

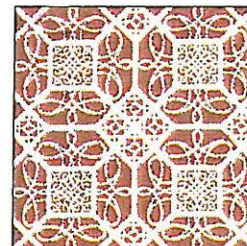
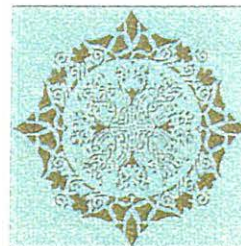
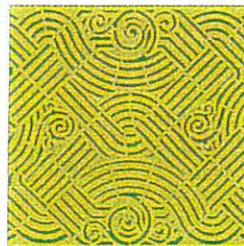
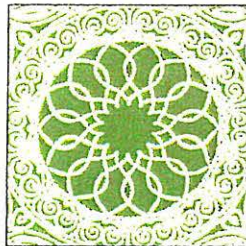
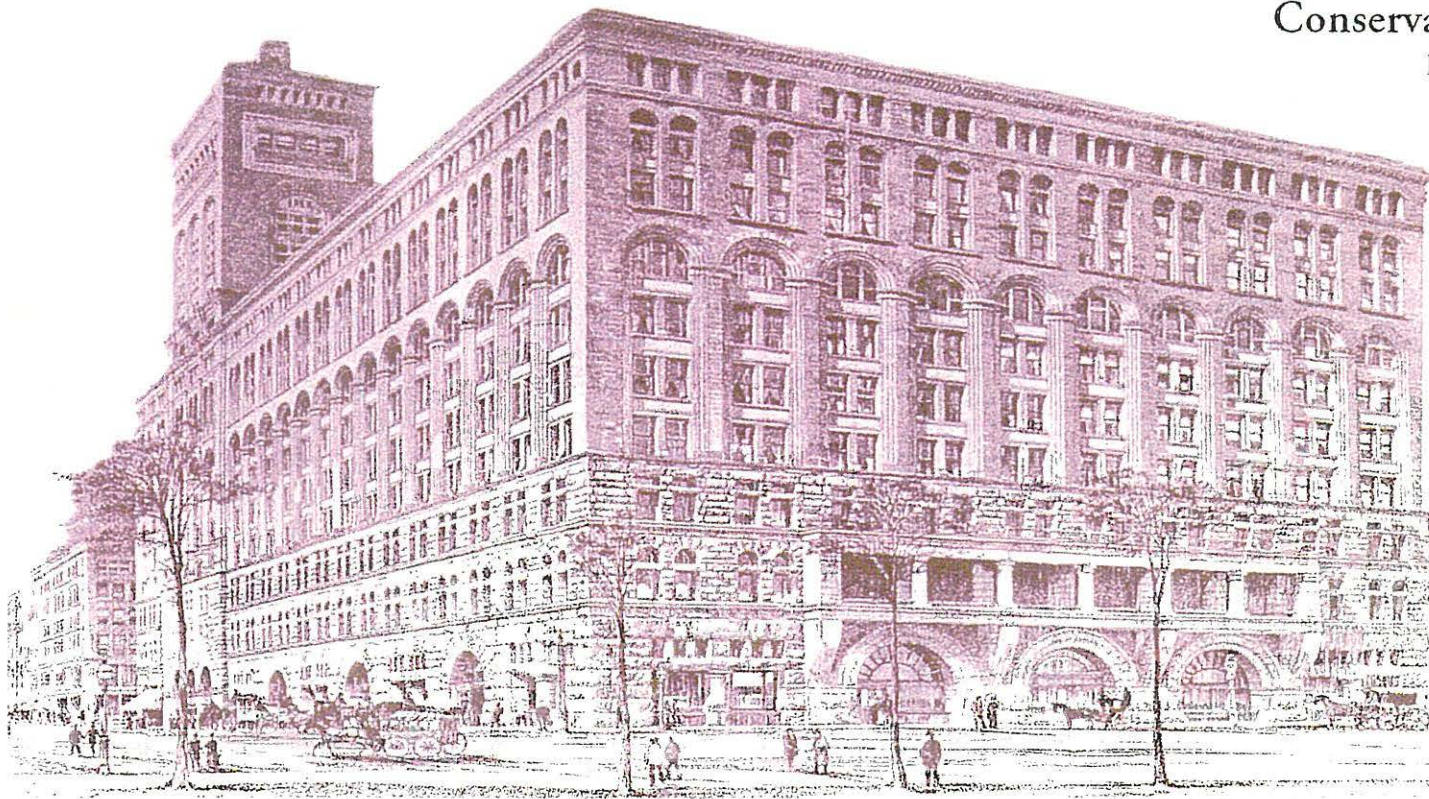
The Auditorium Building

Roosevelt University

Getty Project Preparation Grant - Historic Interior Spaces

Conservation Master Plan

December 2000 Volume II



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Volume II

Structural Conditions Survey
Lighting Restoration Report
Mechanical, Plumbing, and
Electrical System Design Narrative
Preliminary Cost Estimate

STRUCTURAL CONDITIONS SURVEY

Wiss, Janney, Elstner, Associates, Inc. (WJE) has performed a limited condition survey of selected interior spaces in the Auditorium Building at Roosevelt University in Chicago, Illinois. The purpose of this evaluation was to assist Booth/Hansen & Associates (Booth/Hansen) establish a prioritized list of general repair recommendations based on a visual examination of exposed elements. The list is to form part of a Conservation Master Plan being prepared by Booth/Hansen for Roosevelt University. We understand that Roosevelt University has obtained funding for this project from a Project Preparation Grant from the Getty Institute for Conservation.

Eight architecturally significant spaces were to be included in the Getty-funded study: the Library (originally the Auditorium Hotel Dining Room); Ganz Hall (Hotel Banquet Hall); Faculty Lounge (Hotel Men's Smoking Room); Sullivan Room (Hotel Ladies Parlor); Oscar Fainman Memorial Hall (Hotel Reception Lobby); Grand Staircase above the Michigan Avenue Lobby; Michigan Avenue Lobby; and Wabash Avenue Lobby. WJE examined selected elements of each of these interior spaces. Since Ganz Hall and the Library have significant exterior envelope components, WJE examined the roof and accessible portions of the exterior walls and windows for these spaces as well as interior finish elements. In the remaining spaces, WJE's examination was limited to the exterior windows and/or doors. The Grand Staircase was not included in WJE's study. Detailed analysis of building systems and structural components was not requested for any of the spaces examined as part of this study.

BACKGROUND

Roosevelt University occupies the building constructed as the Auditorium Building circa 1887 to 1889 and designed by the firm of Adler & Sullivan, headed by Dankmar Adler and Louis Sullivan. When the building was completed, it housed the Auditorium Theater, wrapped on the east and south by the Auditorium Hotel and an office block on the west. The building is one of Chicago's most significant architectural resources, not only for its exterior architectural facades but also because several interior spaces in the theater and hotel include Sullivan's distinctive ornamental plaster and stencil work. Since 1946, the hotel and office portions of the building have been occupied by Roosevelt University. This study focuses on the interior spaces that have survived to the present and are primarily located in the former hotel portion of the building.

Ganz Hall, which as stated above was originally the Banquet Hall for the hotel, is located at the 7th Floor Level of the building. This space has a unique bridge-like structural system, since it was added to the building soon after its completion. It is supported on two large steel trusses spanning over the theater roof. The space has three exterior walls and a low sloped roof. The Library, formerly the Dining Room of the hotel, is located on the 10th floor of the Michigan Avenue (east) side of the building, and has three exterior masonry walls and a low sloped roof with a barrel vault over the central portion (now the library's reading room). The remaining spaces are located on the lower floors of the building as indicated below; most have at least one exterior masonry wall and several windows.

WJE previously completed a survey of the exterior windows in the building, resulting in a report "Visual Inspection of Exterior Windows at the Auditorium Building, Chicago, Illinois," dated January 30, 1998. Information from this study was used to direct our efforts in re-examining exterior windows for the rooms included in this survey.

We understand that other elements of the interior spaces were examined by the other project team members, including Robert Furhoff (historic finishes); Ketchmark & Associates, Inc. (mechanical, electrical, and plumbing); Schuler & Shook, Inc. (lighting); Construction Resources and Management (cost estimating); and Vinci/Hamp Architects (conservation). Coordination for the study was conducted by Booth/Hansen.

METHODOLOGY

1. **Review.** Review available documentation on the eight spaces included in the study, as well as relevant exterior envelope elements. These included baseline drawings provided on AutoCAD and prepared by Booth/Hansen, as well as relevant portions of the Historic American Buildings Survey (HABS) documentation drawings and photographs. Specific HABS drawings, forwarded to us by Booth/Hansen, included schematic structural drawings of Ganz Hall and building sections showing portions of the Library. Electronic copies of selected HABS photographs related to Ganz Hall and reproduced in this report as Figures 1 through 10 were obtained from the HABS website of the National Park Service.
2. **Visual Survey.** Perform a visual survey of the following spaces and specific elements:
 - a. Library, located on the 10th Floor Level: exterior roof areas, including existing skylight enclosures; exterior windows; accessible roof and floor structural elements; and plaster ceiling.
 - b. Ganz Hall (including vestibule, side corridor, and interstitial space under floor), located on the 7th Floor Level: exterior roof areas, including existing vestibule skylight enclosures; exterior wall cladding; exterior storm windows (with limited observations of the exterior face of the art glass windows); accessible roof and floor structural elements; and plaster ceiling.
 - c. Faculty Lounge, located on the 2nd Floor Level: exterior windows.

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- d. Sullivan Room, located on the 2nd Floor Level: exterior windows.
- e. Oscar Fainman Memorial Hall, located on the 2nd Floor Level: exterior windows.
- f. Michigan Avenue Lobby, located on the 1st Floor Level: exterior windows and entrance doors.
- g. Wabash Avenue Lobby, located on the 1st Floor Level: limited survey of exterior curtain wall.

Since the Grand Staircase does not contain significant portions of plaster ceilings, it was not included in WJE's survey. Observations from the visual survey were recorded with photographs and, where applicable, survey drawings. Where baseline drawings were not available for specific elements and details, observations were recorded on sketch plans and details made from limited field measurements.

In our original proposal, we stated that we would create limited inspection openings at selected locations to observe concealed conditions. Potential areas for inspection openings included interior plaster and exterior roofing systems. As discussed below, Roosevelt University was concerned about making openings through sections of ornamental plaster. Therefore, our observations were limited to the plaster surface or accessible interstitial spaces above or behind the plaster. Also, we understand that the roofing system on the Library was recently replaced, and performing openings would have voided the warranty on this system. Since we did not observe active leaks in the interior spaces or significant water damage to plaster, inspection openings were not performed in Ganz Hall either.

Also, our original proposal included a budget estimate for performing laboratory analysis of selected material samples removed at inspection opening locations. Since inspection openings were not performed as part of this survey, samples were not obtained in this survey. Further discussion of this aspect is provided in the conclusions of this report.

OBSERVATIONS

GANZ HALL

As stated above, Ganz Hall (originally the Hotel Banquet Hall) was added to the building soon after its completion in 1889. The hall consists of two public spaces, a main hall (now an auditorium with a raised stage) and a vestibule. General views of the auditorium and vestibule are shown in Figures 29 through 34 and Figures 37 through 41, respectively. A stair in the main portion of the building connects the 7th Floor Level with the floor level of Ganz Hall. Additional spaces include a corridor on the east side of the hall, several service or "backstage" spaces, and stairs lead down to an interstitial space below the hall's floor level and above the roof of the Auditorium Theater. Figure 1 shows the hall under construction. Figures 2 through 9 are reproductions of the HABS documentation photographs related to Ganz Hall. Figure 10 is a reproduction of a HABS drawing showing a schematic structural plan for the hall.

The vestibule has three skylights covered in translucent panels. The auditorium space, which is taller than the vestibule space, has seven window openings on the west side, three on the south side, and four on the east side. There are also three additional window openings on the east side that are covered by additions to the backstage areas. The hall has a low sloped roof with a built-up roofing system. The exterior walls are clad with an exterior insulation and finishing system (EIFS).

General Structural System Description and Observations

Ganz Hall is constructed with a different structural system than much of the remainder of the building. Instead of load bearing masonry walls, the hall has a lighter-weight structural framing system covered with an exterior cladding that is essentially a curtain wall. The hall spans transversely (north-south) over the theater space, just west of the stage house, and is comprised of the following (see also Figure 1):

- The primary structural elements are two 120 foot long trusses that span in the north-south direction over the theater, supported by the north masonry wall of the theater and the north masonry wall of

the hotel block (see Figure 11). The east truss is approximately 24 feet deep and the west truss is approximately 14 feet deep. The tops of each truss are at the same elevation (about at the sill level of the semi-circular windows of the auditorium space). They are concealed on the interior by the wood and plaster finished walls.

- The trusses support a series of six structural bents formed by lattice columns with transverse girders (built-up members or rolled beam sections) to support the roof framing. Lattice columns are also present at the south end of the structure, as shown in Figures 1 and 12.
- The hall's floor structure is nine transverse floor girders (built-up truss members), which span between the approximate mid-height of the main trusses. Six inch deep metal beams span between the floor girders. These beams are typically spaced at 5 feet on center. The flooring is attached to the 6-inch deep metal beams. Figures 13 and 14 show typical views of the floor framing from the underside.
- The flooring system is 3 1/2 inch deep wood members spaced 12 inches on center with hollow clay tiles filling the space between them. The joint between the tiles and the wood beams was observed to be partially filled with mortar. Two layers of tongue and groove wood floorboards were laid transverse to the wood beams. The bottom layer boards are 5 1/2 inches by 1 inch; the next layer of boards is 8 inches by 1 inch. It appears that the existing finished floor is constructed on top of the floorboards.
- Several floor hatches are located in the floor structure of the hall. We understand that these hatches were installed during original construction to allow for storage of banquet hall furnishings when not in use. Figures 8, 9, 15, 16, and 17 show typical hatches.

Exposed elements of the structure were observed up close at accessible areas. Generally, observations of the structure were made from the interstitial space located between auditorium theater roof and the Ganz Hall floor, and from accessible portions of the roofs outside of Ganz Hall. Concealed portions of the structure (e.g., embedded in masonry) and inaccessible areas (e.g., in walls or above plaster ceilings) were not

observed. The following are our observations of the accessible structure of the hall:

- Exposed metal elements in the interstitial space were observed to be in good condition.
- Exposed metal elements outside the building, as observed from the roof above the Ganz Hall vestibule, exhibit mild to moderate corrosion (these elements are visible in Figures 4 and 5).
- Mortar was observed to be missing or loose in the joints between the clay tile units and the wood beams, as shown in Figures 13 and 14.
- Clay tile units are missing in isolated locations of the floor structure.
- Clay tile units are displaced downward in isolated locations of the floor structure, typically at areas of missing mortar. Figure 20 shows one location of a displaced clay tile unit.
- Floor openings to accommodate sheet metal ductwork are roughly framed with wood headers. Detailed observations of these openings were not possible due to access limitations. Figure 18, 19, and 21 show three locations where these openings have been made.
- The interstitial space contained stage scenery and other non-fixed elements that were stored in the space.

