Waite Associates, Architects to prepare a structural assessment as part of the Historic Structure Report for the University of Virginia Rotunda. As part of this effort, RSA has reviewed historical documentation and recent records of structural modifications, investigated the building to identify structural systems and current conditions, and performed selected structural analysis of building components to inform recommendations for repairs, maintenance and future use. In an effort to provide a record of the historic structural systems and their modification over time, a brief structural history is provided.

## *Review of Reference Documents*

RSA was provided with copies of the following documents, produced by John G. Waite Associates, Architects or gathered by them from the University of Virginia. These sources and additional references are cited within the following report and are detailed in the References section at the end. The drawings provided images of the significant changes in the historic structure over time while also serving as backgrounds for our investigations.

- Autocad elevations received from UVA dated July 6, 2000 (6 total).
- Original Jefferson sketches - (5) total (digital)
- McKim Mead & White drawings - (4) total (digital)
- Restoration and Adaptation of the Rotunda by Ballou and Justice, Architects & Engineers, dated August 1972 thru 1974 - (77) total (digital)
- <u>Rotunda Structural Report</u> by Dunbar, Milby & Williams, Consulting Structural Engineers dated March 15, 1990
- <u>Phase II Report – Rotunda Deck Leakage</u> by Stoneking / Von Storch Architects with Wiss, Janney, Elstner Associates, Inc., September 23, 1997 (SVS/WJE)
- <u>Evaluation of the Rotunda - Southwest Wing Roof Slab System</u> by Whitlock Dalrymple Poston & Associates, Inc. dated November 8, 2000

## *Restoration to Jefferson 1973-Present*

In preparation for the U.S. Bicentennial celebrations in 1976 the University chose to reinstate Jefferson's original design intent of the Rotunda. Restoration began in 1973. Ballou and Justice, Architect & Engineers from Richmond, Virginia were the primary designers of the restoration and adaptation of the Rotunda (Ballou, 1). Pictures from the renovation reveal the removal of all interior structure and finishes. A mechanical tunnel was added below the Rotunda basement. The tunnel is 10 feet wide and runs below the basement hallway (Ballou, S1). Reinforced concrete walls and floors are depicted in the structural plans. The basement floor primarily consists of a 5" reinforced concrete slab on grade (Ballou, S2). Original curved masonry walls, from basement to first floor, support new steel beams and open-web steel joists which carry the new concrete-on-metal-deck first floor slab (Figure 1 --Ballou, S4). Above the existing masonry walls, new masonry was added to mimic the same curved design and thereby reinstate the Jeffersonian plan at the first floor level. In the McKim, Mead &

**Figure 1:** In the 1970s the first and second floor framing was replaced with steel beams and open-web steel joists. (Picture from 1970 Restoration provided by John G. Waite Associates)

White design the second floor was removed. The restoration reinstated the floor and demolished the early 20th century structure, such as the brick interior columns (Figure 2). The second floor framing is also composed of steel beams and open-web joists with a concrete slab-on-metal-deck (Ballou, S5). The Middle and Upper Galleries have been reinstated with a system of steel beam framing which supports concrete slabs-on-metal-deck; a series of steel girders, set radially at each gallery level, bear on brick masonry at the exterior ends while the interior ends are connected to steel pipe columns; the columns are in turn supported on the second floor framing below (Ballou, S6-S7). Architectural finishes encase the steel pipe columns, each of which is paired with a non-structural, decorative column. New steel lintels were added above the window openings, with the exception of the lintels over the false windows at the center of the east and west elevations; at these locations the existing rail steel lintels are shown to remain (Ballou, D4).

**Figure 2:** The McKim, Mead & White interior columns were built up brick columns. (Picture from 1970 Restoration provided by John G. Waite Associates)

Little interior construction remains from the McKim, Mead & White renovation, with the notable exception of the Guastavino domed roof. On the exterior, the north portico and north stairs remain. Also remaining is the steel and Guastavino tile framing in the north and south porticoes.

# Existing Conditions Survey

## *Description of Methodology*

The structural assessment survey is primarily based on visual observations made by RSA personnel in August, 2006. The site survey served to identify structural building materials and assemblies along with current conditions for both exterior and interior features. Field observations were documented with digital photography and hand sketches. RSA measured selected structural components where accessible to serve as the basis for limited structural analysis. Preliminary structural analysis is used as a means of better understanding the structural functioning and interrelations of various building components; results of such analyses may also shed light on observed conditions such as cracking or displacements.

## *Building Exterior*

### *Lintels*

**Figure 3:** Above the windows in the cylindrical walls of the Rotunda the first few rows of brick have been repointed, likely from 1970s restoration and lintel replacement (altered mortar highlighted for clarity).

The exterior brick masonry appears in generally sound structural condition, with no observed locations of significant cracking or masonry displacement. Evidence of past structural repairs or modification is apparent over the window openings at the basement and second floors (the first floor windows are ornamented with a sheet metal pediment detail over each window, concealing the brickwork directly over the opening). In the locations of observed modification, a change in mortar color and texture was apparent with the three or four courses directly above the window frame (Figure 3). Review of the Ballou & Justice drawings from the 1970s shows the majority of the exterior lintels being replaced with steel angles. One exception is at the east and west central, "false" windows, which are indicated on the drawings to retain the existing rail lintels (Figure 4).

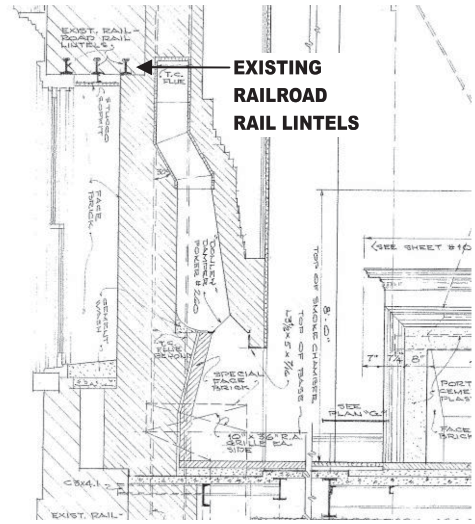



**Figure 4:** The 1970s drawings depict 3 existing lintels above the first floor windows. (Detail from Ballou, D-4)

### *East and West Terrace Elevations*

The East and West Terraces are supported by two distinct structural systems. On the north and south ends of each terrace, a series of three brick arches support the stone-paved, one-way slab terrace. These north and south arcades are braced by the buildings one the Lawn and by four-pier pavilions. Between these pavilions are roofed walkways supported by colonnades with marble entablatures bearing on concrete columns.

The southern most piers on both the east and west arcades have horizontal cracks at the grade level of the Lawn, running all the way through the pier. As the crack travels north toward the first arched opening the crack widens (Figure 5). These piers are laterally supported at the Lawn level and below by adjacent buildings, but the top half of the pier is not restrained, resulting in an eccentricity between arch thrust and resisting support (Figure 6). This eccentricity results in bending in the masonry pier and a resulting in-plane rotation or uplift when the tensile capacity of the mortar is exceeded, consistent with the observed cracking. A more developed explanation of the resulting stresses is given in the Structural Analysis section of this report.

**Figure 5:** South end of East Arcade. Cracking and rotation in end pier.

Several arched openings in the arcades have diagonal cracks emanating from about a third of the way up the arch to the underside of the terrace above (Figure 7). These observed cracks were typically through the full depth of arch construction. The diagonal cracking pattern is likely the result of minor shifting in the original semicircular arch profile. Typically, such shifting derives from insufficient thrust resistance. In the four terrace pavilions transitioning between the arcades and colonnades, cracking and displacement tends to occur where the arch thrusts are not balanced with the thrusts from adjacent arches (Figure 8). Similar to the cracking described above, a more developed explanation of such arch behavior is given in the Structural Analysis section of this report.

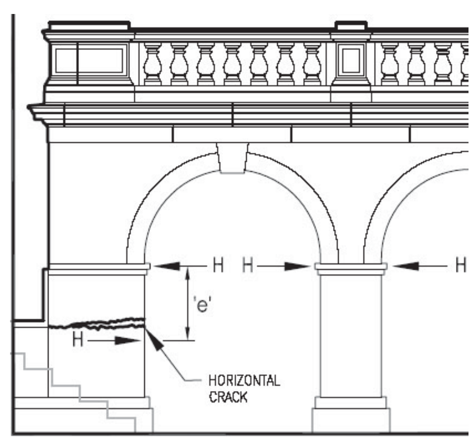



**Figure 6:** On both the east and west arcades a horizontal crack has formed at the grade level of the Lawn.

On northern end of the west terrace elevation there are several cracks in the mortar joints, as well as cracks running longitudinally along the underside of the arches. Visual evidence of recent repointing suggests the possibility of repairs being performed with a stiff mortar. This location has suffered more than other areas, perhaps because it is often in the shade and therefore retains moisture for more extended periods of time. The sustained presence of moisture in the masonry, along with the possibility of excess stiffness in repair mortars, when subjected to freeze-thaw cycling are possible causes for the observed excess deterioration (Figure 9).

In the area of the central colonnades on both the east and west elevations, there is visual evidence of significant water infiltration of the marble construction. Various forms of staining and apparent surface-level hairline cracking or crazing was pervasive (Figure 10). Cracking in the cornice elements appeared largely cosmetic, however should be addressed by a masonry specialist to preserve the life of the stone and minimize water penetration and entrapment into the terrace assembly. For the marble lintels spanning between columns, cracking also appeared largely cosmetic. RSA observed cracks of more significant width in several locations, however even these did not appear to correspond to structural inadequacies, given their disposition within the lintel cross section and span. Once again, sustained moisture penetration into the stone and terrace assembly is a concern. Water penetration in this area has been investigated and is reported in the 1997 report of Stoneking / Von Storch Architects with Wiss, Janney, Elstner Associates, Inc. The report concluded that the waterproofing terminations under the terrace stone and the flashing beneath the balustrades are inadequate. It is unknown whether the recommendations to remediate the problem were implemented.

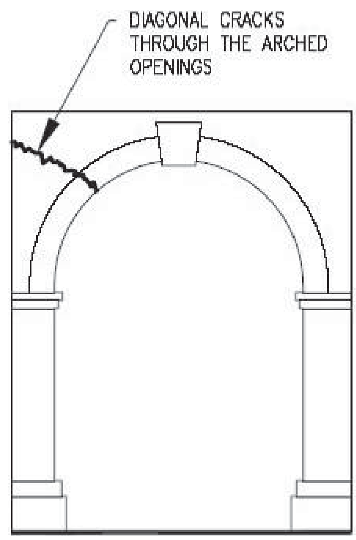



**Figure 7:** In several locations in the east and west arcades cracks were observed diagonally radiating from the arch.

**Figure 8:** Transitional pavilion at east terrace -- arch cracking at lines of unbalanced thrust.


**Figure 9**: North end of west terrace masonry cracking and deterioration.

**Figure 10:** Vertical hairline cracks were observed in the marble cornice and lintels.

## *South Elevation*

The south elevation facing the Lawn features the monumental stair and south portico that is a signature feature of the Rotunda and Jefferson's design for the University of Virginia. The steps and terraces are clad with marble, with decorative components such as column bases, capitals, and balustrades also carved of marble.

Many of the column bases have suffered from hairline cracking or crazing, like spider webs over the whole surface. Some of the bases have Dutchman repairs, where presumably deteriorated stone has been removed and a new piece of stone fitted into the spot (Figure 11). It is most likely that the stone deterioration is the result of material decomposition from weathering and sustained moisture.

On either side of the south portico, in the flanking arcades, RSA observed a number of areas exhibiting significant masonry deterioration (Figure 12). Above some of the most severe areas weep holes draining the terrace were observed; this observation points to a clear connection between masonry deterioration and water infiltration and entrapment. With sustained water infiltration and entrapment in masonry assemblies, which are then subjected to freeze-thaw cycling, both mortar and masonry unit decomposition is the predictable outcome. Also, below the arcade windows, RSA observed a repeated pattern of vertical cracking following the window jambs downward into the corridor walls which retain the higher elevation soil on the Lawn side. It appears that the majority of the visible cracks are through the full thickness of the wall (Figure 13).