Exterior Wall Cladding

WJE's observations on the EIFS cladding system was limited to accessible areas of the vestibule roof adjacent to the south wall of the auditorium space and the roof areas at the east and west sides of the hall. Figures 22 and 23 show typical conditions of the EIFS cladding. Although no significant cracks or other distress were observed on the vertical surfaces of the EIFS cladding, it was observed that the EIFS had been installed on horizontal and sloping surfaces. Evidence of past water collection and organic growth were observed on a small area with horizontally applied EIFS, as shown in Figure 23. Access limitations prevented close-up observations of the east corridor roof, shown in Figure 22, where EIFS had been installed on a sloping

surface.

Window System Observations

Ganz Hall has 17 arched window openings on 3 elevations: 7 each on the east and west and 3 on the south. As noted above, the three furthest north windows on the east elevation are enclosed by adjacent additions. Observations on the windows in Ganz Hall include the following:

- Each opening contains one art glass window that consists of multiple panes of colored glass connected by a structural network of lead coming as shown in Figure 24. Each window also has a metal armature that is tied into the lead coming on the exterior side of the window for added stability as shown in Figure 25.
- Fourteen of the windows that are exposed to the elements have been covered on the exterior with an aluminum storm window that is part of the EIFS system that was installed on the exterior elevations at some time in the past. A typical aluminum storm window is shown in Figure 26. The storm window has a fixed lite in the center with an operable out-swinging casement window on either side.
- The exterior side of the remaining three windows that are located on the east elevation are accessible from an interior space as shown in Figure 27. These windows have an exterior wood framed storm window that was presumably part of the original construction.
- Based on our limited observations at selected locations, the art glass windows are in fair condition. Small pieces of glass are missing at a few locations. The coming and metal armature are in fair condition with some minor surface corrosion on the metal armature in isolated locations. (Detailed observations of the joint compound or putty between the coming and glass were not made; however, the windows are not exposed directly to the elements.)
- The exterior aluminum storm windows are in good condition. The sealant around the perimeter of the window is in fair condition.
- The art glass windows are not vented to the exterior or interior; however, we observed the movement of warm air in the cavity

between the aluminum storm window and the art glass window.

Roofing System Observations

The new roofing membrane system on the north and south roofs of Ganz Hall consist of roofing membrane assemblies with mineral surfaced cap sheets.

Interior Plaster Ceiling Observations

The main auditorium space in Ganz Hall has approximately square bays with flat plaster ceilings bordered by a wide convex crown molding. The crown molding has a repeating pattern of Sullivanesque ornament. Separating the ceiling bays are ornamental drop beams, with deeper drop beams spanning east and west encasing the roof framing of the hall; shallower beams run north and south. The edges of both the deep and shallow drop beams have beaded or spindled moldings. The deep and shallow beams are visually "connected" by ornamental brackets or straps, which also are covered with Sullivanesque ornament. Suspended from these ornamental brackets are incandescent light fixtures with approximately half-hemisphere glass globes.

The plaster ceilings were viewed from the floor level with observations recorded on survey sheets, a copy of which is provided in Appendix B. Observations of the plaster ceiling in the main auditorium space included the following:

- Areas of hairline cracking are present throughout the flat plaster areas of the ceiling. These included the flat plaster panels bounded by the drop beams as well as the soffits of the beams themselves.
- Hairline cracks were observed around the perimeter of some of the metal ceiling grills. A few of the cracks were observed to be wider than hairline cracks, although access limitations prevented measurement of the cracks.
- Cracks were observed in the crown molding at the edges of the drop beams, typically at the corners. Both vertical and horizontal cracks were observed at this location, as shown in Figures 35 and 36. However, access limitations prevented measurement of the

cracks or determination if there was any loose portions of plaster ornament at these locations.

- At least one area of possible plaster deterioration due to past water infiltration through the roofing system or from pipes in the interstitial space above the ceiling was observed on the ceiling. This area was on a drop beam soffit near the foot of the stage platform. However, this location did not appear to have currently active water leakage.
- Acoustical tile was observed affixed to the north side of the first east-west drop beam south of the north wall.

The vestibule space in Ganz Hall has flat plaster ceilings separated by ornamental wood molded drop beams. Within the pattern of the drop beams are three art glass panels illuminated from above by skylights. The center art glass panel is approximately square, while the panel to the east is rectangular and the panel to the west is rectangular with chamfered corners. Each of the three panels is subdivided with wood molding, at the center of which are finely cut square wood screens with a Sullivanesque design. Brass light fixtures with incandescent bulbs are mounted to the drop beams at the corners of the east panel, with similar fixtures mounted to an ornamental plaster panel adjoining the chamfered corners of the west panel.

The plaster ceilings were viewed from the floor level with observations recorded on survey sheets, a copy of which is provided in Appendix B. Observations of the plaster ceiling in the vestibule space included the following:

- Areas of hairline cracking are present throughout the flat plaster areas of the ceiling.
- An area of past water-related damage was observed on two adjacent panels of flat plaster ceiling along the north wall, as shown in Figure 42 and 43. The plaster had been patched in the past. Water-related damage was also observed along the wood drop beam between the panels. On one side of the drop beam is a portion of an encased pipe, presumably from a roof drain. No active water leakage was observed at this location.

- Peeling paint was observed on the side walls of the skylight openings above the art glass panels.

LIBRARY

The Library, originally the Hotel Dining Room, consists of two primarily spaces with historic ornamental finishes, with a series of adjacent spaces where the historic finishes are either concealed or not accessible to the public. The two primary spaces are the large barrel-vaulted space, called for the purposes of this report the main reading room (shown in Figures 44 through 46), and an adjacent space to the south with a lower, "flat" ceiling, called the south reading room (shown in Figure 47). The main reading room has six window openings on the east side; the barrel vault for this space extends partially above the low sloped roof level. The south reading room has five exterior window openings and is separated from the main reading room by four columns with ornamental wood paneling. To the north of the main reading room is a series of spaces that originally were one single space similar in size to the south reading room. This space has been subdivided by walls to enclose a fire stair on the west side and two offices on the east side. The center portion contains book stacks. A significant portion of the original ceiling finishes is present in each of the subdivided spaces, although a suspended acoustical tile ceiling is present in the center portion.

Structural drawings for the library were not available for review, and the HABS drawings for this space have general building section drawings but do not show structural framing members. Observations made in the interstitial spaces above the main and south reading rooms revealed the types of roof framing systems present in each space (observations were not made of the floor system of the Library). The roof structure of the main reading room is composed of arched built-up metal beams or ribs spanning transversely, and are located where the ornamental plaster ribs are present on the interior. Figures 71, 73, and 74 show two of the arched ribs at an accessible location. Metal framing members are connected to these ribs, from which the lath and plaster ceiling is suspended. The roof deck structure was not observable in the interstitial spaces, although it is likely a metal beam and clay tile arch system similar to that observed in the interstitial space above the

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south reading room. The roof framing above the south reading room was observed to be a metal beam and clay tile arch system, as shown in Figures 81 through 84. Also observed in the interstitial space was a separate metal beam and clay tile arch "floor," from which the plaster ceiling is presumably suspended. The interstitial space above the room north of the main reading room was not accessible.

Exterior Wall Cladding

The exterior walls of the Library were not accessible for observation and survey.

During our observations of interior plaster in the offices along the east wall, we observed several sections of sheet metal roofing missing from the setback wing on the east elevation. This condition is shown in Figure 96.

Window System Observations

The 10th Floor Level Library main reading room has 13 openings with 3 windows per opening. There is also one north-facing window opening with one window in an office at the northeast corner of the library section of the building. Each opening is divided into three parts on the exterior by short stone columns. The wood framed mullions between windows are located behind the stone columns.

- The windows in the Library are double hung with wood frame and sash. They are glazed from the exterior with a wood glazing bead.
- The nine windows in the three south elevation openings and the six southern-most windows in the two east elevation openings have been restored at some time in the past as shown in Figure 48. Included in the restoration of the windows was installation of insulated glazing, restoration of brass handles, and encapsulation of the exterior sill with an epoxy mesh.
- The restored windows operate using a block and tackle system rather than original chain and counterweight system.
- The restored windows do not have weather stripping at the meeting rail or jambs.

- The restored windows are in fair condition with some water staining on the top horizontal surface of the meeting rails.
- The remainder of the windows on the east elevation (24 total in 8 openings, plus the single window in the northeast office) are original and operate using chains and counterweights. These original windows are in poor condition. All have peeling paint and deteriorated wood on the interior and exterior as shown in Figure 49. The exterior sills and wood glazing are also in poor condition as shown in Figure 50.
- At four of the original windows, the joint between the stile and the bottom rail of the top sash has begun to deteriorate and the bottom rail is beginning to dislodge.
- Three windows have been temporarily repaired with angle brackets at the sash joints between the bottom rail and the vertical stile on the bottom sash as shown in Figure 51.
- As with the restored windows, weather stripping is absent at the sill and jambs.

Roofing System Observations

The library roofing membrane system was replaced in 1999. The existing membrane system is a cold-applied built up roofing membrane manufactured by Tremco. At the existing skylight monitors, the new roofing membrane is terminated on the vertical surfaces of the monitor walls below the sheet metal covering the skylights. The only visibly obvious deterioration in the new roofing membrane has been caused by maintenance traffic on the library roof. There are isolated scuffs and cuts in the field and in the base flashings of the new roofing membrane.

In addition, debris has accumulated at the strainers for the roof drains. The accumulation of this debris has caused water to pond around the roof drains.

Deterioration was visibly obvious at the vertical surfaces where the library roofing membrane was terminated. The joints between the coping stones at the parapet walls and the mortar joints in the masonry walls of adjacent sections of the building are deteriorated. Water can penetrate openings in these joints and flow below the new roofing

membrane system. Several layers of previous repair materials were observed around these joints.

Interior Plaster Ceiling Observations

The plaster ceiling of the main reading room of the Library is a shallow flat plaster barrel vault in form running north-south and divided by five ornamental plaster ribs spanning east-west. Figures 53 and 55 show a typical ornamental plaster ceiling rib. (As stated above, the built-up structural members of the main reading room are encased by these ornamental plaster ceiling ribs.) Shallow square coffered moldings form the soffit of the ribs, with additional ornamental plaster on the sides of the ribs and moldings adjoining the flat plaster. At the apex of the ceiling vault are six openings that originally had skylights above. The skylight openings have an ornamental plaster border. Within each bay of the ceiling are transverse flat plaster vaults approximately half the height of the main reading room ceiling.

The plaster ceilings were viewed from the floor level with additional observations made from a personnel lift provided by Roosevelt University. Appendix C contains a copy of the survey sheets for this region. Observations of the plaster ceiling in the main reading room included the following:

- Longitudinal and transverse cracking (with respect to the north-south direction of the ceiling vault) were observed throughout the flat plaster areas. Typical views of flat plaster distress are shown in Figures 54 and 56. Most of the cracks were hairline in width, with specific patterns as follows:
- Hairline cracks were observed running north-south (or longitudinally with the direction of the ceiling vault). As shown on the survey sheets, the cracks were located on each side of the former skylight openings.
- Some very fine hairline cracks running east-west (or transverse to the direction of the ceiling vault) were observed in isolated locations.

- Most of the hairline cracks in the transverse vaults were observed in the vaults adjoining the east exterior wall. These cracks ran north-south, or transverse to the directions of the vaults.
- Isolated areas of water-related plaster damage were observed. These locations included the following:
 - As shown in Figures 57 and 58, the base of one of the plaster ceiling ribs. This area had been roughly patched, although the ornamental plaster was not restored.
 - As shown in Figures 59 and 60, there is evidence of water-related damage at the northwest corner of the main reading room, adjoining the frieze running across the north wall. This area had been roughly patched.
 - As shown in Figures 61 through 64, water-related plaster damage was observed at the northeast corner of skylight opening no. 3. This area had been patched partially, although the ornamental plaster had not been restored. Cracks were observed along the edges of some of the ornamental features; however, these were not observed to be loose. Water-related damage was also observed along the side walls of the skylight opening above the level of the existing light fixtures, as shown in Figures 65 through 67.
- A second area of past water-related damage was observed at the northwest corner of skylight opening no. 4.
- Other areas of water-related plaster damage were observed on the ceiling vaults, as documented in the condition survey drawings in Appendix C.
- Several areas of previously-patched plaster were observed on the ceiling. Some of these patches were readily discernable because the plaster finish did not match the surrounding area.
- Chipped and peeling paint finishes were observed in isolated locations of the plaster ceiling, as documented in the condition survey drawings in Appendix C.

Observations were also made in interstitial spaces above the main reading room ceiling, as shown in Figures 68 through 74. The most

significant observation in these spaces was the large opening that extends from an adjacent elevator shaft to an interstitial space above the stair leading to the Library.

The ceiling of the south reading room is divided into three sections with ornamental plaster drop beams, with three large ornamental medallions containing rosette patterns within each section. The plaster ceilings were viewed from the floor level with observations recorded on survey sheets, a copy of which is provided in Appendix C. Observations of the plaster ceiling in the south reading room included the following:

- Water stains and water-related plaster damage were observed in at least three locations, as documented in the survey drawings in Appendix C and as shown in Figures 75 through 80.
- Several hairline cracks, typically running north-south, were observed in the flat plaster adjoining the west wall drop beam.
- Chipped and peeling paint finishes were observed in isolated locations of the plaster ceiling, as documented in the condition survey drawings in Appendix C.

Observations were also made in interstitial spaces above the main reading room ceiling, as shown in Figures 81 through 84. Plastic tarps were observed in this space, presumably to catch water leakage through the roofing system.

Limited observations were made of the original plaster ceiling above the existing suspended acoustical tile ceiling in the north room of the Library. This ceiling is similar to the south reading room ceiling, but without the medallions and rosettes present in that space. (Additional areas of ornamental plaster are extant in the offices along the east wall of the space). Due to limitations in accessing the entire ceiling, observations were not documented fully on survey sheets. General observations are provided on a drawing in Appendix C and in the figures described below. Observations of the original plaster ceiling in the north room included the following:

- Most of the ornamental plaster in accessible locations was observed to be in good condition, as shown in Figures 85 through 87. The

past installation of the suspended ceiling had avoided damaging the ornamental plaster sections, as shown in Figures 88 through 90.

- One end of a drop beam and adjacent sections of ornamental plaster had mechanical and water-related damage, as shown in Figures 91 through 94. A small section of loose ornamental plaster was removed from this location, and is shown in Figure 95.

Limited observations were made above the suspended acoustical tile ceiling in the room west of the main reading room. As shown in Figure 97, the structure for a floor level added in the past above this space is visible. Although it is not known if there was any ornamental plaster in this space, none is now present.

FACULTY LOUNGE

Window System Observations

The second floor Faculty Lounge has six openings with windows that are similar to those in the Sullivan Room. A typical window in the Faculty Lounge is shown in Figure 98. For a full set of comments on the windows in the Faculty Lounge, see the comments made for those in the Sullivan Room. Specific observations for the windows in the Faculty Lounge include the following:

- Five of the windows do not operate and one does not remain open.
- The glass is cracked at one of the fixed transom windows on the south elevation.

SULLIVAN ROOM

Window System Observations

The Sullivan Room has eight window openings in the exterior masonry wall that consist of an arched opening over a rectangular opening with a stone horizontal element dividing the two on the exterior. Observations for the windows in the Sullivan Room include the following:

- Each opening is expressed on the interior as one rectangular

opening and does not reflect the masonry wall opening on the exterior. The window assembly in each opening consists of an operable single hung window and a fixed transom window. The windows are separated by aluminum panning that covers the horizontal exterior stone element as shown in Figure 99.

- The fixed transom window has aluminum panning on the interior at the upper corners that is cut at an angle to follow the form of the arch on the exterior as shown in Figure 100.
- The windows have an aluminum sash and frame and insulated glazing. They were manufactured in 1983 by Traco. The windows also have wood casing at the jambs and head, and a marble sill
- The windows operate on a spring balance system. All of the windows are difficult to operate. Two do not operate at all. Four of the windows do not stay open once they are opened.
- The glass is cracked at one of the insulated glazing units in a fixed transom window on the south elevation.
- The aluminum windows and panning are not in character with the historic nature of the space or the exterior facade.

OSCAR FAINMAN MEMORIAL HALL

Window Systems Observations

The Fainman Memorial Hall patio has six large openings on the east elevation with two windows per opening. Observations of the windows in Oscar Fainman Memorial Hall include the following:

- Each opening spans between round granite columns with an ornamental base and cap with the openings at either end spanning between a column and the building wall.
- Each opening contains two large single pane aluminum framed windows with no muntins. The southern window section in each opening is fixed with the northern window section being an operable sliding window as shown in Figure 101.
- The aluminum frames are painted a dark brown color. Peeling

paint was observed on the interior of the frames at each opening.

- The sliding windows are non-functioning at four openings and very difficult to operate at the remaining two openings. The remaining four are reasonably operable at the present time.

MICHIGAN AVENUE LOBBY

The Michigan Avenue Lobby has two revolving doors that are flanked on the north and south side by a large rectangular window topped with an arched window. Observations on the revolving doors and window systems at the Michigan Avenue Lobby include the following:

Revolving Door Observations (2 sets)

- Each door consists of four panels connected at a center pivot point.
- Each panel consists of a large glass lite surrounded by a wood frame with a brass kick plate and two horizontal rails as shown in Figure 102. The door vestibules are also trimmed with wood.
- Both sets of doors are in good working order and appear to have been restored recently.

Window System Observations (2 total, flanking revolving doors)

- Each window consists of a large single rectangular lite set in a wood frame and glazed with a wood glazing bead. A set of double doors with a side lite on either side is located directly to the south at each window. The entire assembly is topped with a semi-circular transom window with true divided lites and muntins laid out in a sunburst pattern as shown in Figure 103.
- The center of each sunburst window is a single lite with an operable tilt-in window with a wood frame and wood glazing bead.
- The double doors in the southernmost assembly have been enclosed by an interior storage vestibule and are no longer in use as shown in Figure 104.
- The windows are in fair condition.

WABASH AVENUE LOBBY

Aluminum Curtain Wall Observations

The Wabash Avenue Lobby has two sets of double doors that are set in two large arched openings with glass infill. Observations on the windows and doors at the Wabash Avenue Lobby include the following:

- The door and window assembly consists of single pane glass set in an aluminum frame with aluminum mullions. The aluminum has a clear anodized finish. The mullions divide the opening at the head and jams of the double doors as shown in Figure 105.
- The aluminum and glass are in fair condition; however, the glass and steel "curtain wall" appearance of the window assembly is out of character with the historic fabric of the remainder of the facade.

SUMMARY AND CONCLUSIONS

GANZ HALL

General Structural System

- The paint coatings on the exposed metal elements outside the building should be maintained to prevent further corrosion.
- With regard to the missing and loose mortar between the wood floor beams and clay tile units, it is possible that these joints were not packed full during original construction. However, the loose mortar is likely due to a combination of shrinkage of the wood beams and shrinkage of the mortar material itself. During our

survey, we did not observe distress conditions directly related to loose mortar and resulting looseness of the clay tile units (other than displacement of the units, which is discussed below). A structural analysis of the floor system would need to be performed to determine the interrelationship of the mortar in the wood and clay tile floor system. If analysis shows that the mortar should be repaired or repointed throughout the floor system, a separate analysis should also be performed to determine if such a repair would affect adversely the acoustical properties of the auditorium space.

- A code analysis should be performed to determine the appropriateness of the use of wood beams in the floor system of the hall.
- Approximately 3-5% of the tiles should be anticipated for replacement.
- A structural analysis should be performed of the floor openings installed to accommodate mechanical ductwork.
- A code analysis should be performed to determine the storage limitations in the interstitial space below the hall floor.

Exterior Wall Cladding

- An appropriate roofing system should be installed to replace the existing EIFS cladding used on horizontal and sloped surfaces.
- The EIFS cladding should be monitored for distress conditions such as cracking or evidence of water leakage through the wall.

Window System

- The art glass windows should be inspected by a qualified conservator to determine if any repair interventions are warranted at this time.
- The cavity between the art glass should be vented to prevent the build-up of high-temperature air or condensation, both of which can be detrimental to the art glass. Further study is needed to determine whether the venting is to be installed on the interior or the exterior.

- The sealant materials at the aluminum storm windows should be maintained.

Roofing System

- The existing roofing membrane on Ganz Hall was replaced in 2000.

Interior Plaster Ceiling

- Close-up inspection of the ornamental plaster in the auditorium should be performed by a qualified ornamental plaster conservator when this room is scheduled for restoration or repainting. However, if this work is not scheduled to take place within the next five years, then inspection should be performed before that time. The inspection should include the bottom surface of the plaster as well as the supporting structure for the plasterwork. We understand that Ganz Hall is scheduled for re-roofing in the near future. Inspection of the supporting structure could be performed through interstitial access gained at that time by making openings through the roof deck of the hall.
- If additional acoustical modifications are made to the auditorium space, the plaster ceiling should be inspected and analyzed at locations of planned modifications to determine if the ceiling can support the loads of additional materials.
- The flat plaster areas and wood drop beams in the vestibule space should be repaired and restored by a qualified restoration contractor.

LIBRARY

Exterior Wall Cladding

- We recommend, in conjunction with an investigation of the building facade, that examination of the exterior masonry facade of the Library include components in the scope of work for close-up inspection and inspection openings at appropriate locations to observe concealed conditions.
- The region of with missing sheet metal roof at the east elevation

setback wing should be inspected close-up as part of the examination of the building facade.

Window System

- The fifteen windows that have been restored in the southern portion of the Library should have weatherstripping installed at the meeting rails and jambs in order to reduce air and water infiltration. Consideration should also be given to re-installation of the chain and counterweight system in order to maintain historical accuracy.
- The remaining existing windows should be fully repaired and restored by a qualified window restoration contractor.

Roofing System

- The isolated scuffs and cuts in the field of the roofing and in the base flashings of the new roofing membrane should be repaired as soon as possible.
- Debris that has accumulated at the strainers for the roof drains should be routinely removed. The accumulation of this debris has caused water to pond around the roof drains.
- The various previous repair materials at the parapet areas should be removed and the joints should be properly repointed or resealed.

Interior Plaster Ceiling

- Close-up inspection of the ornamental plaster in the Library (main reading room, south reading room, and north room) should be performed by a qualified ornamental plaster conservator when this room is scheduled for restoration or repainting. However, if this work is not scheduled to take place within the next five years, then inspection should be performed before that time. The inspection should include the bottom surface of the plaster as well as the supporting structure for the plasterwork.
 - Areas of plaster damage should be repaired and restored by a qualified ornamental plaster contractor.

FACULTY LOUNGE

Window System

- The windows in this space are in good condition yet they are not historically accurate and operate poorly.
- Consideration should be given in the master plan to replacing the existing windows with historically sensitive windows.

SULLIVAN ROOM

Window System

- The windows in this space are in good condition yet they are not historically accurate and operate poorly.
- Consideration should be given in the master plan to replacing the existing windows with historically sensitive windows.

OSCAR FAINMAN MEMORIAL HALL

Window Systems

- These windows are very difficult to operate and are not historically sensitive to the building.
- We understand that consideration is being given in the master plan to remove the existing windows and, since Roosevelt University wants to maintain the enclosure of the space, replace them with more historically or architecturally sensitive windows. We (concur) that this approach should be taken.

MICHIGAN AVENUE LOBBY

Revolving Door (2 sets)

- The doors are in good condition and should be maintained to preserve their current condition.

Window System (2 total, flanking revolving doors)

- These windows are in fair condition and should be maintained on the exterior and interior.

WABASH AVENUE LOBBY

Aluminum Curtain Wall

We understand that as part of the overall master restoration plan for the building, that consideration is being given to remove the Wabash Avenue entrance and restore it to original condition. We concur that this approach should be taken.

We have appreciated the opportunity to study these remarkable spaces in one of Chicago's most significant buildings. Please call if you have any questions or require any further assistance.

Very truly yours,

WISS, JANNEY, ELSTNER ASSOCIATES, INC.

Anthony D. Cinnamon
Project Architect

Jason A. Aspin
Project Architect

Jeffrey P. Koerber
Project Manager

ADC/JAA/JPK:laa

LIGHTING RESTORATION

OVERVIEW

The Auditorium Building was completed in 1889 – ten years after the first practical incandescent lamp was invented. Thus the widespread use of electric lighting as the sole source of illumination in the Auditorium Building is a notable architectural achievement.

However, early filament lamps were extremely inefficient at producing useful light. Conventional incandescent lamps of today produce eight times as much illumination as filament lamps of 1889 would have produced. Thus many of the spaces examined as a part of this study would have seemed dim by today's standards. The challenge of the lighting restoration for Roosevelt University is to achieve an honest replication of the original lighting while addressing the visual needs of a modern university environment. In areas used primarily for circulation, such as the Michigan Avenue Lobby, the original lighting scheme will be adequate. In areas where specific visual tasks such as reading require higher light levels, supplemental lighting will be necessary. These areas have been identified based on the current programming intent for each space. Recommendations for supplemental lighting schemes are included in this report as an element of the lighting restoration.

PRIMARY CONCEPT AND GOALS

1. To restore the current lighting scheme to the original scheme as closely as possible.
2. To enhance architectural features in keeping with Sullivan's intent.
3. To increase illumination levels where necessary for the adaptive reuse of each space by Roosevelt University.
4. To make all lighting renovation work unobtrusive and consistent with the architecture.
5. To provide appropriate lighting control based on the programming for each space.
6. To simulate natural light behind stained glass windows and skylights which were used extensively throughout the building. In addition to the aesthetic pleasure derived from the stained glass, these elements were sources of useful light.

LIGHT SOURCES

The majority of light sources will be incandescent, in keeping with the character of the original carbon filament light sources. Specifically, we recommend the use of a clear incandescent "S19" shaped bulb with a filament design that is representative of early incandescent lamp technology. This lamp would be used in all fixtures with exposed lamps.

To simulate natural light behind stained glass windows we recommend the use of fluorescent lamps with high color rendition characteristics.

LIGHTING RESTORATION

RECOMMENDATIONS

MICHIGAN AVENUE LOBBY

ORIGINAL CONDITIONS

- A. Incandescent electroliers were centered in the ceiling coffers - similar to the existing surface mounted fixtures.
- B. Single filament lamp "points of light" in plaster cornice.
- C. Single lamp "points of light" mounted at quarter points of columns in small colonnade at cornice.

EXISTING CONDITIONS

- A. Most of original lighting was restored in 1997 restoration.
- B. Light levels are appropriate for circulation.

RECOMMENDATIONS

- 1. Replace lamps in existing fixtures (Type XA and Type XB) with new clear filament lamps which are more representative of early 20th century light bulbs and have a long life.
- 2. Add single lampholders (Type SB) to columns in small colonnade at cornice level to match original locations. Four per column.
- 3. Add fluorescent backlight to simulate daylight for the replaced stained glass in the lunettes.