Cracks were observed in the stucco on the side elevations of the south stairs. The cracks were most likely caused by movement of the supporting stair arch behind the stucco finish (Figure 14).

### *Catering Room (Room #106, below the south stairs)*

Under the south stairs there is a room for used to support catering functions. The ceiling of the room is vaulted like half of a masonry barrel vault (Figure 15), which serves as the spanning structure for the south stairs. The wall surfaces three feet above the floor level are lined cracks. The most significant crack in the ceiling runs in an east-west direction approximately two-thirds above the spring point of the vault. The observed east-west longitudinal cracking appears to be the result of the masonry vault spreading southward causing minor flattening of the half-

**Figure 11:** Many column bases have extensive surface cracking. The smooth white surface to the right is a replacement piece of stone, a Dutchman repair.

**Figure 12:** The bricks between the arch windows show significant material decomposition corresponding to areas of increased water penetration.

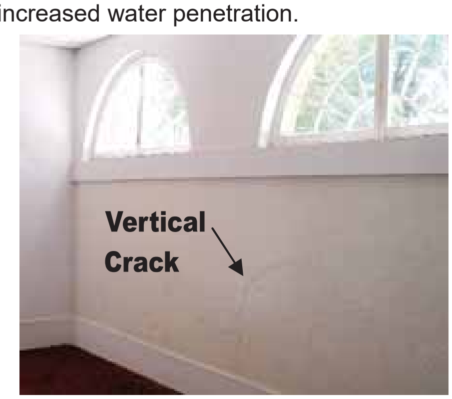



**Figure 13:** South terrace corridor – interior cracking below windows.

**Figure 14:** A sloping crack running below the stairs was observed on the east elevation.

barrel profile. This is the same movement that has caused cracks on the side elevations of the south stairs. No major instabilities were apparent. At this point the cracking is considered only minor and is not a structural concern. Further discussion of this structure is offered in the Structural Analysis section.

### *North Elevation*

On the northern side of the Rotunda the grade falls quickly requiring multiple sets of stairs. The upper stair, similar to that of the south side, is surfaced in marble which is set atop a steel and reinforced concrete roof structure. Below the stairs to the portico are Store Rooms 109 & 110 and a large Mechanical Room. The landing at the base of the marble stair is surfaced in square stone pavers bordered by concrete bands. Ponding water was observed in this area. The stone pavers and concrete are significantly deteriorated, especially at the intersection of the two materials (see Figure 16). The concrete stairs on grade below the upper terrace are also deteriorating. There are numerous cracks and spalls throughout the stairs that have been patched with a cementitious mortar (see Figure 17 and Figure 18).

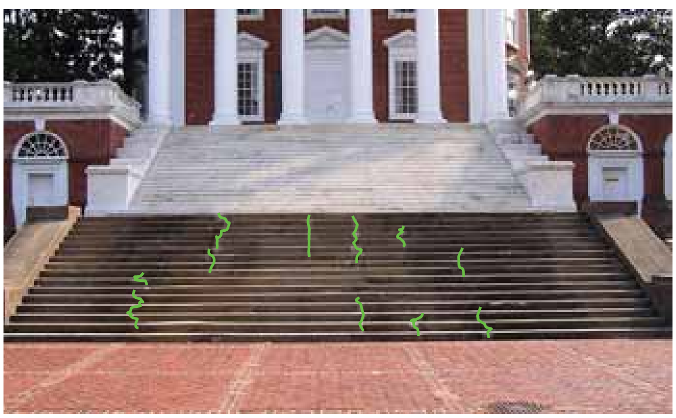


**Figure 17:** The north stairs approaching the Rotunda have several cracks and patches.

### *Roof*

The roof structure noted on the 1972 drawings by Ballou and Justice, Architects & Engineers is the outer Guastavino tiled dome from the McKim, Mead &White era. The 1970s drawings indicate the application of new roofing, consisting of a flat-seamed metal over 1 5/8" insulation. The metal roofing is tied to the tile structure through 2x2 treated wood strips, spaced at a maximum of 20 inches, fastened with ¼" diameter bolts with lead cinch anchors. Localized rusting was observed on the surface of the dome roof (see Figure 19). Although it appears that such roofing deterioration creates clear

**Figure 15:** The walls and ceiling of the catering room below the south stairs has numerous cracks.

**Figure 16:** The terrace on the north side has obviously been repaired several times and remains in a deteriorated state.

**Figure 18:** Attempts to repair the spalling concrete at the interface of the slate pavers and cracks running down the stairs are failing.

**Figure 19:** The metal roofing is corroding and exfoliating causing the paint to peel and blister, this is especially evident at joints and corner seams.

avenues for water infiltration, no structural implications were visually apparent at this time. Refer to architectural recommendations for roofing treatments.

## *Building Interior*

### *Dome*

The dome was observed through the mechanical spaces in the Upper Gallery, and above the North and South Porticos (see Figure 20). The tiles and cementitious mortar that were observed appeared to be in satisfactory condition. Steel tension rings were found in two locations. One ring measured 4"x½" with the long side perpendicular to the floor and is located between the two domes, approximately 38" below the outer dome. Near the same location 1" wooden pegs have been driven into some of the tiles. The use of the pegs was not apparent. RSA measured the other tension ring to be 3"x3/4", and was positioned parallel to the floor approximately at the base of the inner dome. The tension rings appeared in relatively good condition, with localized surface rust but no appreciable loss of cross section.

### *North Portico Attic (Room #401)*

Above the North Portico barrel vaults made from Guastavino tiles span from east to west walls and frame both the floor and roof. The ceiling vault is supported by regularly spaced ribs composed of brick supported by a ½"x2½" steel plate (see Figure 21 and Figure 22). The steel is in effect a tensile catenary where the end thrust is resisted by a continuous steel ledger and the compressive resistance of the masonry ribs and vault itself. The tension plate is 17 inches from the bottom surface of the Guastavino tiled vault at midspan, with the depth of the rib tapering to effectively zero at the north and south end bearings. At the attic floor level, the walking surface is a combination of Guastavino tile vaulting with some cementitious fill. The floor vaulting is 2½" thick, comprised of 2 layers of 1" tile separated by a ½" cement mortar layer. The horizontal thrust of the floor arch is resisted with steel tie rods at the base of the arch (Figure 22 and Figure 23). From the top of the floor arch to top of the ceiling below is approximately 19 inches. The tile arch construction appeared to be in sound structural condition. Some rusting of the steel components, particularly the ledger elements embedded in the masonry wall, was observed. However, the conditions observed did not appear to represent a significant loss of cross section. Small penetrations in the vault and mechanical attachments do not appear to be having any structural impact. No active leaking or water infiltration was

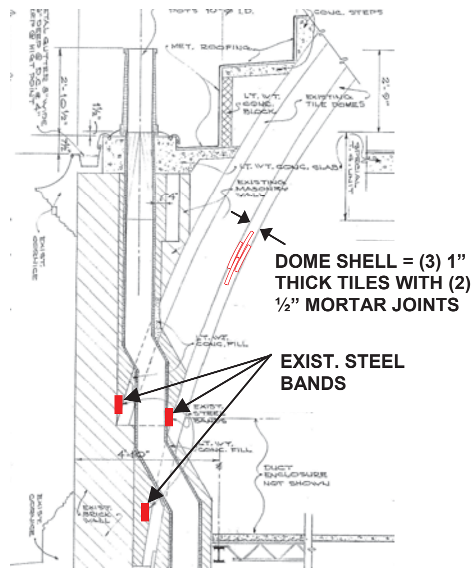



**Figure 20:** The 1970s drawings depict 3 existing lintels above the first floor windows. (Detail from Ballou, D-4)

**Figure 21:** North Portico Attic Ribbed Vaulting

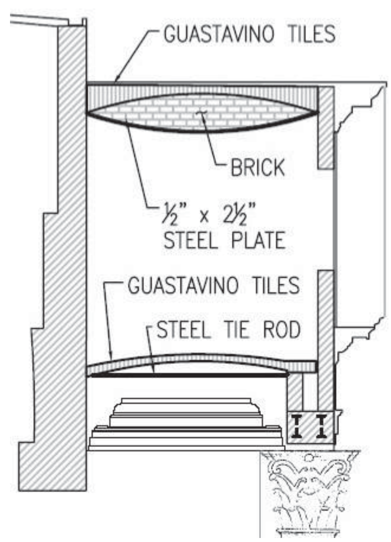



**Figure 22:** The North Portico Attic floor and roof framing consists of 2 barrel vaults.

apparent.

### *South Portico Attic (Room #402)*

The South Portico also has Guastavino tiles framing the floor and roof. The roof is constructed of three adjacent barrel vaults that are on a slope, peaking in the center tile. The vaults are separated by steel I-beams encased in brick and terra cotta masonry (see Figure 24 and Figure 25). The encasement is 7½" wide by 11" deep. There are 6 north-south ties rods, approximately 1" in diameter, at the bottom of the vault. On either side of the peak, there are rectangular concrete patches in the center vault. These filled openings were apparently cut out for the 1970s era mechanical systems and later repaired. The concrete patching does not appear to be compromising the structural performance of the vault construction, as lines of compression are maintained and there was no significant cracking or displacement observed in the area of the penetrations. The floor is framed by brick ribs with Guastavino tiles.

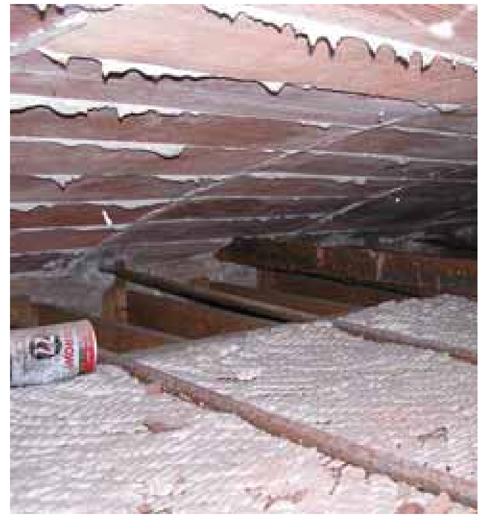


**Figure 23:** North Portico Attic floor vault structure and ceiling below

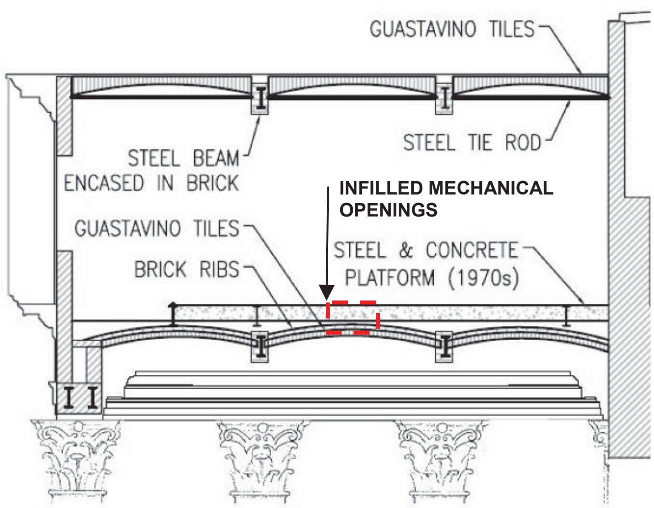
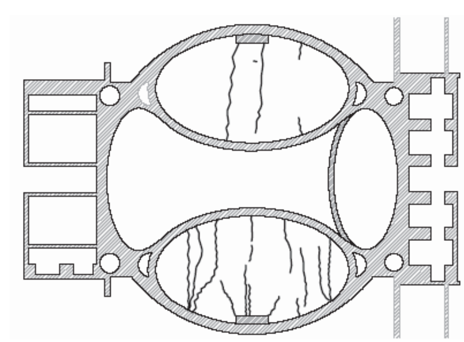



**Figure 24:** South Portico Attic Section.

**Figure 25:** South Portico Roof Framing

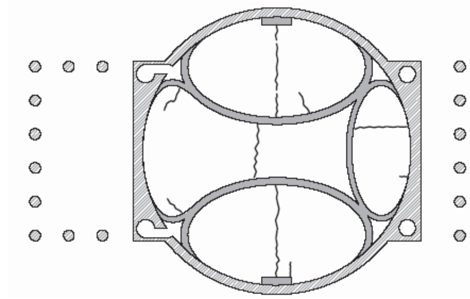
### *East (Room #103) and West (Room #102) Oval Rooms on the Ground Floor and Main Floor*

Across the ceilings of the east and west oval rooms hairline cracks were visible (Figure 26). The most noticeable cracks run the width of the ellipse (from the center of the fireplace through the two sprinkler heads), essentially splitting the two rooms in half. The cracks typically run parallel (east-west) and they tend to originate above window or duct openings or emanate from a sprinkler head. The Dunbar, Milby & Williams Report from 1990 noted hairline cracks on walls and ceilings of the West and East Oval Rooms and the basement rooms below. The hairline cracks were also observed radiating



**(a)** Basement Ceiling

from the lintels and sills of many windows and vents in each room. As depicted in drawings S-3 and S-4, the ceiling cracking appears to have some correlation to the layout of floor framing in the floor level above. This is discussed further in the Structural Analysis section.



**(b)** First Floor Ceiling

**Figure 26:** Hairline cracks were observed in the ceilings of the east and west oval rooms on both the basement (a) and first floor (b) ceilings.

## *Dome Room (Room #301) Columns*

The domed "Reading Room" on the second floor is encircled by 20 pairs of columns of the Composite Order. One column in every pair has 2 vertical cracks, one on the surface facing the center of the room and one crack on the side of the column facing the exterior windows (Figure 27). These visible cracks are up to a 1/4 of an inch wide. Examination of the 1972 drawings shows that the restoration called for steel columns in one of each pair of columns. Direct comparison reveals that the cracked columns consistently are the ones encasing the structural steel. All crack pairs are 180 degrees from each other, as if the decorative encasement was installed in two halves and brought together to enclose the structural column. The cracking appears to be the result of a failed seam in the architectural finish. The finish failure may be the result of temperature or humidity cycling in the domed space.

**Figure 27:** One in every pair of columns in the reading room has two vertical cracks.

## *Middle Gallery (C401)*

Supported by the new steel columns introduced in the 1970s and the exterior wall, the Middle Gallery circles the Dome Room approximately 9'-6" above the floor. The 1972 framing plans of the Middle Gallery (see Figure 28) depict W6x15.5 beams spanning from the exterior wall to a column. Spanning between these beams there are 4 W6x12 beams with a 2½" composite concrete floor (see Figure 29).

On the top surface of the Middle Gallery, RSA observed regularly spaced black stains in the carpet. The stains are linear from the exterior wall and create a regularly spaced radial pattern (**Error! Reference source not found.**). The stains also appear to be along the inside face of the exterior finish wall. It is possible that the staining is the result of moisture transmission along the top of the slab and may correspond to locations of seams in the carpet underlayment, perhaps in a layer of plywood. This moisture may be infiltrating the columns through the connection of gallery steel to structural steel column, which may relate to the finish cracking in the column encasements.

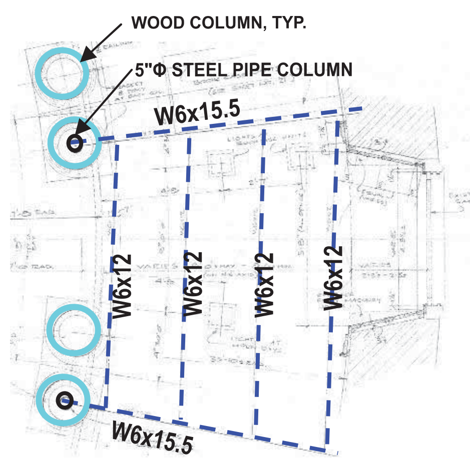



**Figure 28:** Architectural partial plan of the 1970s steel pipe columns and Middle Gallery beam connections. (Ballou & Justice,22)

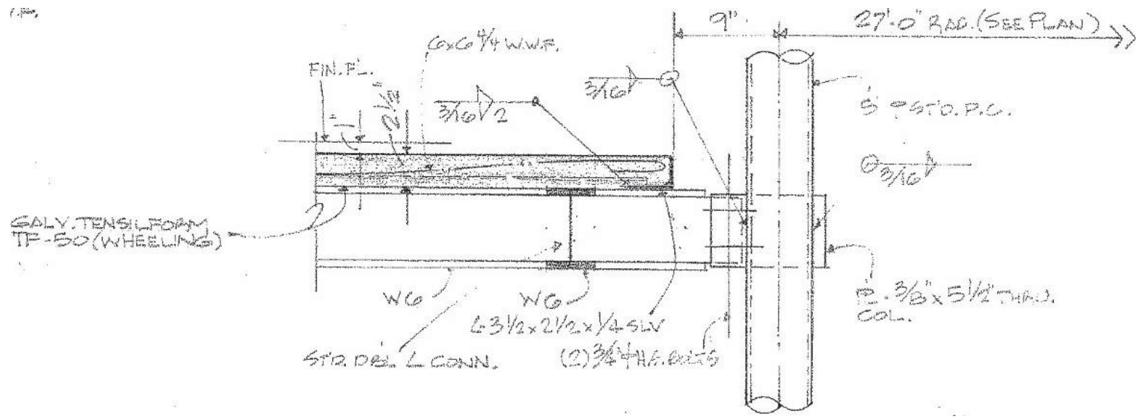



**Figure 29:** Section X/S.8 from the 1972 Structural drawings shows the connection of the W6 beam in the middle gallery to the column inside the cracked wood casing.

Under the middle gallery the cracks were observed in the plaster. Most cracks appear to be radiating from the recessed light fixtures. Similar cracks were noted in the Dunbar, Milby & Williams inspection in 1990.

**Figure 30:** Radiating black stains are visible on the carpet in the middle gallery.

### *Mechanical Room (below the north portico stairs)*

Below the north portico stairs is a mechanical room. The mechanical room is a dense mix of pipes, columns to support the roof and stairs above, struts to brace column supports, temporary shoring pipes and cross-bracing. There is evidence of significant water infiltration; however, water infiltration appears less active than it has been in the past. A large percentage of the brick masonry foundation walls have lost considerable amounts of mortar and some areas of spalling brick were observed. Several of the beams present surface rusting, with some indicating a more extensive material loss in the past. In response to this apparent deterioration are clear efforts to provide additional support by way of new columns and shoring.

Most likely the original design from the McKim, Mead & White era had six 4½" diameter steel pipe columns supported on 16" square concrete pedestals raised 13" above the slab height (Figure 31). There are two additional columns of the same size with raised rectangular pedestals placed off the column grid. The middle section of the ceiling appears to have been reconfigured at some point and extra columns were added. These columns are 2" in diameter and situated on timber cribbing piers constructed from 6x6 (Figure 32). Furthermore there are two rows of four 2" diameter aluminum shoring columns braced together. The shoring towers are in locations where the ceiling appears to be greatly deteriorated.

**Figure 31:** A steel pipe column with a concrete base found in the mechanical room below the north stairs.

One explanation for the abundance of new columns and shoring is that for graduation students assemble above the space on the north stairs for the procession. Given the history of water penetration and deterioration, we now find multiple campaigns of shoring which likely were deemed important to provide additional safety in this highly loaded area.

**Figure 32:** Extra columns were added to the space below the north stairs.

### *Pipe and Duct Tunnel (Below the basement floor)*

The Pipe and Duct tunnel is accessible in the Mechanical Room below the north portico stairs. The walls and floor of the tunnel appear in good condition. Standing water was observed in some areas of the tunnel. The Dunbar, Milby & Williams Report from 1990 also comments on puddling water. A clogged drain was observed and was contributing to the water buildup. The standing water has caused the bottom surfaces of mechanical ducts to rust.

**Figure 33:** Due to water infiltration, the steel support of the North Stair is corroding. The structure is exposed in Storage Rooms No. 109 and 110.

### *Storage Rooms 109 & 110 (below the north stairs)*

The ceiling of the two storage rooms is the underside of the North Stair structure. The stair framing appears to be a sloped concrete slab supported on I-beams spaced approximately 5 feet apart. Water has damaged the lower ends of most of the steel beams and adjacent concrete and rebar (see Figure 33). Remnants of steel beams embedded in the bearing wall were observed, perhaps indicating that the original steel had suffered significant deterioration and was removed and replaced with the current steel members. It appears that the rooms continue to suffer from water infiltration, as the existing beams and some of the slab and wall surface show signs of water staining. The steel has surface rust, however the overall cross-sectional loss does not appear significant.

# Structural Analysis

Following the field observations previously discussed, RSA performed preliminary structural analysis for selected components of the Rotunda structure. This analysis is performed for components where a more developed understanding or quantification of structural behavior may help explain issues of capacity, performance and condition.

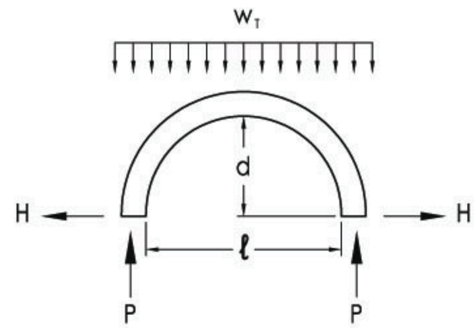



**Figure 34:** A uniform load, $w_T$, on a masonry arch creates a horizontal thrust, H, which equals the load per foot times the span of the arch in feet squared divided by eight times the rise of the arch in feet

## Building Exterior

### *East and West Terrace Elevations*

The horizontal cracks observed on the southern most piers of both the east and west arcades (depicted in Figure 7) have been further evaluated given that the source of this cracking appears to be the direct result of thrust resistance from the adjacent arch. The arcades support terraces above at the Rotunda's first floor level. For the load analysis, the current applicable building code requires a 100 psf live load for such terraces, particularly where used as places of assembly. Dead loads on the arches were assumed based on visual observation and on documentation of the terrace framing from previous investigations. The terraces above produce a uniform load on the supporting arches. Through the arching mechanism the uniform forces are redirected into a horizontal force and a vertical reaction force at each end (see Figure 34). In the arcades, the arches are observed to perform well when the horizontal thrust is resisted by either a large mass or an opposing force, like the horizontal thrust from an adjacent arch. As previously discussed, problems in maintaining the form of the arch occur when there is some support movement generated by insufficient resistance to the horizontal thrust. Figure 35 depicts the forces on a pier cross section which is subjected to both axial load and to bending, here the result of an unbalanced horizontal thrust (H) acting at some eccentricity (h). The vertical P force created from the loads above the arch and dead weight of the pier itself is distributed evenly over the cross section of the pier. The horizontal force, H is applied at the spring of the arch. The Horizontal force (H) creates a rotational force (or bending moment) in the pier that must be resisted internally by the compressive and tensile capacity of the masonry and ultimately by the coupling forces at the base of the pier. Mortar in brick masonry provides the tensile capacity of the structure, which is very limited in comparison to its compressive strength. As such, when the tensile stresses resulting from bending are only slightly greater than the compressive stress, cracking in

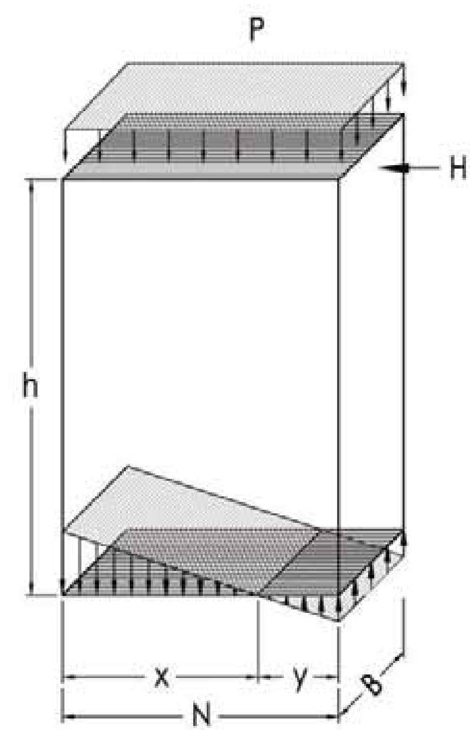



**Figure 35:** The pier supporting the arch is N inches wide by B inches thick, with a gravity load, P and a horizontal thrust from the arch H.

the masonry may develop. Thus, the stability of the masonry piers is reliant on either a sufficiently large axial compression to overcome the effects of bending, or, the elimination of bending by directly balancing or resisting the horizontal thrusts.