GRAND STAIRCASE - 1st Floor

ORIGINAL CONDITIONS

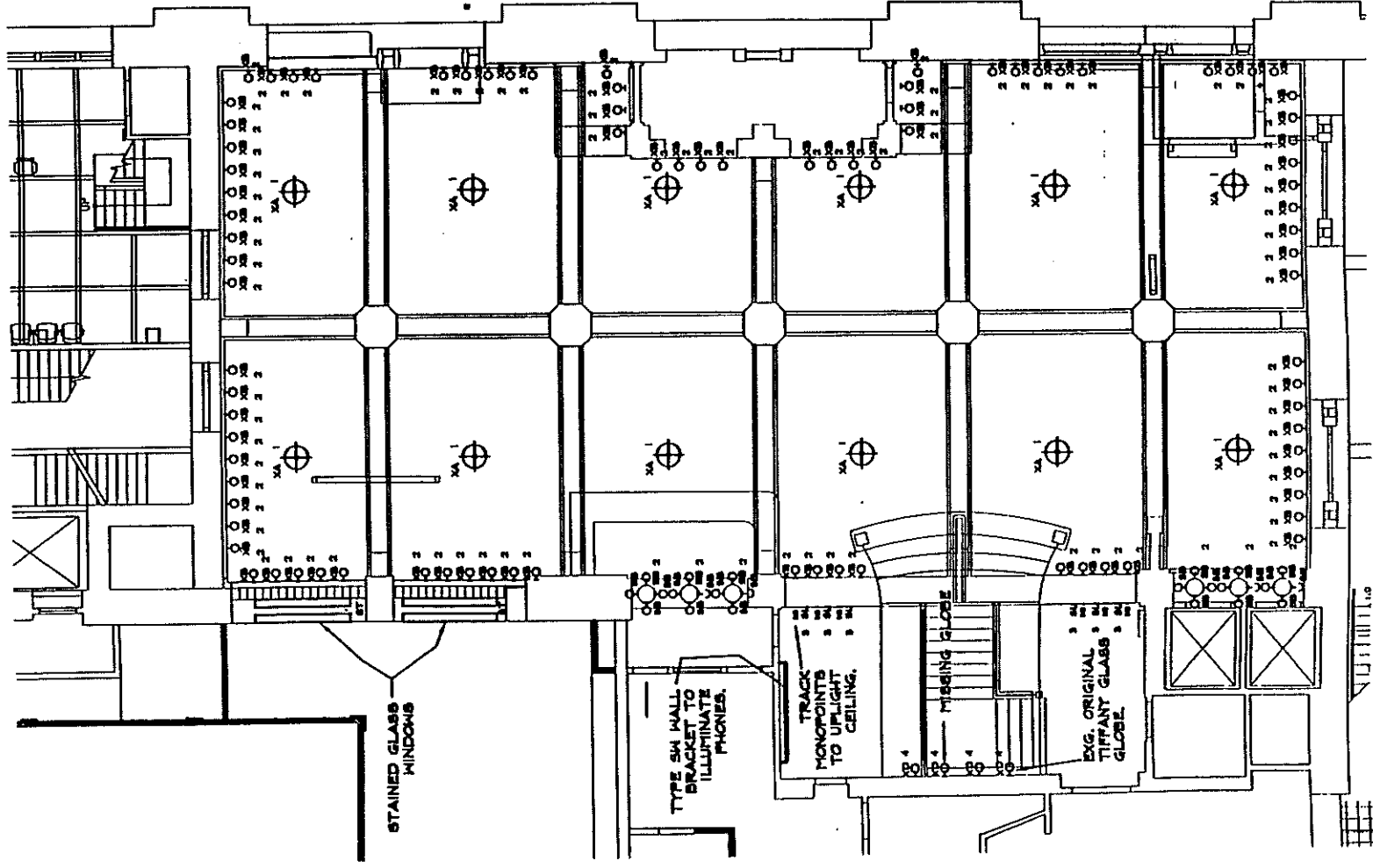
- A. Four simple incandescent wall brackets with Tiffany Favre glass globes mounted along the top of stairs to basement.
- B. Limited evidence of other elements of original lighting scheme in the area.

EXISTING CONDITIONS

- A. Single filament lamp lampholders in medallions on west side of arch do not appear to be original.
- B. The stairway seems dingy and under-illuminated.
- C. The wall mounted fluorescent fixture above the phones is unattractive and out of place.
- D. Original wall brackets (Type XD) still exist along the west wall of stairwell to basement. Three existing fixtures have original globes.

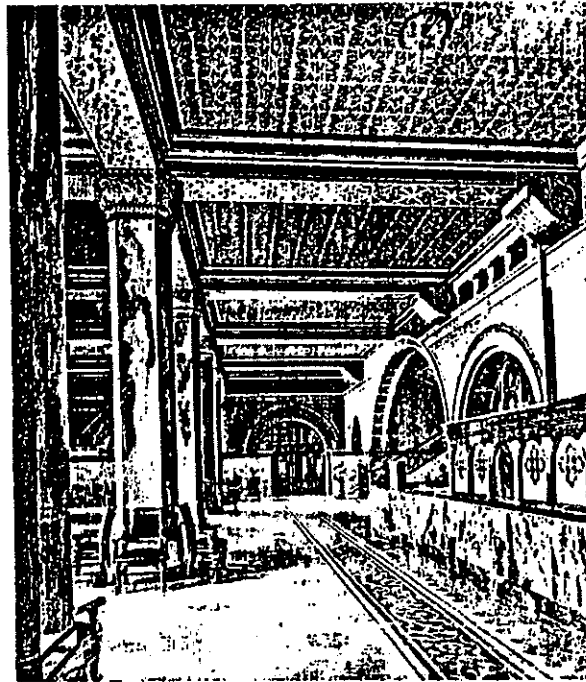
RECOMMENDATIONS

- 1. Replace lampholders on west side of grand staircase arch with canopy mounted track heads (Type SL) to uplight the decorative plaster on the underside of the stairs to the 2nd floor.
- 2. Remove two lampholders closest to the arch.
- 3. Rewire, refurbish, and re-lamp original wall brackets (Type XD.) Replace one globe. (If a closely matched globe is not feasible, replace four globes.
- 4. Replace existing fluorescent fixture at the phones with a halogen wall bracket.

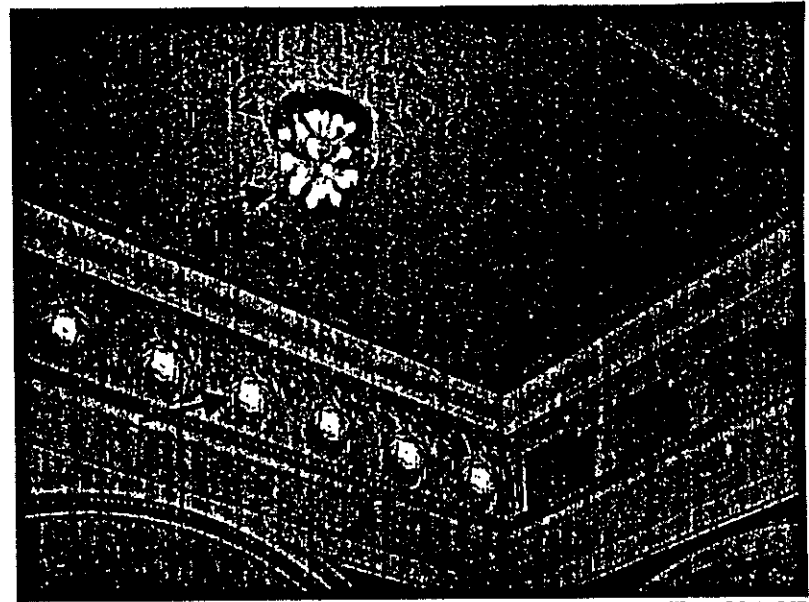


Michigan Avenue Lobby - Lighting Layout

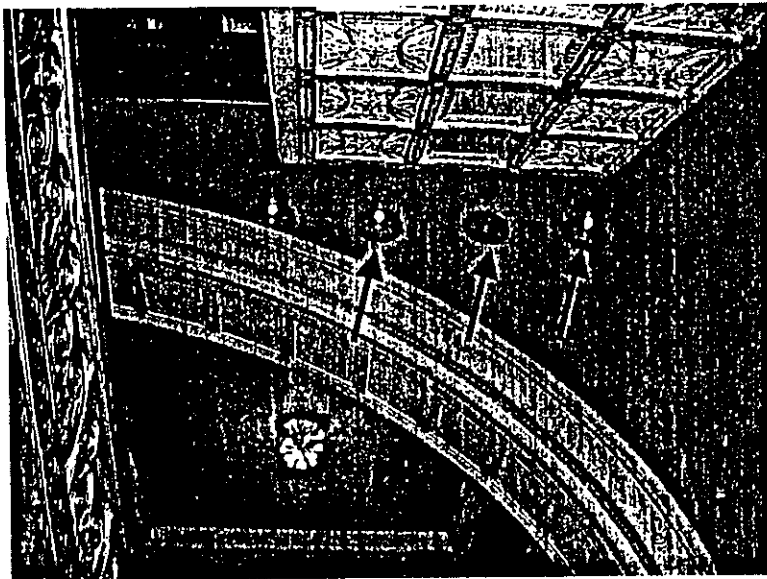
SCHULER & SHOOK, INC.



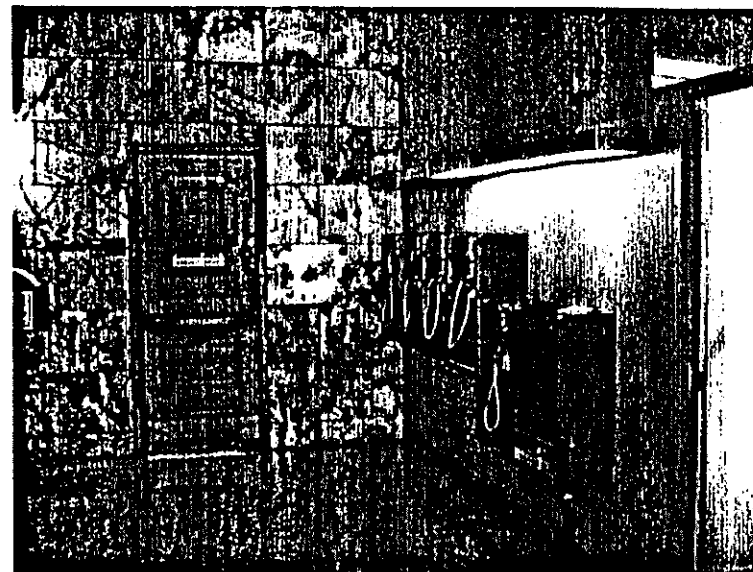
Original Condition



Fixture Types XA, XB



Locations for new Type SL

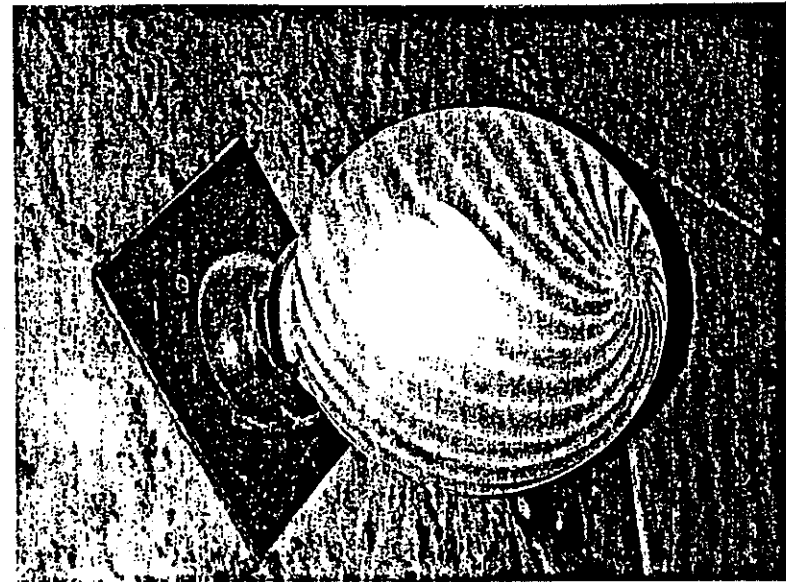


Existing fluorescent wall bracket (To be replaced)

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Existing Type XD Wall Brackets



Type XD with "Favrile" Glass Shade

GRAND STAIRCASE - 1st/2nd Floor Landing

ORIGINAL CONDITIONS

- A. Four pair of "three-lamp" incandescent electrolier sconces were mounted in the plaster frieze on west wall of landing.
- B. Surface or pendant light fixture was mounted over stair to second floor.

EXISTING CONDITIONS

- A. Electrolier sconces have been removed.
- B. Pendant mounted light fixture over stair to second floor is not original or in character with original lighting.
- C. The stairway seems under-illuminated.

RECOMMENDATIONS

- 1. Replace eight "three-lamp" electroliers (Type SC) in plaster frieze.
- 2. Remove existing pendant fixture and replace with ceiling mounted "four-lamp" electrolier (Type SA) to match new ceiling fixtures in Fainman Lounge.

GRAND STAIRCASE - 2nd Floor Mezzanine

ORIGINAL CONDITIONS

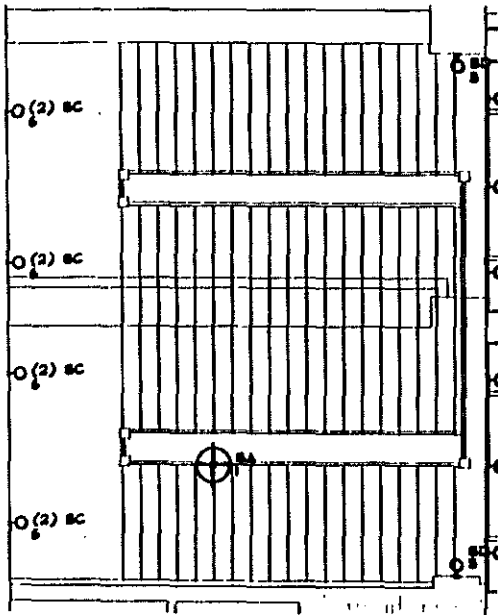
- A. Daylight from the stained glass skylight poured into the space.
- B. Natural light from an original "light well" illuminated stained glass windows along the north wall.
- C. Five "three-lamp" incandescent electroliers were mounted in the plaster frieze on west wall of landing.

EXISTING CONDITIONS

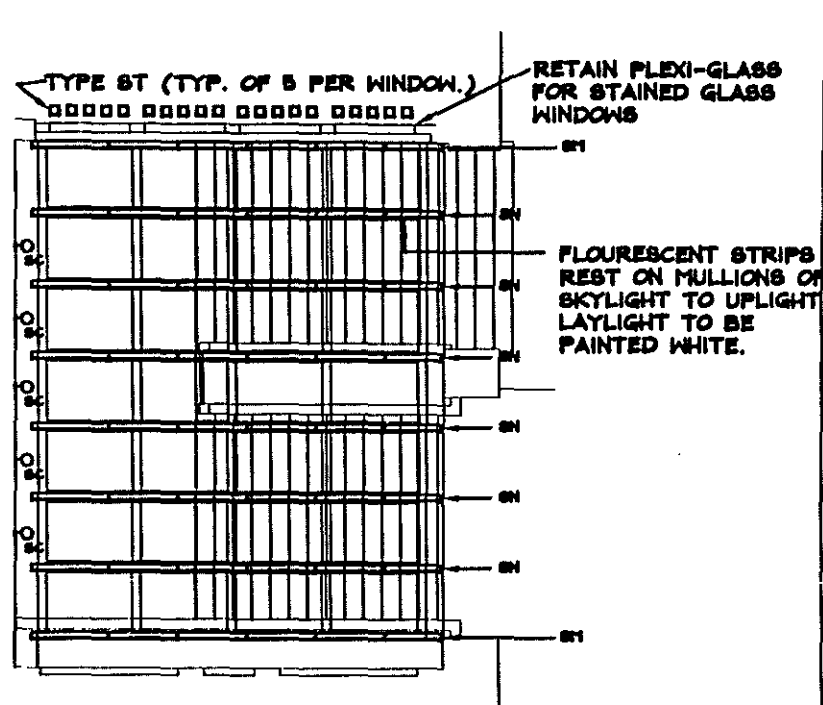
- A. Fluorescent lighting fixtures behind the skylight are highly visible and detract from the stained glass.
- B. Electroliers in the frieze have been abandoned.
- C. Double hung stained glass windows have a Plexiglas diffuser and have non-uniform fluorescent backlight. Lamp color is inconsistent.