Figure **36** depicts the response of a pier-supported arch with insufficient thrust resistance. The crack patterns depicted are consistent with some cracking observed on site at areas where the arches are not directly supported laterally at the arch spring points.

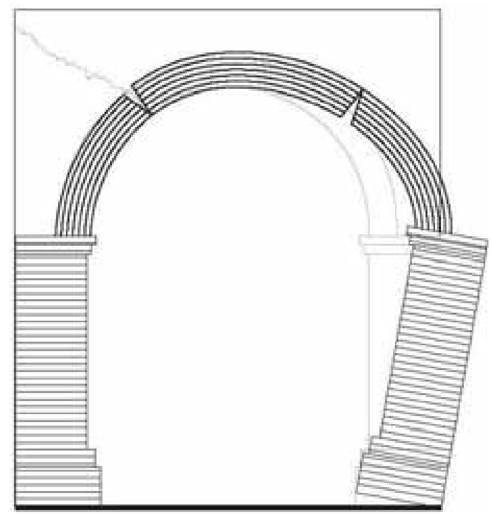


**Figure 36:** Shifting support causing deformation and cracking in arch.

### *South Elevation*

Below the window arcades the vertical cracking pattern in the retaining wall appeared to happen most often below windows. Most commonly two distinct cracks have developed, projecting vertically downward from the jambs of the arched window above. The piers between the windows have much less cracking. The typical cracking pattern is depicted in Figure 37. Preliminary analysis shows that the portion of the wall below the windows can not support the lateral soil pressure as a vertical cantilever, but must distribute their loads horizontally to the piers. It is likely that this cracking is associated with the horizontal transfer of lateral soil pressures, particularly if water is not properly draining away from the foundation wall on the Lawn side. The vertical cracking occurs primarily below the arched openings where the masonry is essentially unloaded by gravity loads from above. The vertical compressive stress in the pier masonry adds stability and reduces the likelihood of cracking. Cyclic effects of freeze-thaw or thermal loads also likely contribute to cracking in the wall areas between the piers. Vertical cracking on both faces of the wall are indicative of such movements.

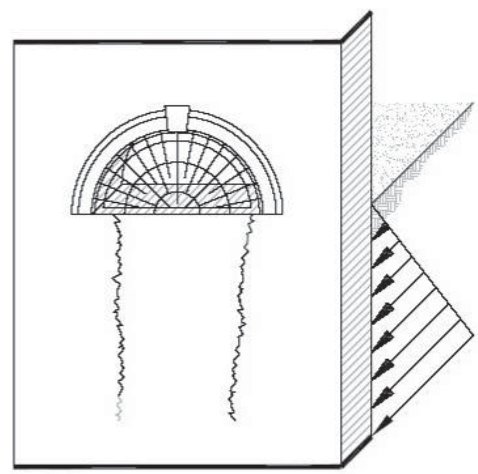


**Figure 37:** Below the window arcade on the south elevation the wall is retaining the south lawn.

### *South Portico Stairs and Catering Room Below*

The cracks in the ceiling of the Catering Room (depicted in Figure 15) correlate to the cracks on either side of the south portico stairs (shown in Figure 14). Shifting or settlement of the soils below the bottom end of stairs, which serves as the support for the horizontal thrust generated by the loaded half-vault, would cause deformation and the development of tension cracking in the vault; such cracks would form perpendicular to the spanning of the barrel vault, as has been documented in RSA's recent survey (Figure 38).

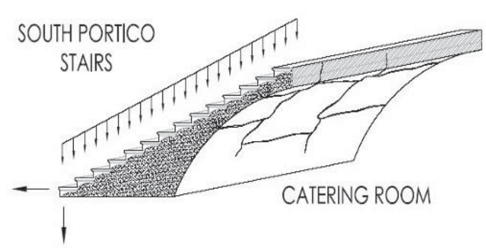



**Figure 38:** The cracks in the Catering Room ceiling may have resulted from settling below the South Portico Stairs.

# Building Interior

## *Dome*

Jefferson's original design included a laminated wood dome. The dome construction was designed based on domes by Philibert Delorme. Delorme domes are constructed from several smaller pieces of wood joined together to create large ribs of a dome structure (see Figure 39). The lightweight design of the laminated wood dome and the relatively inexpensive and quick construction were among the great advantages of the system. Figure 42 depicts an example of a Delorme dome system, documented in the 1813 Robert Mills design at Monumental Church in Richmond, VA. There, the system included primary and secondary longitudinal ribs, which carry the primary axial compressive forces of the dome down to the edge supports. Wood members of similar size, regularly spaced along the latitudes of the dome, referred to as hoop members, connect the primary ribs with pegged mortise and tenon joints. The hoop members carry secondary forces which run latitudinally through the dome diaphragm; these forces can be compressive or tensile, depending on the shallowness and radius of curvature of the dome. According to the membrane theory of dome analysis, the upper portion of a spherical dome (from 0 degrees at the projected apex, down to an angle of 51 degrees – with 90 degrees being at the base of a hemispherical shape) would have hoop members in compression. The lower portion (between 51 degrees and 90 degrees) would have hoop members in tension. Thus, the near hemispherical dome of the Rotunda would have had to provide for tension resistance in its hoop members, likely by way of pegged mortise and tenon joints. The axial forces at the base of the dome generally require resistance to the horizontal force component, typically by way of a tension ring. Because of the near hemispherical form of the Rotunda dome, the horizontal component of the axial force is relatively small in comparison to the vertical force.

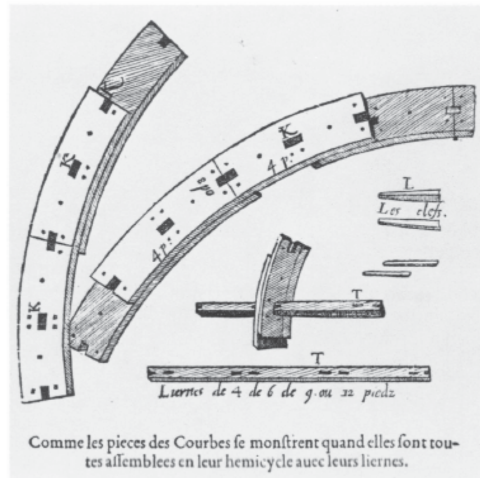



**Figure 39:** A wood Delorme dome is created by ribs composed of small curved pieces of wood laminated together. (Picture from Delorme's *Inventions Pour Bien Batir,* 1561)

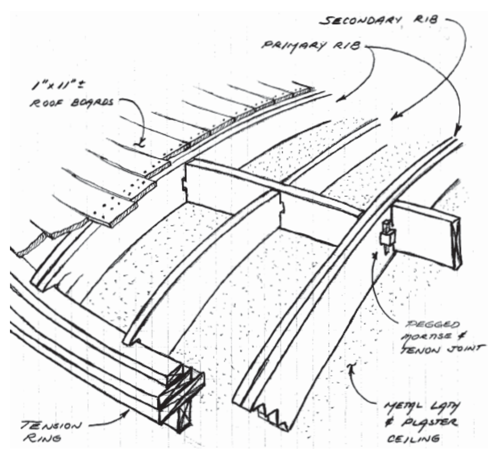



**Figure 40:** Framework of a laminated wood dome from Monumental Church in Richmond, VA; an 1813 design by Robert Mills (RSA archives).

The current dome and main floor arches were designed by Raphael Guastavino (the Guastavino Fireproof Construction Company) using his own patented mechanism of overlapping clay tiles and thick layers of cementitious mortar. Guastavino domes are constructed from long slender tiles; the dome construction is typically 3-tiles thick, overlapping at the joints and sandwiching 2 wide layers of cementitious mortar (Figure 20). Specifically patented to be durable and fast drying the cementitious mortar gave the dome a solid binder at the joints. The tiles were also specifically designed by Guastavino. He experimented with the tiles and cement quantities to arrive at the cement ratios and optimal tile configuration. The Rotunda dome construction consists of 2 nearly hemispherical vaults about 18 inches apart. Between tile layers the cement layers are approximately ½" thick each creating a composite shell 4" thick.

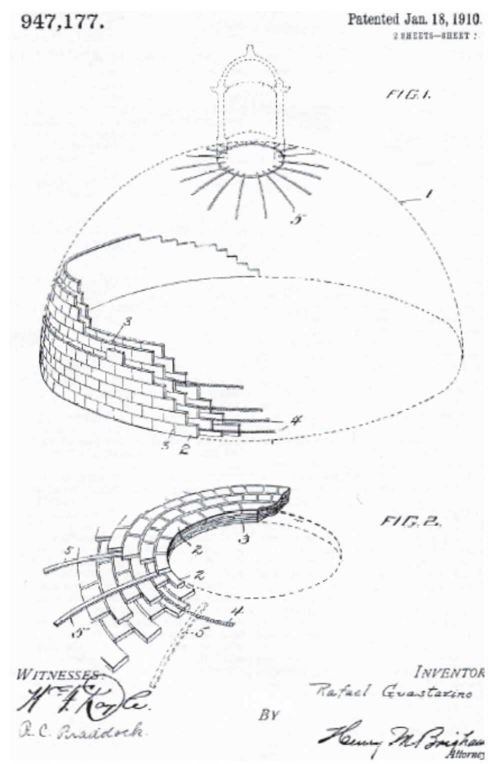



**Figure 41:** Sketches from a patent entitled Masonry Construction (#947,177) by Rafael Guastavino filed in 1908. Most likely the Rotunda dome has a similar construction. (Patent copy on Guastavino.net)

Although the new dome had the great advantage of being a non-combustible fireproof material, it has the disadvantage of being significantly heavier. Similar to the behavior discussed for the Delorme dome, both a vertical and horizontal force must be resisted at the base. Because the overall load is greater, the horizontal thrust is correspondingly greater. To resist this horizontal thrust a series of steel plate tension rings have been installed. And also as noted for the Delorme dome, in the lower portion of the near hemispherical structure, tensile hoop stresses would need to be resisted. For the wood structure, the pegged mortise and tenon hoop members would provide for this while in the tile structure, it was common to introduce a series of embedded tension rings within the shell; these were often in the form of metallic rods with twisted or deformed cross section to enable an integrated bonding within the tile and mortar assembly (Figure 41).

The capacity of the current dome was investigated through two different methods. One method is based on meridional (longitudinal) forces and hoop (latitudinal) forces in the plane of the dome. The other analytic method was developed by the dome designer, Raphael Guastavino.

Guastavino outlines his technique for analyzing domes he constructed in a treatise entitled "Essay on the Theory and History of Cohesive Construction, Applied Especially to the Timbrel Vault," which he presented to the Society of Arts in Boston, Massachusetts in 1893. According to the essay Guastavino experimented with special tiles and cement he created to obtain an optimal arch and dome design. The best system consisted of three layers of tiles interlaced with thick cement layers. For this design, Guastavino obtained average values for transverse resistance, tensile, shear and compression strength[1]. Through experimentation, Guastavino derived an equation (EQ. 1) for three layered tile domes under uniform loading conditions (See Figure 42 -- Guastavino, 58).

According to this equation the allowable load, L, for one of the two shelled domes equals 398 kips. If the dead load of the dome is 40 lbs/ft sq. and the applied live load is 30 lbs/ft sq., the actual maximum load on the dome is 378 kips. Thus, according to Guastavino his tiled dome structure satisfies the design requirement.

[1] Results of Guastavino's experimentation in the 1880s include a 10-day tensile strength equal to 250 lbs./sq. in., a transverse resistance of 90 lbs./sq. in., a maximum shearing stress equal to 123.7 lbs./sq. in. and a compression capacity of 2060 lbs for his testing specimen. Guastavino, Raphael. "1893: 58-59.

Gaustavino's Arch Analysis:

$$T = \frac{L \bullet S}{8 \bullet r \bullet 12 \bullet C \bullet 2} \qquad \text{EQ.1}$$

T = thickness of the dome at midpoint (in)
C = coefficient of compression derived from Guastavino's experiments
 = 2060 lbs (Guastavino, 58)
S = span of the dome (ft)
r = rise of the arch (ft)
L = total load (lbs)

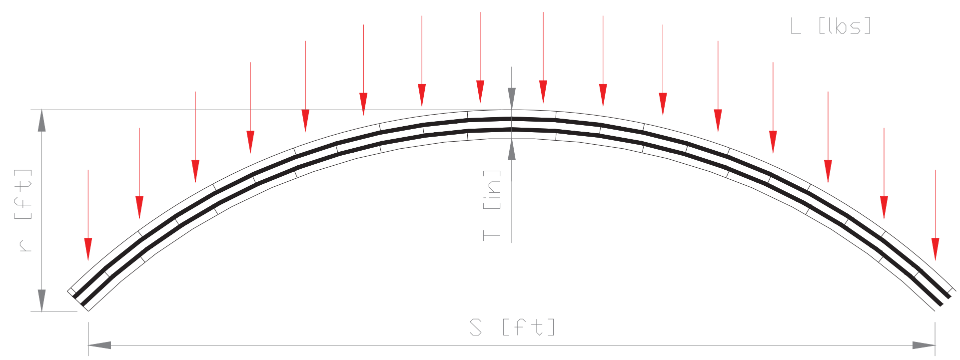



**Figure 42:** Guastavino's method of analyzing his dome construction involves variables, r, S, T and L depicted above.

The second method of dome analysis is a modern approach for designing thin shelled domes. The procedure involves two perpendicular forces, meridional forces and hoop forces. Meridional forces occur from the bottom edge of the dome, across the top and to the other bottom edge, or in what would be the North-South (longitudinal) direction on a globe. Hoop forces occur on horizontal planes through the dome, or in what would be the East-West (latitudinal) direction on a globe. The meridional and hoop forces in the domes were calculated using Equations 2 & 3.

Meridional Forces: $$N'_{\phi} = -aq\frac{1}{1+\cos\phi} \qquad \text{EQ. 2}$$

Hoop Forces: $$N'_{\theta} = aq\left(\frac{1}{1+\cos\phi} + \cos\phi\right) \qquad \text{EQ. 3}$$

Where a = radius of dome (ft)
q = load (psf)
$\Phi$ = angle from vertical to edge of dome

The maximum meridional forces, which occur at the maximum angle $\Phi$, were used to calculate the base tension ring force T in the inner and outer domes, using Equation 4.

Tension Ring Force: $$T = rN'_{\phi}\cos\phi \qquad \text{EQ. 4}$$

Where r = radius of dome in plan (ft)

The tension ring force in the outer domes was calculated at 58.7 kips. The inner dome would have less of a tension ring since there is no live loading applied. The steel pieces found embedded in the walls were 4”x½” and 3”x3/4”. In the 1970s drawings (Figure 20) there are three metal bands. Assuming an 18,000 psi allowable metal strength for the bands, an approximate total resisting force is 112.5 kips. This value is sufficient to carry the combined tension ring force for the inner and outer domes.

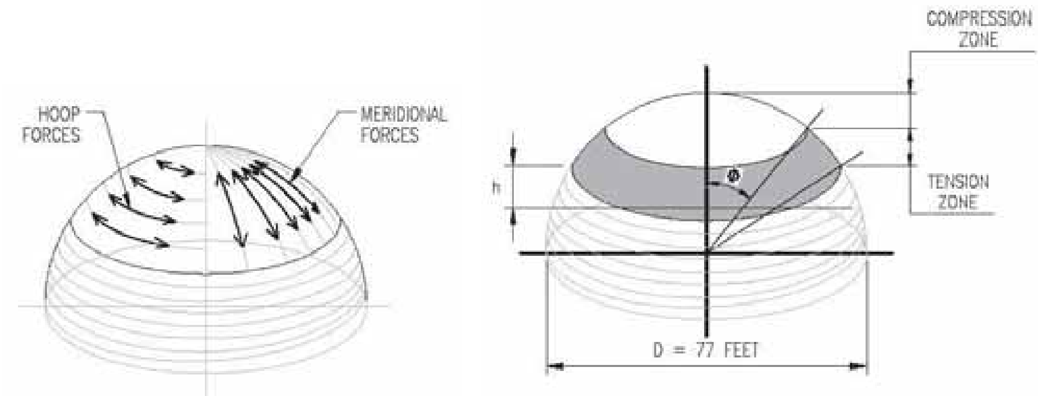



**Figure 43:** The sketches above were used to analyze the dome using meridian and hoop stresses.

## *East and West Oval Rooms on the Ground Floor and Main Floor*

Preliminary calculations for the main floor and dome room framing indicate that differential levels of deflection may be contributing to cracking in the plaster ceilings. Localized areas of concentrated load, such as where gallery columns are transferred onto the steel framing of the dome room floor, appear to correspond to some of the larger ceiling cracks. In addition, the pattern of cracking corresponds to the framing direction of open web joists from the 1970s construction, in which it appears that little or no bridging may have been applied. Allowable live loads, consistent to standard code requirements, have been indicated on the 1970s structural drawings and are reported herein in the attached framing plans. *Further analysis will follow to look more closely at differential deflections as a possible cause of ceiling cracking.*

## *Reading Room Columns*

The columns in the dome room are 5” standard steel pipe columns. Allowable concentric load for these 18’ tall columns is 47 kips (AISC Steel Manual 9th ed.). The actual load on each column is 32 kips, below the allowable limit.

## *Mechanical Room (below the north portico stairs)*

The Mechanical Room under the north portico stairs has undergone several stabilization modifications. The analysis of the original structure by RSA concludes that assuming the original cross-sections of the beams are unchanged the structure is adequate. The 1970s modification to the structure, again assuming no deterioration, is also sufficient for the applied loads. The 1986 “Rotunda North Portico” report by Dunbar, Milby & Williams Consulting Structural Engineers concurs with the structural stability of the Mechanical Room framing, however makes note of areas of deterioration in the steel framing and reinforced concrete slabs. Subsequent to that report, additional temporary shoring has been installed, apparently to provide additional support within the areas of noted deterioration. The current live load capacity of the system appears adequate to satisfy the load requirements, given the frequency of both permanent and what appears to be temporary shoring. To determine a more precise load capacity of the framing RSA recommends a through beam-by-beam investigation of the structure (see Conclusions and Recommendations).

### *Seismic Activity*

The cylindrical form of the Rotunda and the robust interior masonry supports which define the elliptical rooms on the ground floor and main floor create a stiff structure that would appear to perform well when subjected to seismic loadings. The correlation of floor cracking to possible seismic loadings appears unlikely. Because such lateral forces would first be taken by the stiff masonry, any significant lateral movement would be first communicated by extensive masonry cracking. As noted above, the cracking pattern observed in the ceilings corresponds well to the direction of floor framing. The patterns observed are not consistent with what would be expected in the transfer of lateral forces from the masonry shear walls into the floor diaphragms. Seismic activity of note in the Charlottesville area, includes:

| Year | Richter Recording | Location |
|---|---|---|
| 2001 | 3.2 | Shadwell, Virginia |
| 1984 | 4.0 | 15 miles SE of UVA |
| 1929 | 4.5 | Albemarle County |

# Conclusion and Recommendations

## Building Exterior

### *Lintels*

No action required.

### *East and West Terrace Elevations*

Cracking and shifting in the masonry arcades should be repaired so as to minimize the continued infiltration of water and the acceleration of deterioration. However, the design of masonry repairs for the arcades of the East and West Terraces should also include an assessment of thrust resistance on the various masonry piers. It appears to be a consistent problem that may require a structural intervention to develop a long-term stabile solution. Longitudinal cracking along the arch soffit will likely require some re-attachment of the outer wythe of arching brick to the interior portions of the arch. Stainless steel helical ties or other means may be considered. Water infiltration from the terraces above and conservation measures to treat hairline cracking in the stone elements should be implemented.

### *South Elevation*

The column bases should be assessed by a masonry conservator to address the ongoing decay mechanism in the stone. As part of this investigation, RSA recommends employing non-destructive testing methods to evaluate the integrity of stone throughout the cross section; this will confirm whether the nature of decay is surface related or is penetrating deeply within the stone; it will also help assess the long-term integrity of the column base in bearing the loads from the portico and column shafts.

### *Catering Servery (Room #106, below the south stairs)*

Most of the cracks observed in this area appear to be largely the result of minor shifting in the masonry substrate or simply from shrinkage in the stucco finish. Localized repointing of brick masonry and subsequent stucco patching is recommended. Although the evidence of some horizontal shifting did not represent a current concern structurally, the fact that the movement has apparently occurred reminds us of the structural means of support that is functioning below the south stairs, and should represent a caution for future maintenance operations. The earth in front of the south stairs likely plays an important role in resisting the thrust of the stair vault; as such, any future excavation in front of the south stairs should be carefully considered and evaluated prior to implementation.

### *North Elevation*

It appears that water continues to penetrate into the paving layer of the north stairs. The deterioration of the paving system and stair structure will continue unless adequate removal of water from the stairs is achieved.

### *Roof*

Water infiltration through the roofing system will penetrate the insulation layer and reach the surface of the outer shell of the Guastavino dome roof. With sustained moisture at the roofing – tile interface, freeze-thaw cycling will result in deterioration of the masonry structure. Water penetration remediation and reproofing efforts should be implemented in accordance with architectural recommendations. As part of the next re-roofing of the dome, RSA recommends that the tile surface be visually inspected with hands-on assessment to assure that past moisture penetration has not compromised the structural materials.

## Building Interior

### *Dome*

No action required. Maintain or upgrade roofing above per architectural recommendations to minimize water infiltration of the structure.

### *North Portico Attic*

No immediate action required. Exposed areas of steel may be cleaned and painted for long-term maintenance. Maintain or upgrade roofing above per architectural recommendations to minimize water infiltration of the structure.

### *South Portico Attic*

No immediate action required. Exposed areas of steel may be cleaned and painted for long-term maintenance. Maintain or upgrade roofing above per architectural recommendations to minimize water infiltration of the structure.

### *East and West Oval Rooms on the Ground Floor and Main Floor*

No structural remediation recommended at this time. As the cause of cracking along lines of open web joists may be the result of independent, rather than excessive movement of the joists, the best long-term solution may be to introduce a line or lines of bridging to help distribute concentrated floor loads to multiple framing members.

### *Dome Room Columns*

A probe through the finish of one of the columns exhibiting surface cracking is warranted to expose the interior steel column and its attachment to finishes. The probe should be at the back (outward facing) side to minimize visual impact and also to allow for the exposure of the column to gallery floor beam connection.

### *Middle Gallery*

A probe investigation at the gallery floor slab, including both the nature of moisture in the finishes as well as the bearing detail of the beams in masonry is recommended. The probes will serve to confirm the nature of damages associated with water infiltration at this level.

### *Mechanical Room (below the north portico stairs)*

To determine a more precise load capacity of the framing below the north stairs, RSA recommends a thorough beam-by-beam investigation of the structure. The investigation will require access to perform a hands-on survey and documentation of beams. A probe investigation may be necessary to confirm stair and terrace loadings as well as slab construction. Assuming the long-term goal would be to eliminate the temporary shoring within the mechanical room, it appears very likely that significant reinforcement of the roof framing will be required in this area.