RECOMMENDATIONS

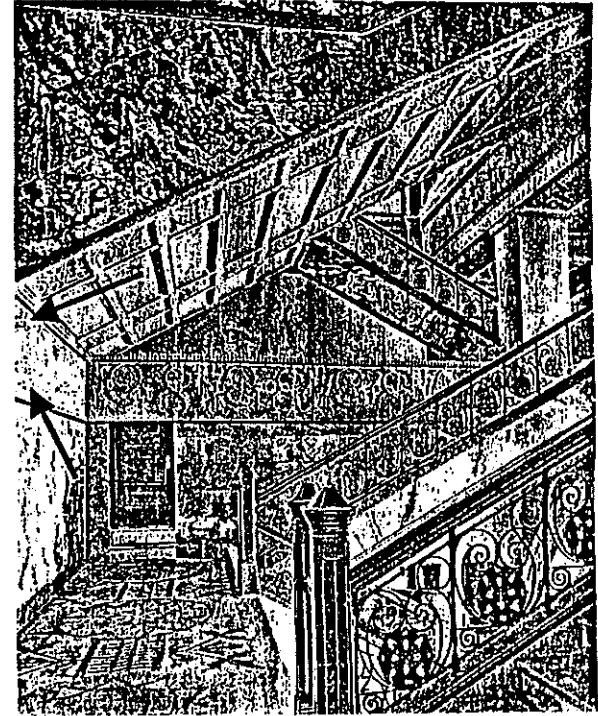
- 1. Remove existing fluorescent lighting in skylight and behind double hung stained glass windows.
- 2. Add new and additional fluorescent fixtures (Type ST) to uniformly rear illuminate double hung stained glass windows. Retain Plexiglas.
- 3. Paint surfaces of laylight high reflectance matte white. Add new fluorescent fixtures (Type SM, SN) to uniformly uplight "laylight" of skylight.
- 4. Fixtures would be mounted and concealed on mullions. Not visible.
- 5. Replace five "3-lamp" electroliers (Type SC) in plaster frieze.



Grand Staircase - 1st/2nd Floor Landing - Lighting Layout

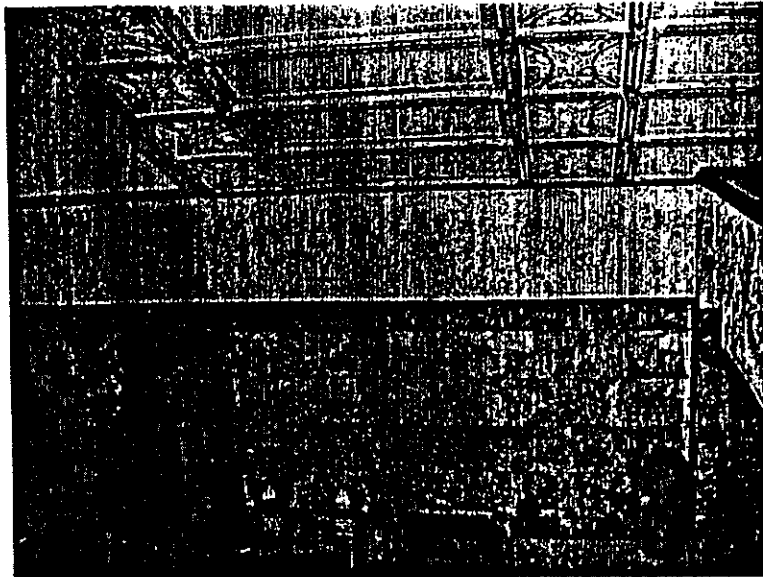


Grand Staircase - 2nd Floor Mezzanine - Lighting Layout



1st/2nd Floor Landing - Original Conditions

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original. 1st/2nd Floor Landing - Current Conditions
 Right level has a deep shadow from the ceiling light fixture.
 (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)



Type SC Locations

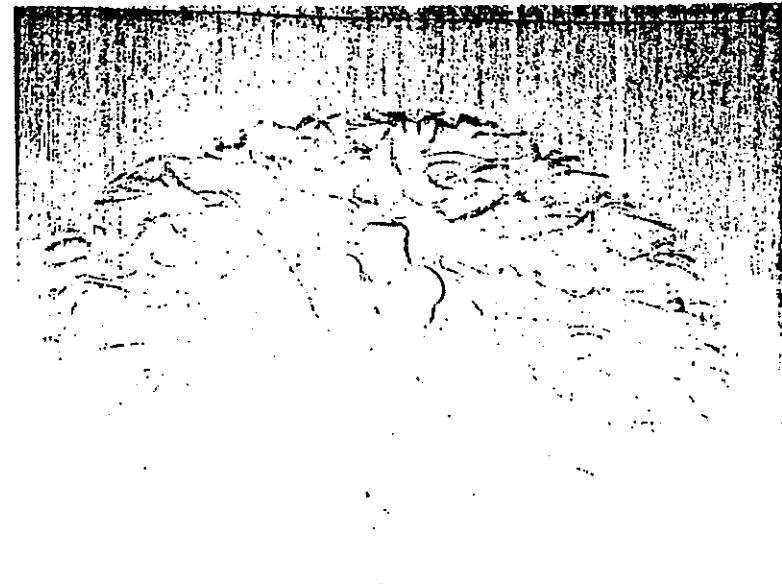


1st / 2nd Floor Landing – Existing Conditions

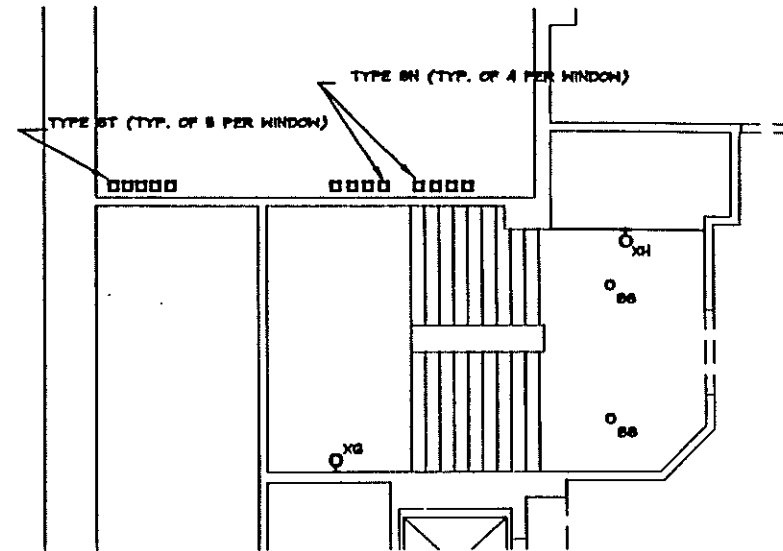
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2nd Floor Mezzanine - Existing Conditions

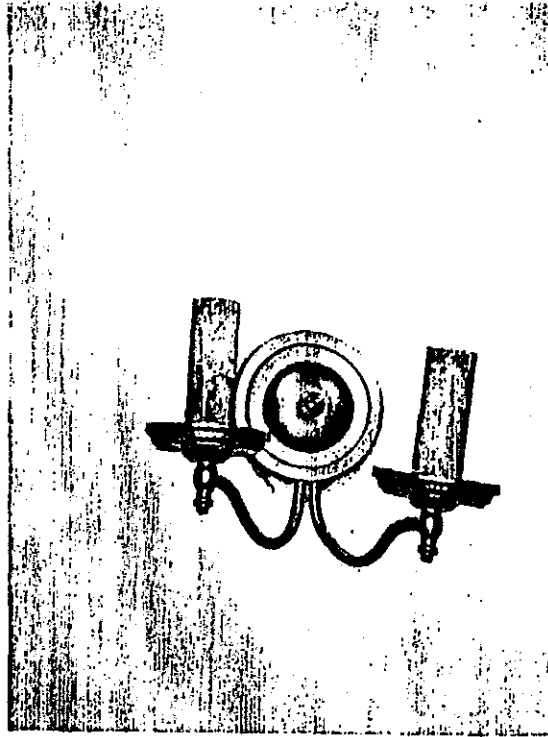


2nd Floor Mezzanine - Original Fixture Location

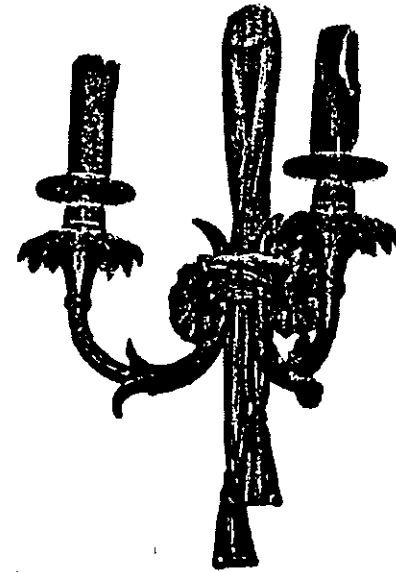


Michigan Avenue Stair, Upper Floors - Lighting Layout

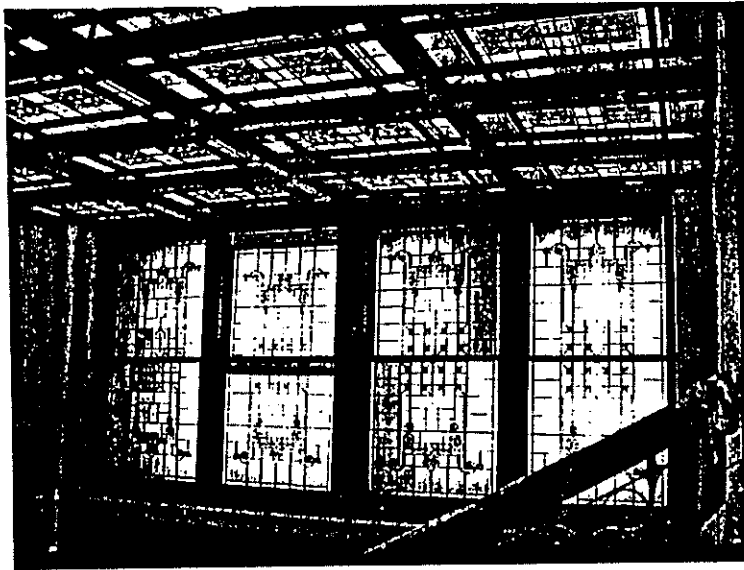
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Michigan Avenue Staircase, Upper Floors – Existing Type XG



Michigan Avenue Staircase, Upper Floors - Existing Type XII



2nd Floor Mezzanine – Existing Stained Glass Windows



2nd Floor Mezzanine – Existing Skylight

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GRAND STAIRCASE - Upper Floors

ORIGINAL CONDITIONS

- A. Natural light from an original "light well" illuminated stained glass windows along the north wall and provided useful light to the stairwell.
- B. Incandescent wall brackets mounted at each landing provided additional light for circulation.

EXISTING CONDITIONS

- A. Double hung stained glass windows have a plexiglas diffuser and have non-uniform fluorescent backlight. Lamp color is inconsistent.
- R

RECOMMENDATIONS

- 1. Add new fluorescent fixtures (Type ST, SN) to uniformly rear illuminate double hung stained glass windows. Retain Plexiglas.
- 2. Utilize existing wall bracket locations. Two fixture options are:
 - a. Reuse existing wall brackets (Type XG, XH). These fixtures may be original but they are not in character with the lighting used in other areas of the building.
 - b. Replace existing fixtures with three-lamp electroliers (Type SC).
- 3. Supplement existing light with recessed downlights (Type SS) at landing. Besides making this interior stairwell more pleasant, additional illumination will reinforce the sense of safety and security.
- 4. Target illumination level: 15 foot-candles



Michigan Avenue Staircase, 10th Floor Landing — Existing

WABASH AVENUE LOBBY AND STAIRCASE

ORIGINAL CONDITIONS

- A. Natural light from a clerestory above the original entrance configuration spilled into the space.
- B. Four "three-lamp" incandescent electroliers were mounted to the wood paneling band just below the clerestory and above the doors.
- C. Limited evidence of other elements of original lighting scheme.

EXISTING CONDITIONS

- A. Original lighting has been removed.
- B. Modern globe pendants and wall brackets provide general light.
- C. Natural light fills the space from the glass storefront.
- D. Elevator lobby under the stairs is illuminated from modern wall brackets. Area seems dingy and dark relative to the rest of the lobby.
- E. Upper floor landings are illuminated with random and varied fixtures and light sources including surface mounted fluorescent fixtures and simple incandescent wall brackets.