### *Pipe and Duct Tunnel (Below the ground floor)*

Address water collection and transport issues.

### *Storage Rooms (Rooms 109 and 110, below the north stairs)*

Address water infiltration from above.

Clean existing steel of loose rust and scale in preparation for the addition of a protective coating.
Repoint interior masonry walls.

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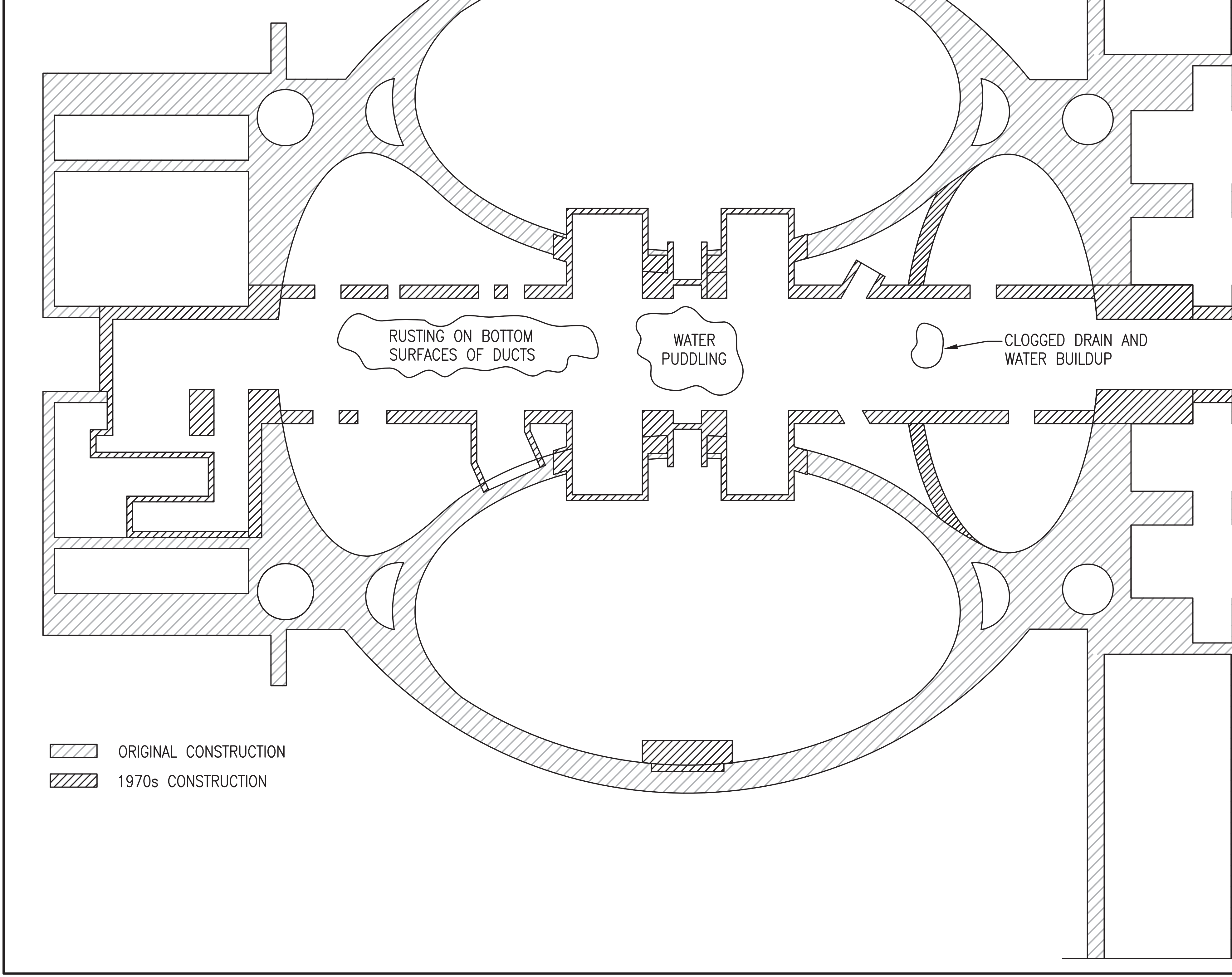
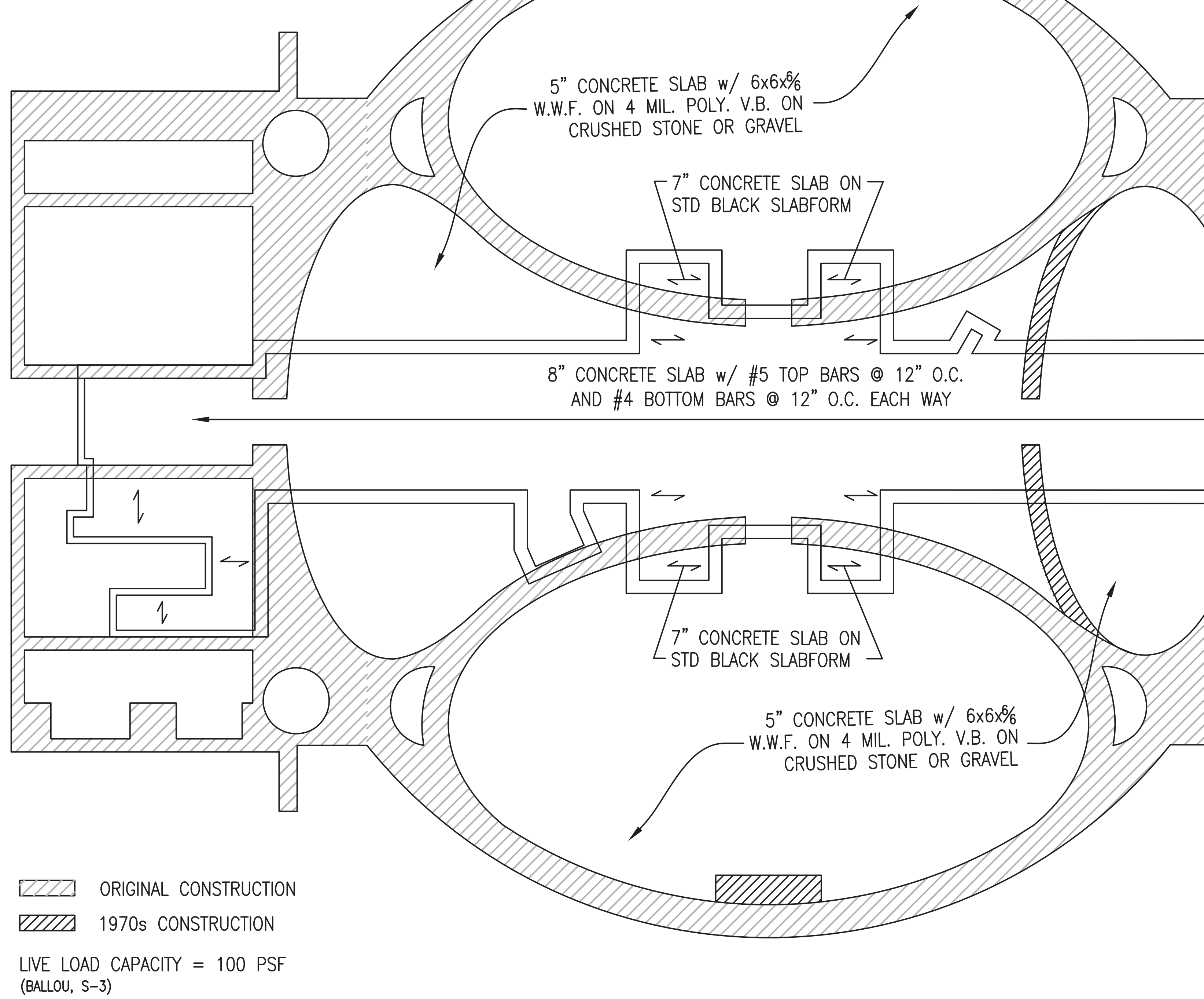
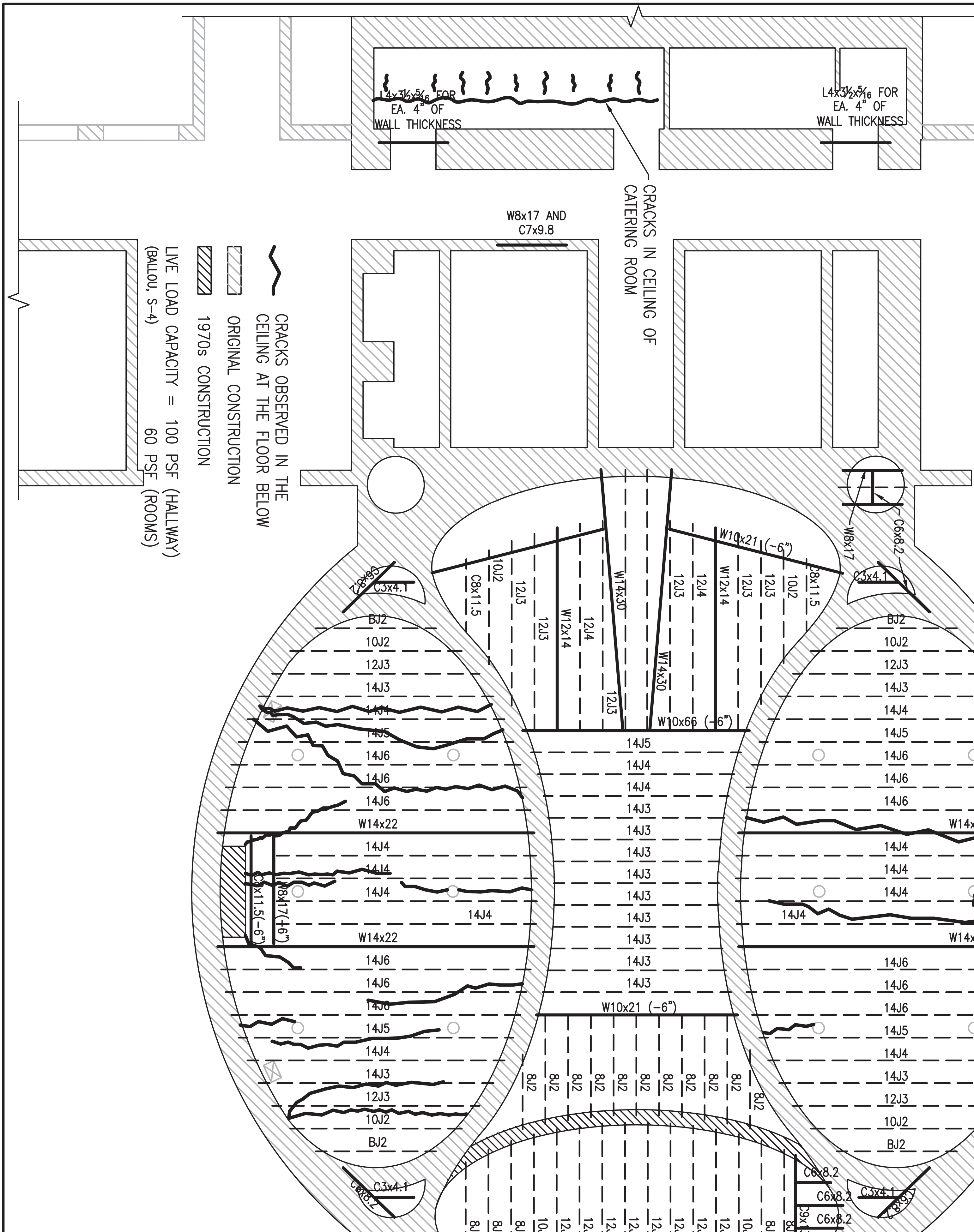
# Appendix A

## Sketches

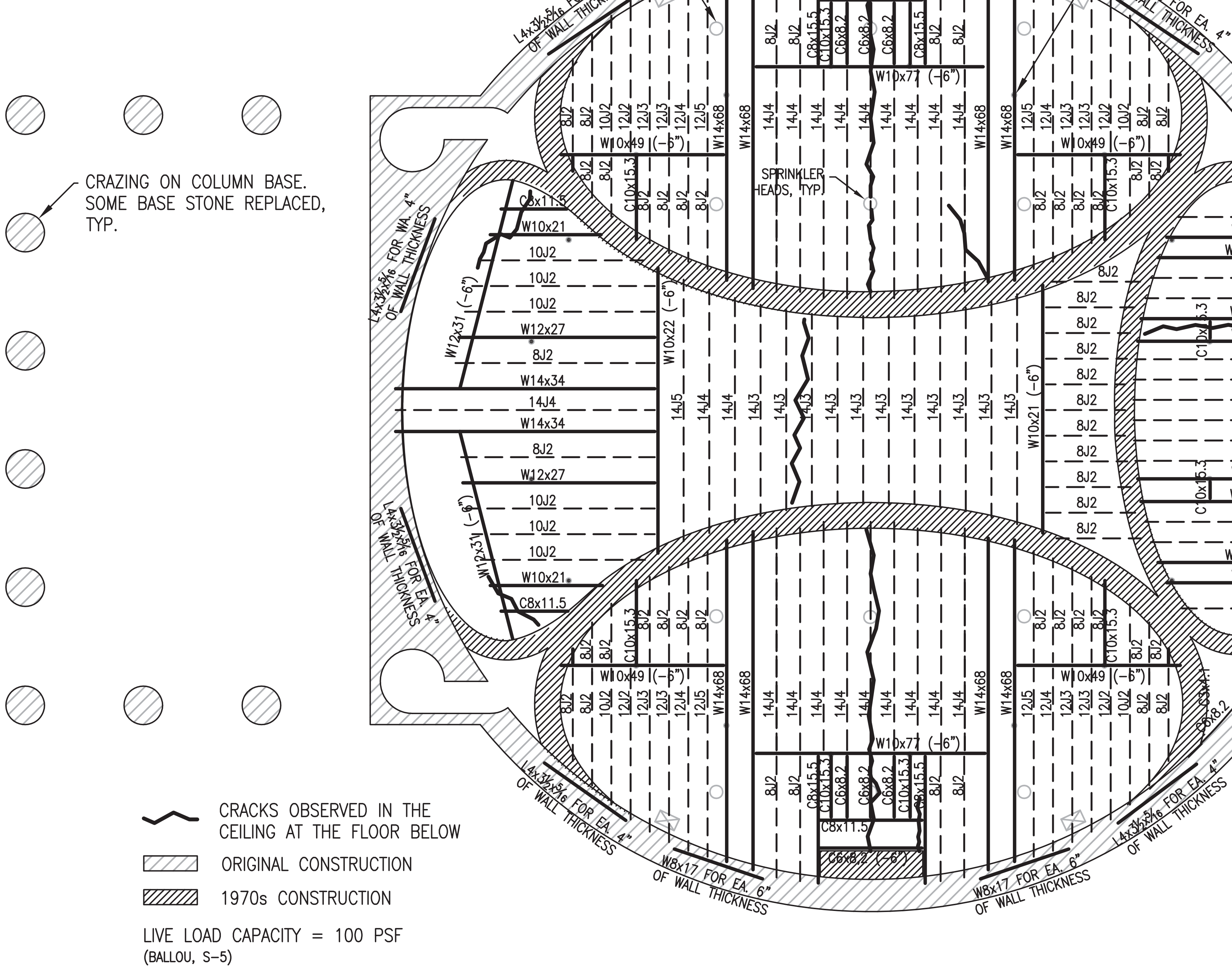
S-1: Pipe and Tunnel Foundation Plan
S-2: Basement Floor Framing Plan
S-3: First Floor Framing Plan
S-4: Second Floor Framing Plan
S-5: Middle Gallery Framing Plan
S-6: Upper Gallery Framing Plan
S-7: Roof Plan
S-8: Rotunda and Terrace Plan

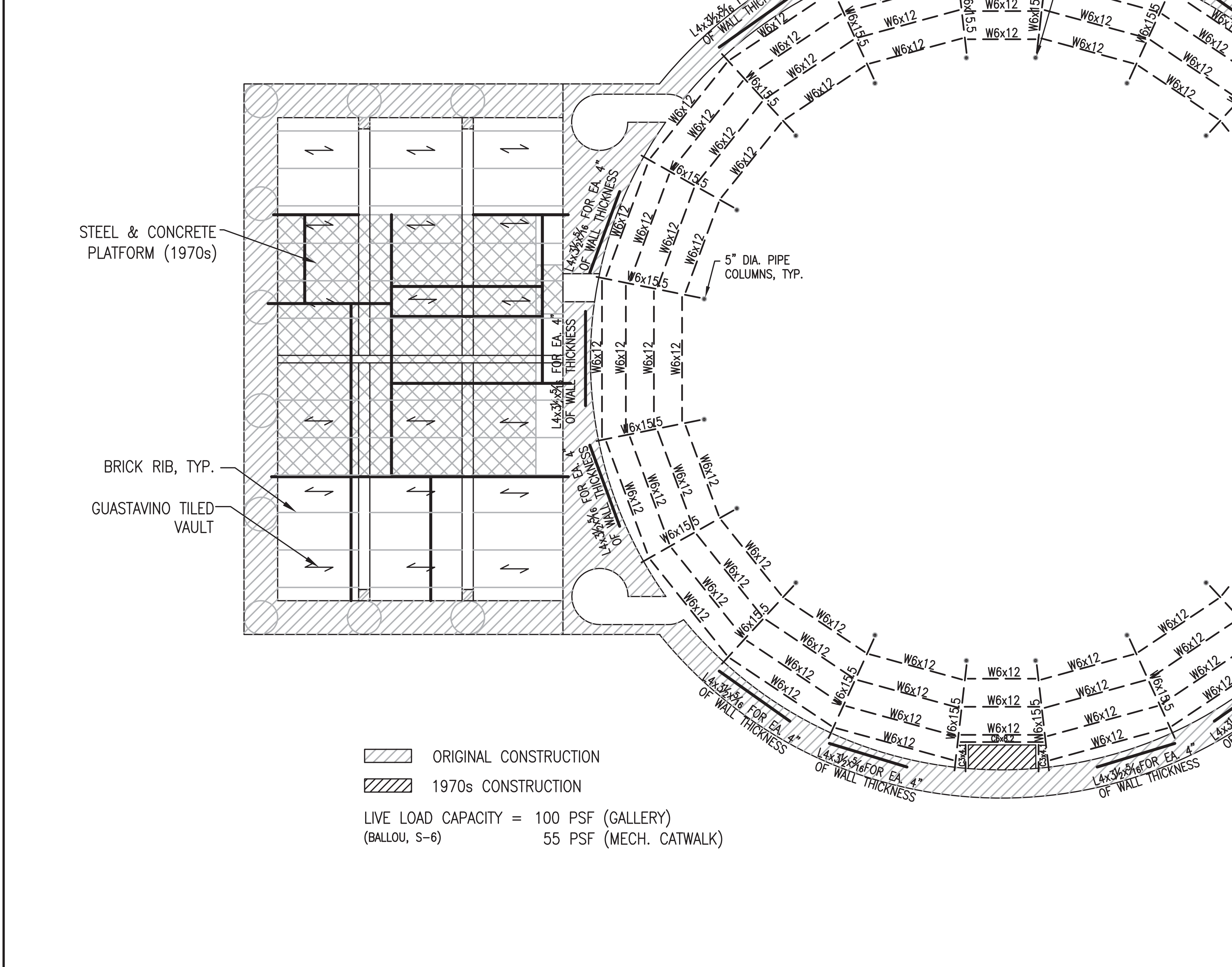

RUSTING ON BOTTOM SURFACES OF DUCTS
WATER PUDDLING
CLOGGED DRAIN AND WATER BUILDUP
ORIGINAL CONSTRUCTION
1970s CONSTRUCTION


5" CONCRETE SLAB w/ 6x6x6/6
W.W.F. ON 4 MIL. POLY. V.B. ON
CRUSHED STONE OR GRAVEL
7" CONCRETE SLAB ON
STD BLACK SLABFORM
8" CONCRETE SLAB w/ #5 TOP BARS @ 12" O.C.
AND #4 BOTTOM BARS @ 12" O.C. EACH WAY
7" CONCRETE SLAB ON
STD BLACK SLABFORM
5" CONCRETE SLAB w/ 6x6x6/6
W.W.F. ON 4 MIL. POLY. V.B. ON
CRUSHED STONE OR GRAVEL
ORIGINAL CONSTRUCTION
1970s CONSTRUCTION
LIVE LOAD CAPACITY = 100 PSF
(BALLOU, S-3)



L4x3½x5/16 FOR EA. 4" OF WALL THICKNESS
L4x3½x5/16 FOR EA. 4" OF WALL THICKNESS
CRACKS IN CEILING OF CATERING ROOM
W8x17 AND C7x9.8
CRACKS OBSERVED IN THE CEILING AT THE FLOOR BELOW
ORIGINAL CONSTRUCTION
1970s CONSTRUCTION
LIVE LOAD CAPACITY = 100 PSF (HALLWAY) 60 PSF (ROOMS)
(BALLOU, S-4)
W10x21 (-6")
W8x17
C6x8.2
C3x4.1
C8x11.5
10J2
12J3
12J4
W12x14
W14x30
W10x66 (-6")
BJ2
14J3
14J4
14J5
14J6
W14x22
C8x11.5(-6")
W8x17(+6")
W10x21 (-6")
8J2
C6x8.2