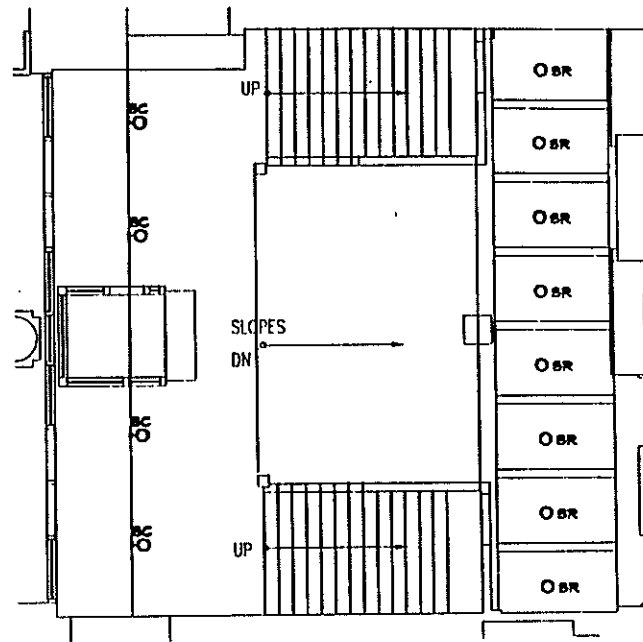
RECOMMENDATIONS

LOBBY

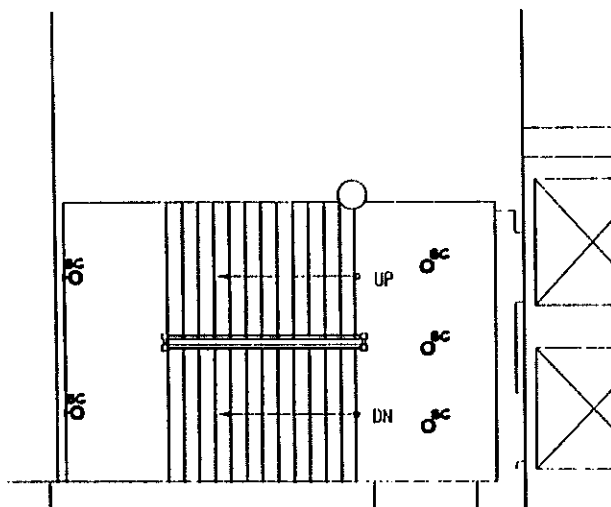
- 1. Reproduce original three-lamp electroliers (Type SC) and add to original locations above the door.
- 2. Add downlights (Type SR) to low ceiling at elevators.
- 3. Target illumination level: 15 foot-candles

STAIRCASE

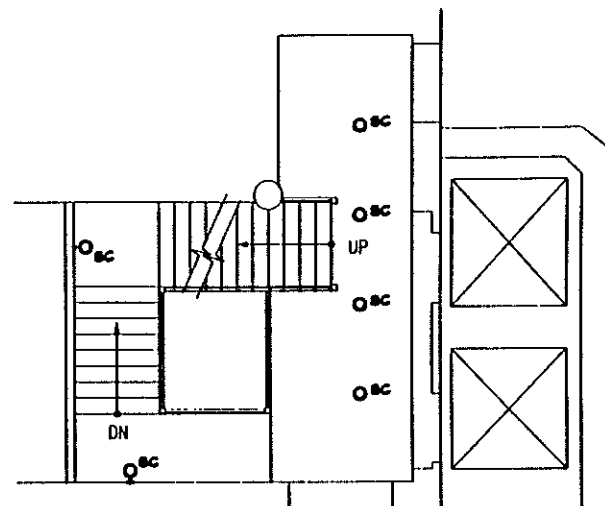
- 1. Add three-lamp electroliers (Type SC) at wall bracket locations on stair landings.
- 2. Reproduce the original ceilings at the elevator landings and add three-lamp electroliers (Type SC).
- 3. Add new fluorescent fixtures (Type SM) to uniformly uplight "laylight" of skylight (reproduction of original) at 10th Floor landing. Paint interior surfaces of laylight high reflectance white.
- 4. Like the Michigan Avenue stairwell, additional illumination will reinforce the sense of safety and security.
- 5. Target illumination level: 15 foot-candles



Wabash Avenue Lobby - Lighting Layout



Wabash Avenue Stairs, Floors 2-6 - Lighting Layout



Wabash Avenue Stairs, Floors 7-10 - Lighting Layout

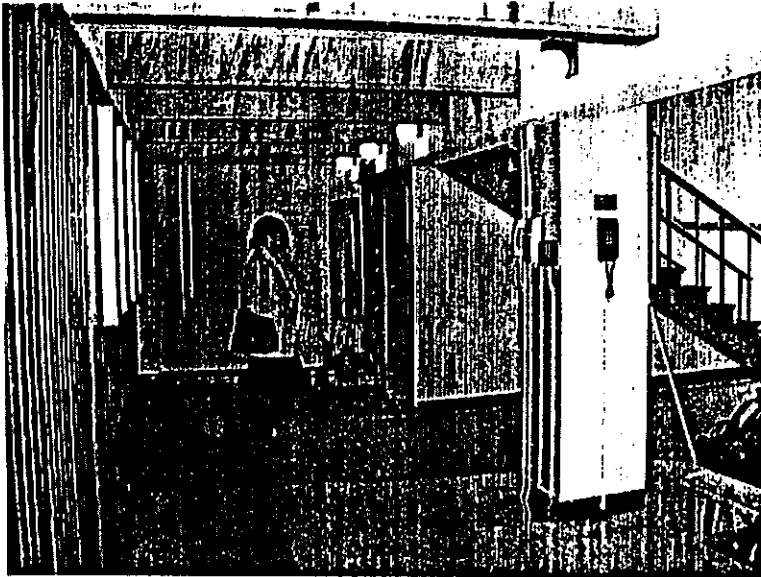


*Wabash Lobby - Original Conditions
(Type SC Location)*

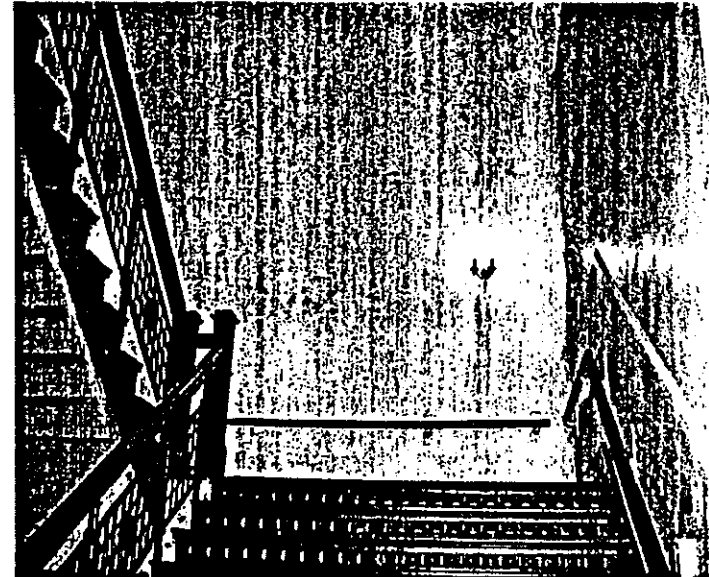


Wabash Lobby - Existing Conditions

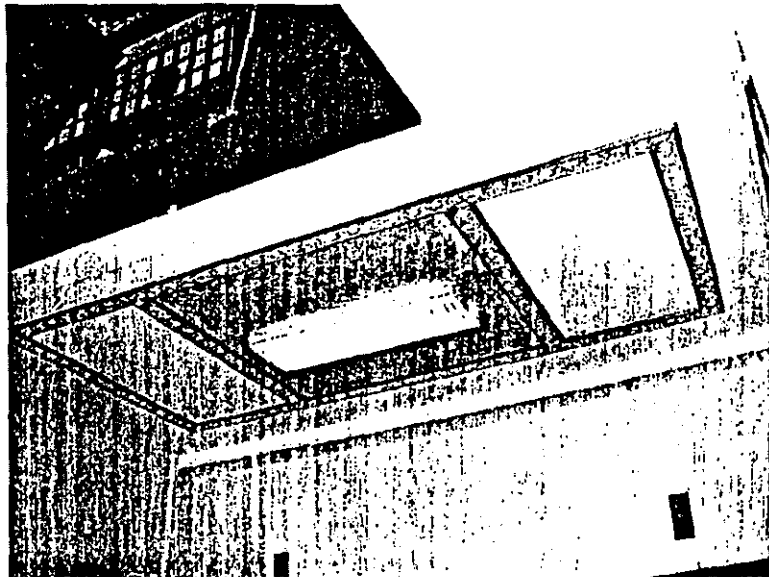
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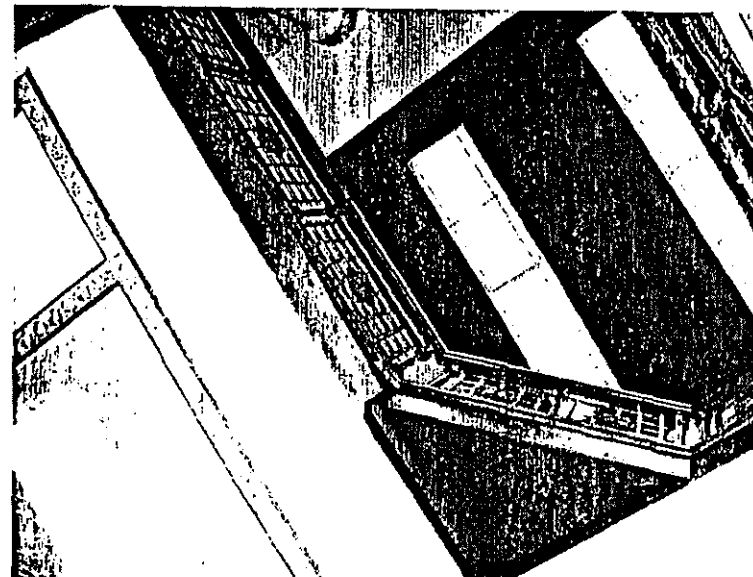
Wabash Elevator Lobby – Existing Conditions



*Wabash Stairway – Existing Condition
(Typical)*



Wabash Stairway, Upper Floors — Existing Conditions



Wabash Stairway — Skylight Location

FAINMAN LOUNGE

ORIGINAL CONDITIONS

- A. Four-lamp incandescent electroliers mounted in the ceiling coffers.
- B. Three-lamp incandescent electroliers mounted in the plaster cornice.
- C. "Goose-neck" shaped wall brackets with Tiffany Favrile glass globes mounted on columns at Grand Staircase. (Same globes as on existing Type XD wall brackets on the first floor.)

EXISTING CONDITIONS

- A. Original lighting has been removed or abandoned.
- B. Modern globe pendants are suspended in the coffers.
- C. Surface mounted fluorescent fixtures were mounted on the ceiling of the loggia to supplement daylight when the space was enclosed.

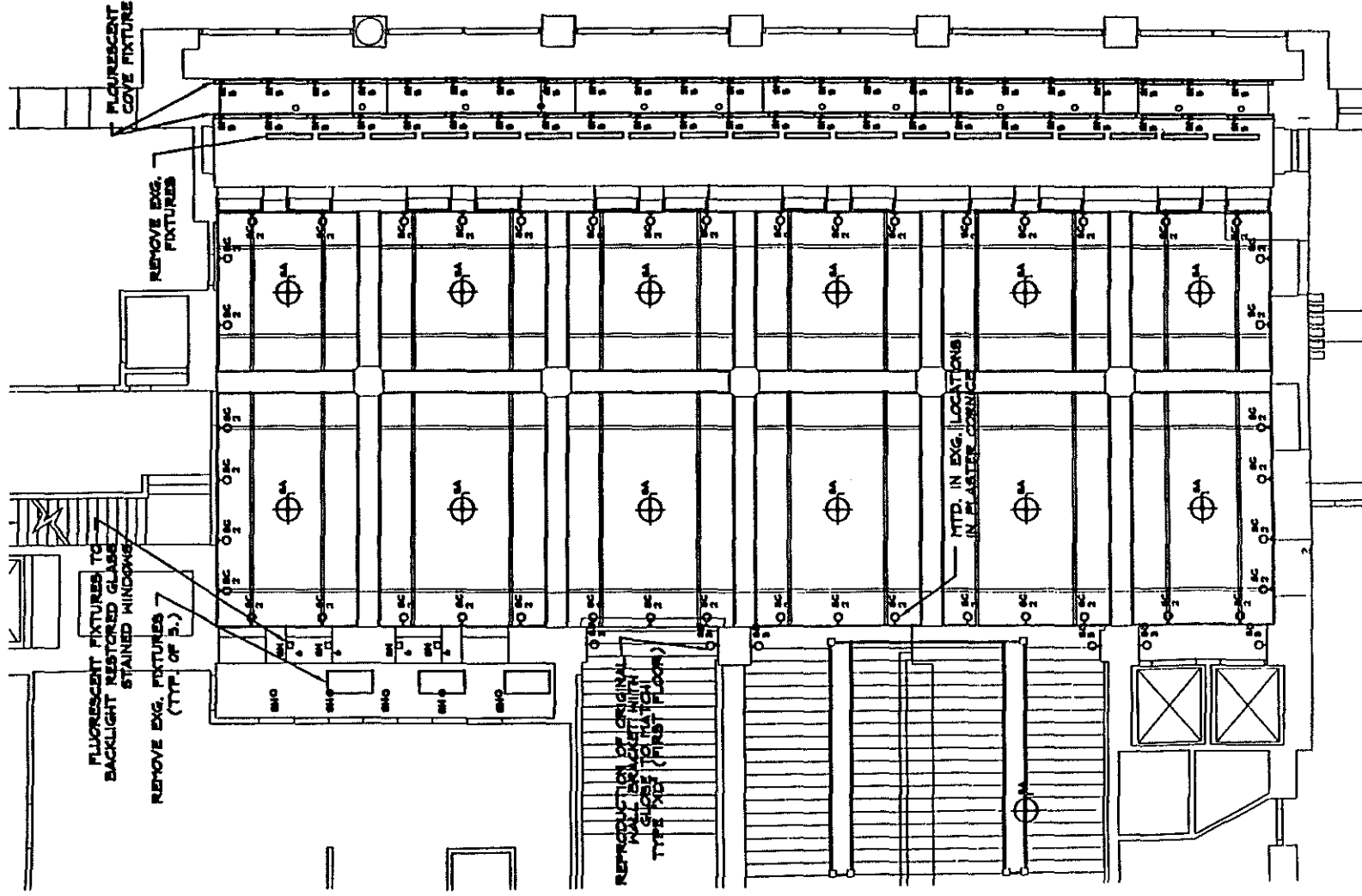
RECOMMENDATIONS

- 1. Restore lighting to original installation. The original lighting scheme will produce illumination levels that are appropriate for circulation, casual gathering and simple visual tasks. Add supplemental lighting as needed for reading tasks in the form of floor or table lamps associated with the furniture layout. The suggested illumination level for reading is 50 fc.

- 2. Remove modern globe pendants.
- 3. Replace ceiling mounted "four-lamp" electroliers (Type SA).
- 4. Replace "three-lamp" electroliers (Type SC) in decorative plaster cornice.
- 5. Reproduce and replace wall brackets (Type SD) on columns at grand staircase.
- 6. Add fluorescent fixtures (Type SN) to backlight restored stained glass windows adjacent to the fireplace.
- 7. Add recessed downlights (Type SS) to light corridor behind fireplace. (Ceiling to be raised to minimize visibility.)
- 8. Remove existing surface mounted fluorescent lighting in loggia.
- 9. Add fluorescent coves (Type SM) to uplight ceiling in the loggia.