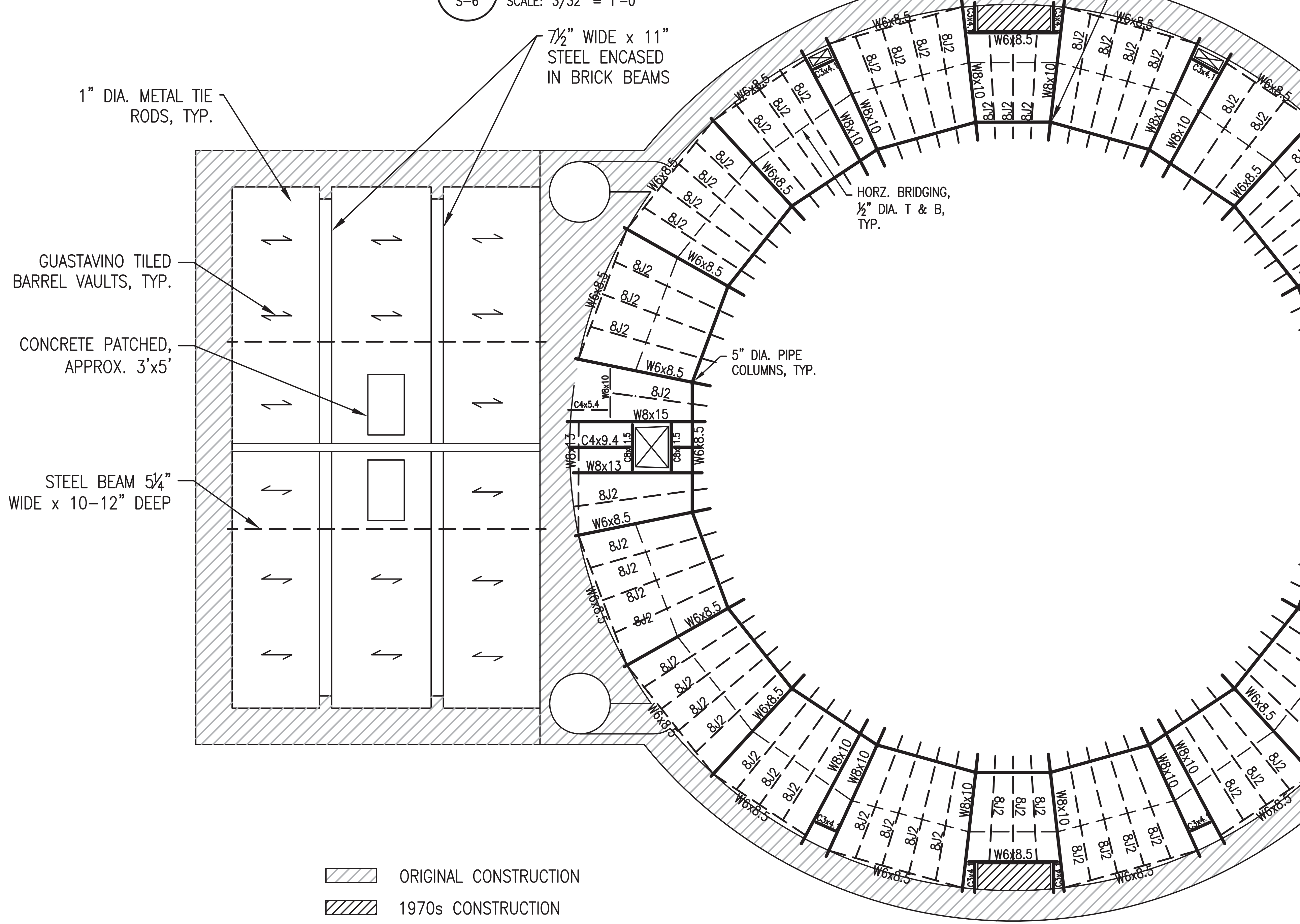

CRAZING ON COLUMN BASE.
SOME BASE STONE REPLACED,
TYP.
SPRINKLER HEADS, TYP
L4x3½x5⁄16 FOR WA. 4" OF WALL THICKNESS
L4x3½x5⁄16 FOR EA. 4" OF WALL THICKNESS
W8x17 FOR EA. 6" OF WALL THICKNESS
W12x31 (−6")
W10x22 (−6")
W10x21 (−6")
W10x49 (−6")
W10x77 (−6")
C6x8.2 (−6")
W14x68
W14x34
W12x27
W10x21
C8x11.5
C10x15.3
C8x15.5
C6x8.2
14J5
14J4
14J3
12J5
12J4
12J3
12J2
10J2
8J2
CRACKS OBSERVED IN THE
CEILING AT THE FLOOR BELOW
ORIGINAL CONSTRUCTION
1970s CONSTRUCTION
LIVE LOAD CAPACITY = 100 PSF
(BALLOU, S-5)


STEEL & CONCRETE PLATFORM (1970s)
BRICK RIB, TYP.
GUASTAVINO TILED VAULT
5" DIA. PIPE COLUMNS, TYP.
L4x3½x5⁄16 FOR EA. 4" OF WALL THICKNESS
W6x12
W6x15.5
ORIGINAL CONSTRUCTION
1970s CONSTRUCTION
LIVE LOAD CAPACITY = 100 PSF (GALLERY)
55 PSF (MECH. CATWALK)
(BALLOU, S-6)

2
S-6

SOUTH PORTICO ATTIC

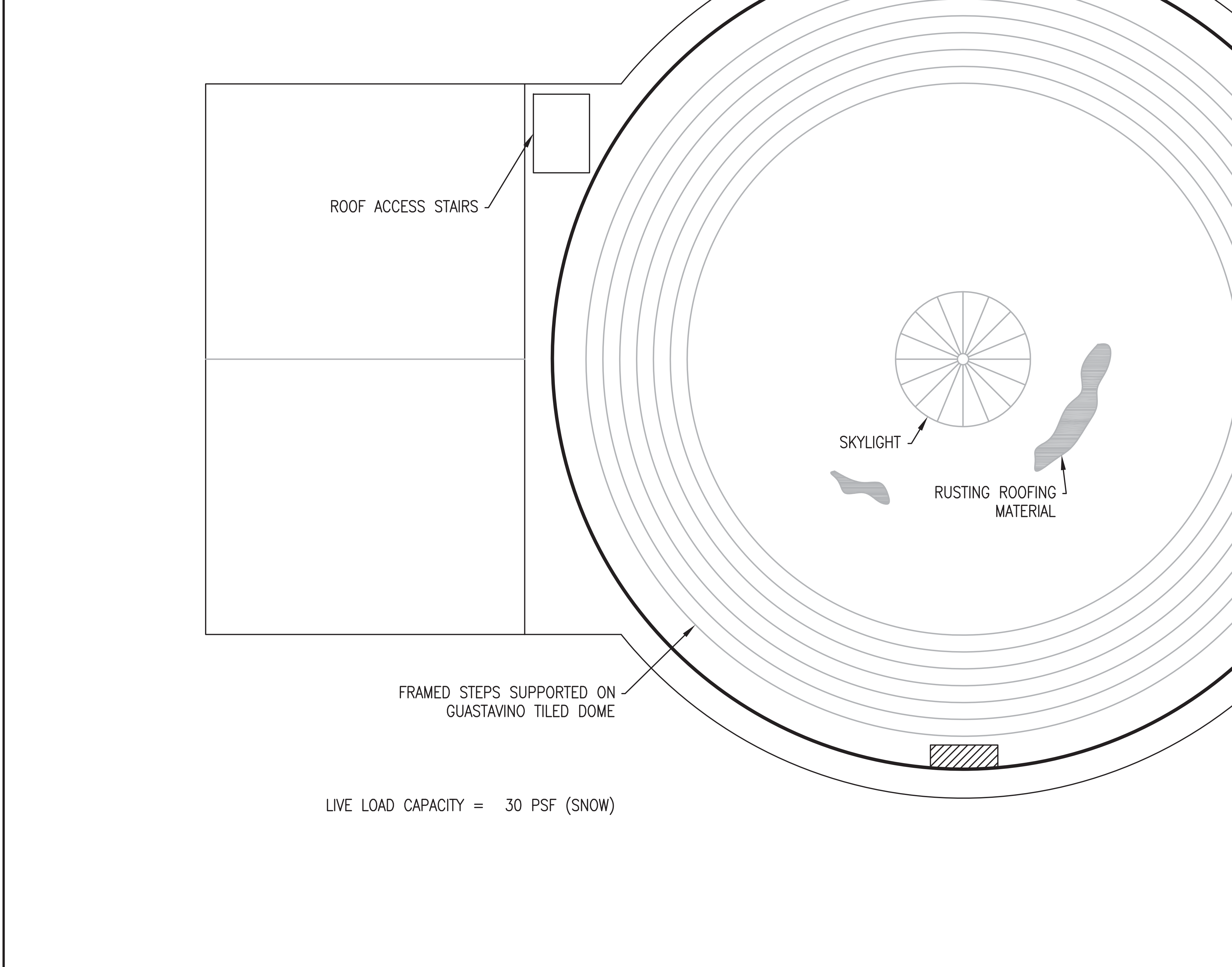
SCALE: 3/32" = 1'-0"

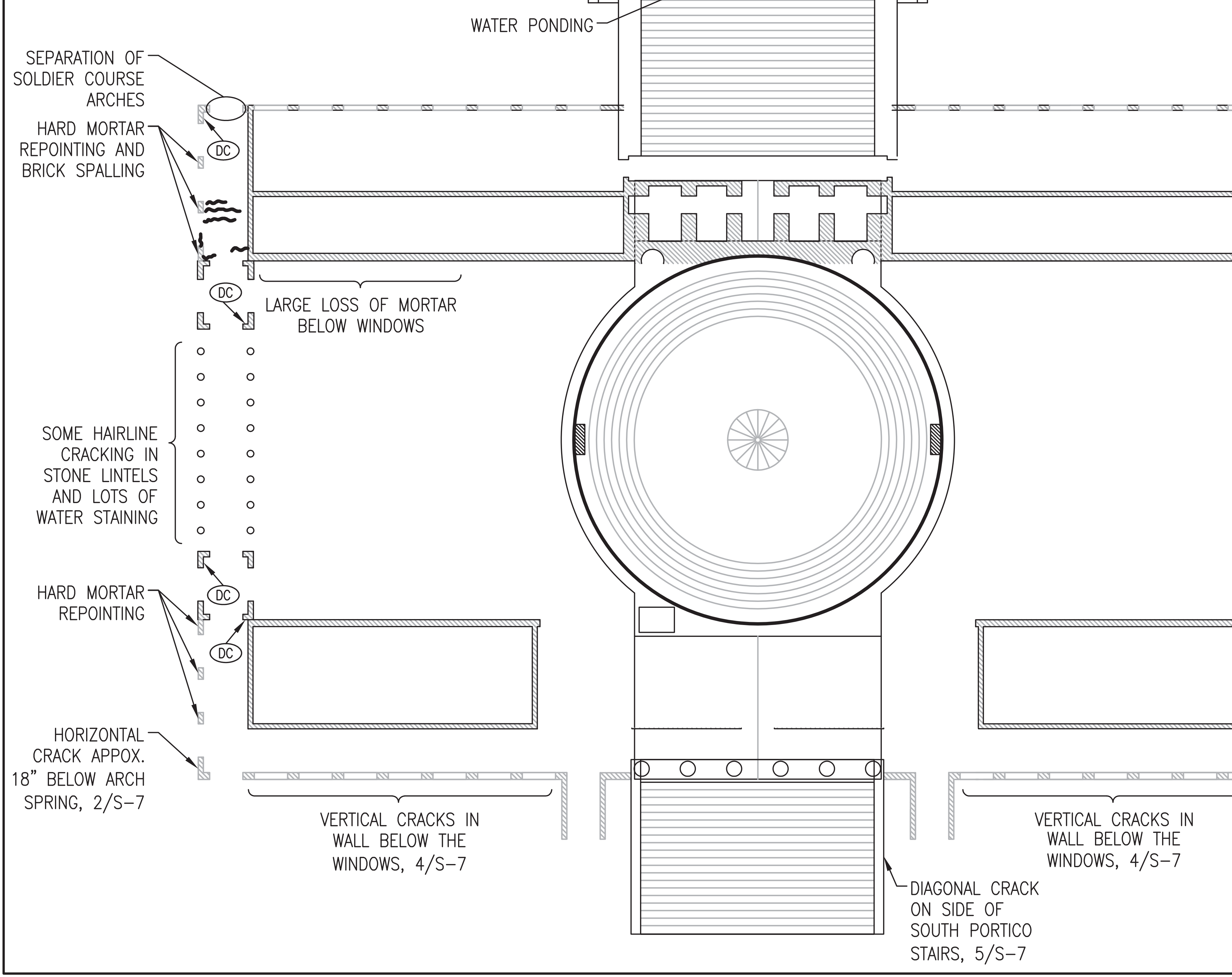



ORIGINAL CONSTRUCTION

1970s CONSTRUCTION

LIVE LOAD CAPACITY = 40 PSF (GALLERY)
(BALLOU, S-7)


ROOF ACCESS STAIRS
SKYLIGHT
RUSTING ROOFING MATERIAL
FRAMED STEPS SUPPORTED ON GUASTAVINO TILED DOME
LIVE LOAD CAPACITY = 30 PSF (SNOW)


WATER PONDING
SEPARATION OF SOLDIER COURSE ARCHES
HARD MORTAR REPOINTING AND BRICK SPALLING
DC
DC
LARGE LOSS OF MORTAR BELOW WINDOWS
SOME HAIRLINE CRACKING IN STONE LINTELS AND LOTS OF WATER STAINING
HARD MORTAR REPOINTING
DC
DC
HORIZONTAL CRACK APPOX. 18" BELOW ARCH SPRING, 2/S-7
VERTICAL CRACKS IN WALL BELOW THE WINDOWS, 4/S-7
DIAGONAL CRACK ON SIDE OF SOUTH PORTICO STAIRS, 5/S-7
VERTICAL CRACKS IN WALL BELOW THE WINDOWS, 4/S-7