SULLIVAN ROOM

No Lighting Work.

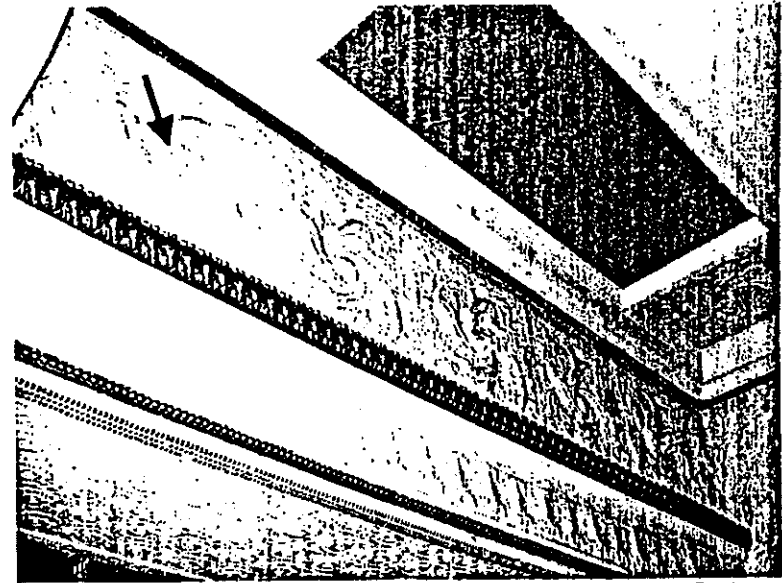


Fairman Memorial Lounge - Lighting Layout

SCHULER & SHOOK, INC.



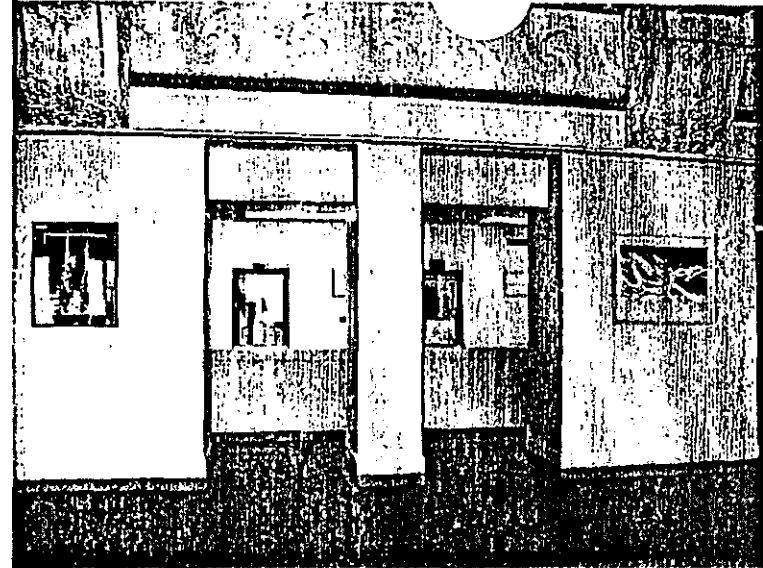
*Fainman Lounge – Original Conditions
(Type S.A, S.C., and S.D locations)*



*Fainman Lounge – Existing Condition
(Type S.C - Typical Location)*



Fireplace – Original Condition



Fainman Lounge – Existing Conditions

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FACULTY LOUNGE

ORIGINAL CONDITIONS

- A. Pendant fixtures with four half-globe diffusers provided general illumination.
- B. "Goose-neck" shaped wall brackets with single half globe diffusers were mounted on paneled walls - original locations have been filled in but are visible.
- C. Since this was a "Smoking Room" with dark wood paneled walls, the light levels would have been relatively low.

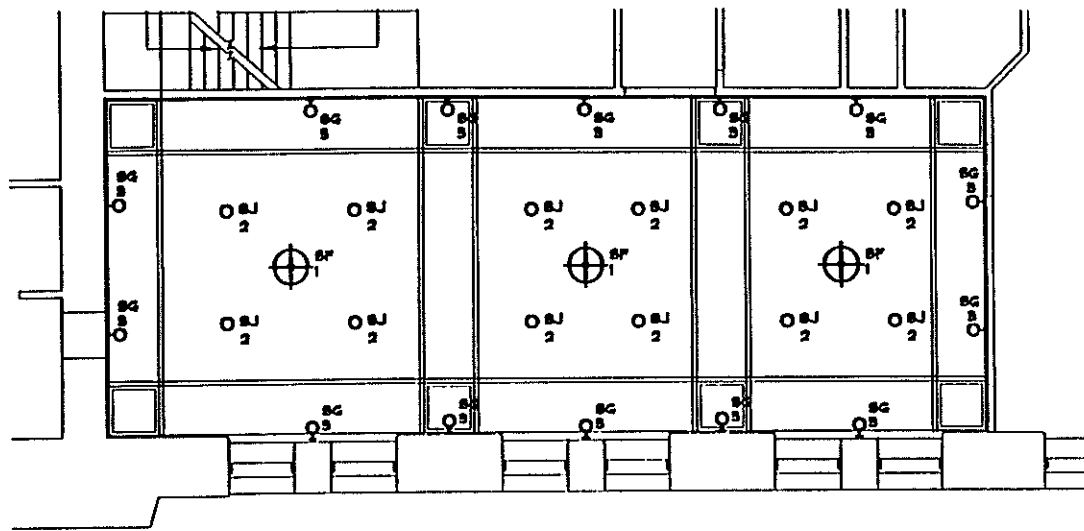
EXISTING CONDITIONS

- A. Original fixtures have been removed.
- B. Four modern globe pendants hang from each coffer with a power feed from a centrally located junction box.
- C. The lighting is inadequate for the visual tasks associated with meeting functions.

RECOMMENDATIONS

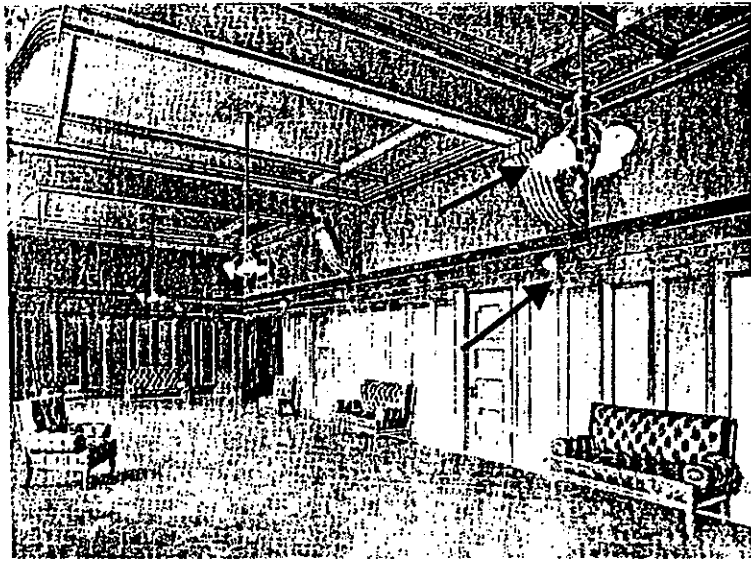
- 1. Restore lighting to original installation.
- 2. Reproduce three pendant fixtures (Type SF).
- 3. Reproduce wall brackets (Type SG).
- 4. Since the intended use of the space is as a meeting room, add incandescent recessed downlights (Type SJ) to supplement light levels for reading.
- 5. Target illumination level: 50 foot-candles

- 6. Lighting fixtures to be controlled by a preset dimming system. Dimming control will be utilized for meeting functions such as audio-visual presentations, etc.



Faculty Lounge - Lighting Layout

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Smoking Lounge - Type SF and SG



Smoking Lounge - Existing Conditions

GANZ HALL

ORIGINAL CONDITIONS

- A. Stained glass windows in the lunettes provided natural light to the space.
- B. Large electrolier pendant fixtures - each with twenty-nine incandescent filament lamps provided general illumination.

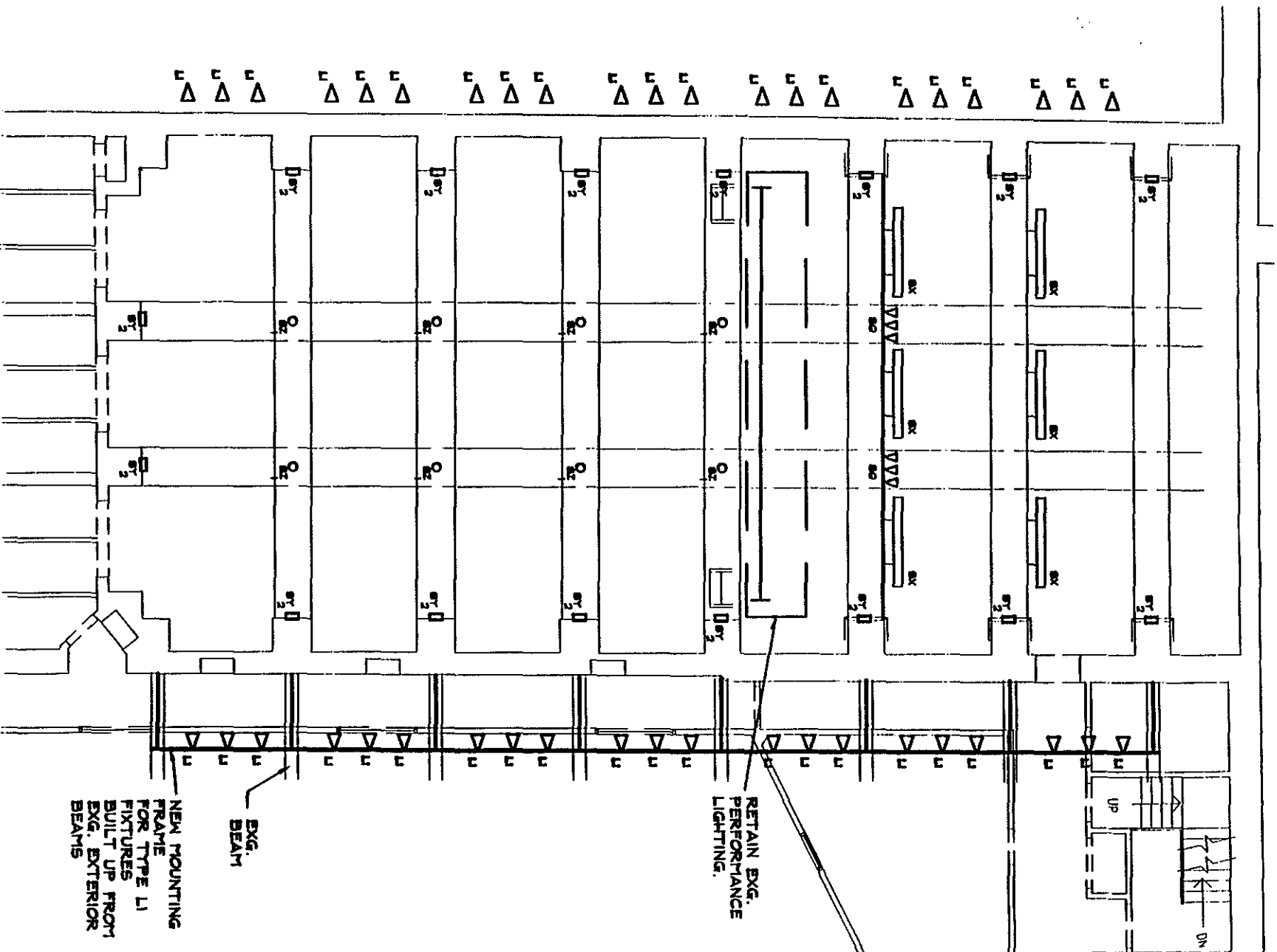
EXISTING CONDITIONS

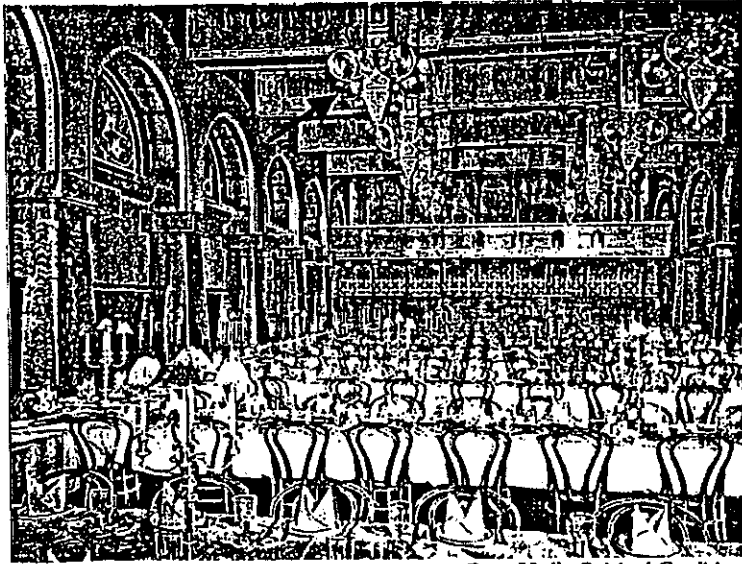
- A. Original fixtures have been removed and replaced with modern pendant fixtures.
- B. Lampholders with PAR lamps are concealed behind the cross beams (on north face of beams) above the stage to provide downlight onto the stage. However, a dark band occurs on the stage floor between beams with light fixtures because the current configuration causes obstruction of the beamspread of the downlight.
- C. Front light is provided to the stage by pipe mounted theatrical fixtures mounted on the north side of the beam just in front of the stage.

RECOMMENDATIONS

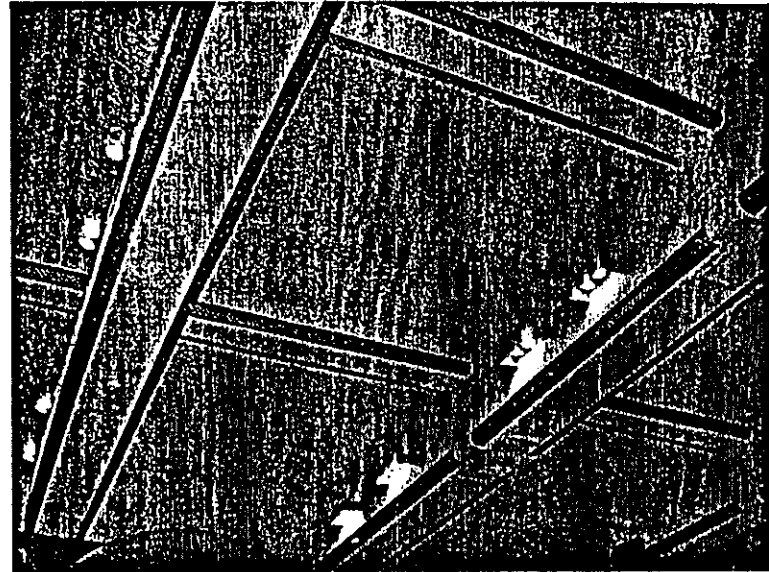
1. Reproduce electrolier pendants at eight locations (Type SZ). Original locations existing above the stage not included.
2. Investigate the possibility of recessing compact floodlights in wood capitals at pilasters to uplight decorative ceiling.
3. Add floodlights (Type L1) to new exterior mounting frame to highlight lunette stained glass windows from outside. This was not original, but the general public rarely experiences this space during the day. Floodlighting will allow for the windows to be appreciated when the space is used most.
4. Remove existing stage downlighting.
5. Add new downlights - border lights bracketed off north face of beams in concealed location.
6. Add three new theater fixture locations for additional frontal lighting to rear of stage.
7. Termination of all lighting circuits should be to one central location to allow for future installation of a central dimmer rack. All fixtures used for general lighting should be controlled via dimmer switches.

NOTE: While it is not within the scope of this project, the lighting control for Ganz Hall should eventually consist of a small theatrical control board that will plug directly into the dimmer rack and control both the general lighting and the theatrical lighting. In addition, scene preset stations should be located at the entrance to the room which would be capable of calling up a single "normal" preset light setting.



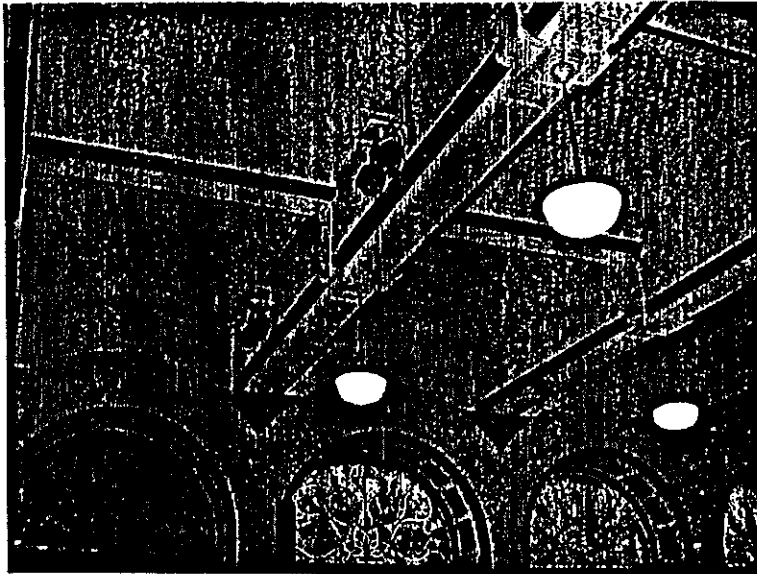


Ganz Hall - Original Conditions

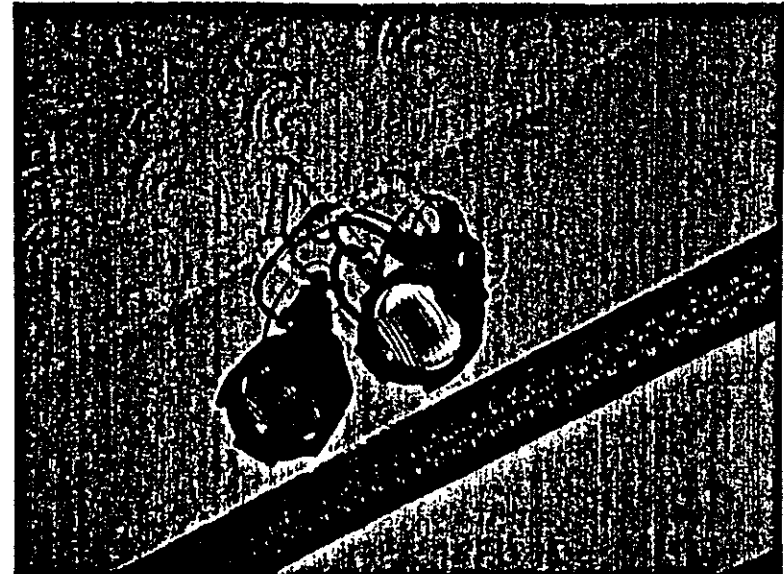


Ganz Hall - Existing Conditions

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Gang Hall - Existing Conditions



Gang Hall - Existing Theatrical Fixtures

GANZ HALL ANTECHAMBER

ORIGINAL CONDITIONS

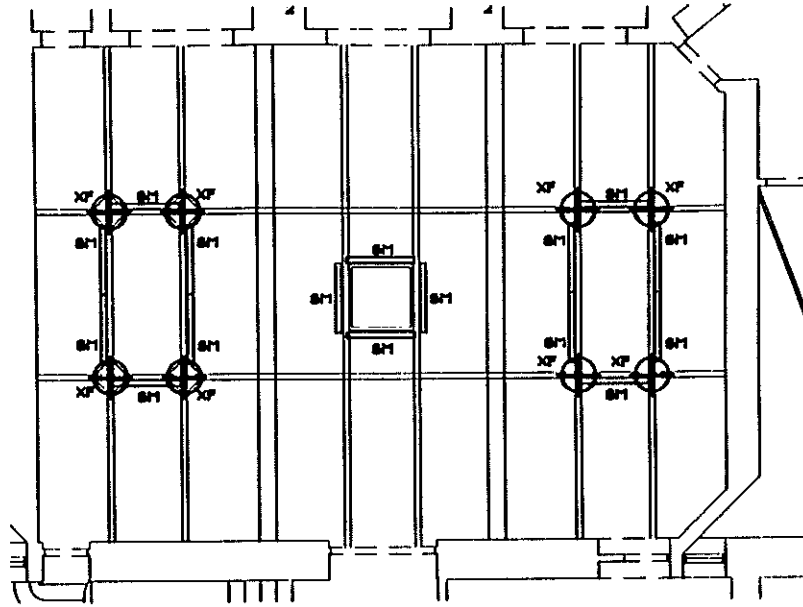
- A. Stained glass skylights provided natural light into space.
- B. Pendant fixtures with four shades provided general illuminations.

EXISTING CONDITIONS

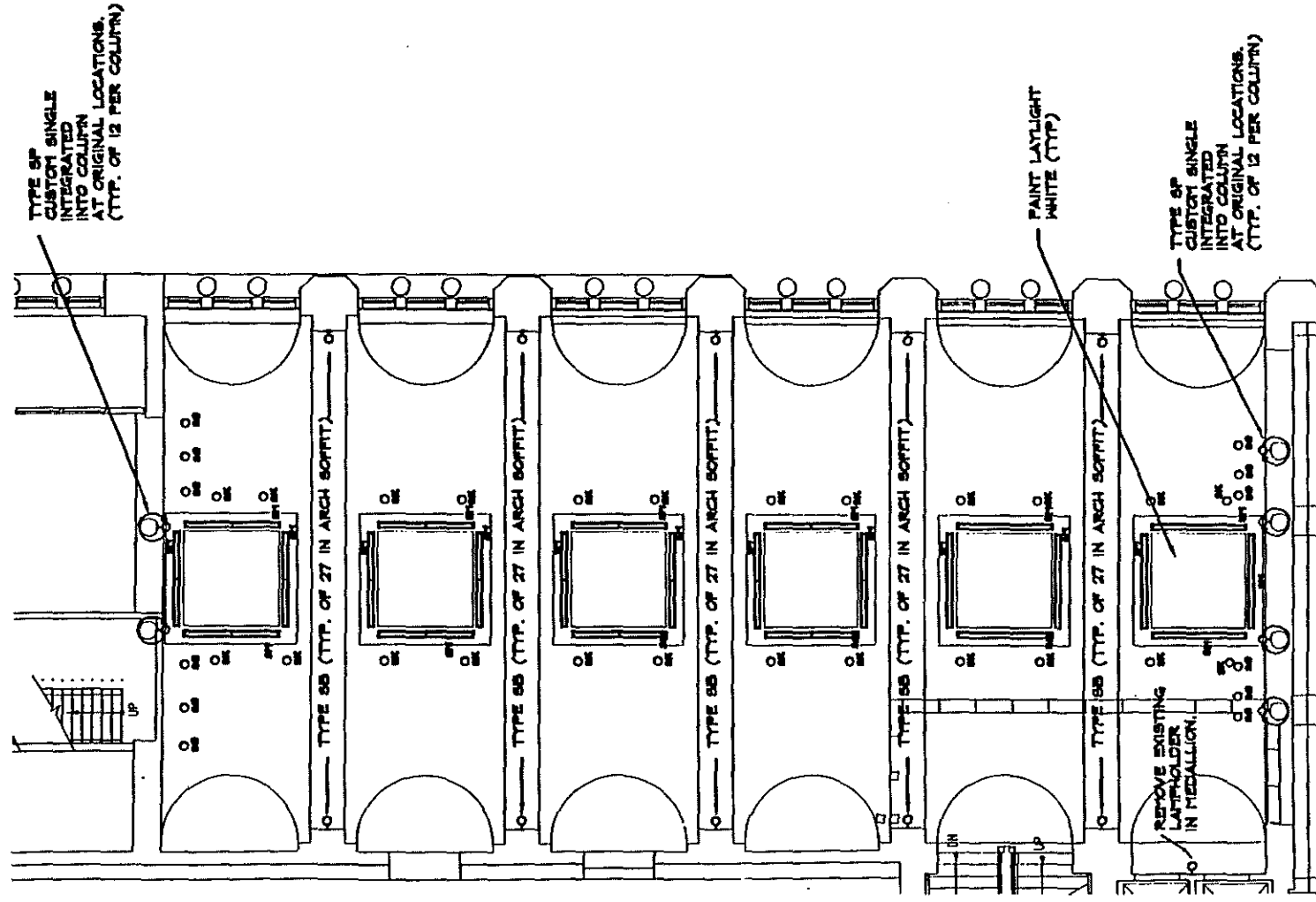
- A. Pendant fixtures with four white shades provide sufficient illumination. These fixtures may resemble the original fixtures.
- B. Fluorescent lighting and incandescent spotlights in the "laylight" above each skylight is obtrusive and does not adequately illuminate the skylight.

RECOMMENDATIONS

- 1. Retain reproduction pendants (Type XF).
- 2. Add new fluorescent fixtures (Type SM) to uniformly uplight "laylight" of each skylight. Paint interior surfaces of laylight high reflectance white.



Ganz Hall Antechamber - Lighting Layout



Reading Room - Lighting Layout

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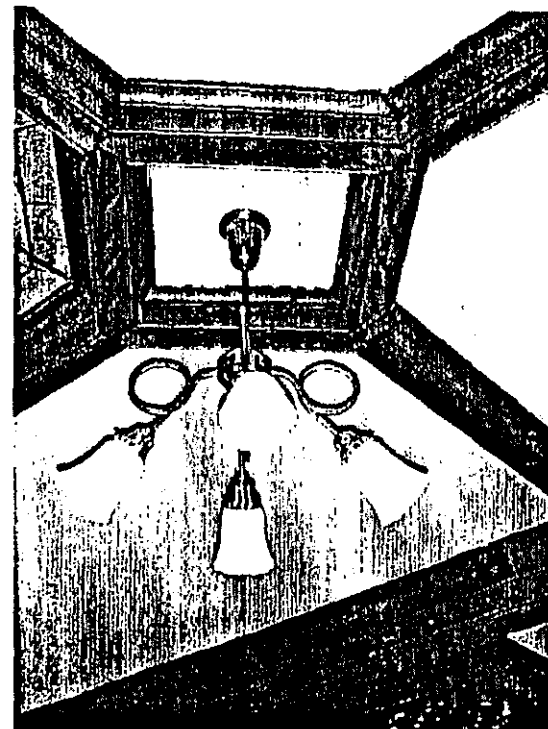


Reading Room – Existing Conditions



Reading Room, North Wing – Existing Conditions

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Ganz Hall - Existing Conditions

Lighting Restoration Report

READING ROOM

ORIGINAL CONDITIONS

- A. Natural light entered the space through six stained glass skylights and windows.
- B. Twenty-seven filament lamp "points of light" were mounted in the plaster soffit ornament to highlight the form of each arch.
- C. "Bracelets" of twelve filament lamps encircled the top of each of six wood paneled columns.
- D. North and south wings had decorative coffered ceilings. In the south wing, the lighting consisted of a series of single filament lamps mounted in the plaster cornice.

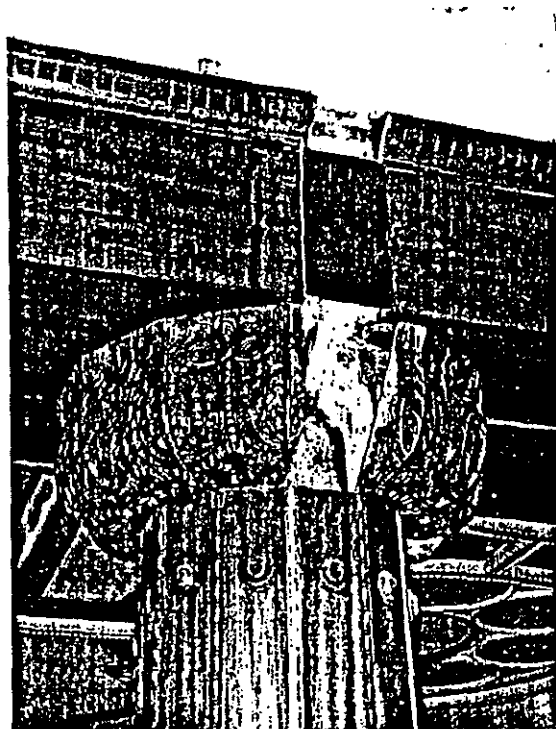
EXISTING CONDITIONS

- A. Original lighting has been removed or abandoned.
- B. Stained glass skylights have been removed.
- C. High illumination levels are required since the space is currently utilized as a library. Thus many fixtures are required to produce the recommended illumination level for the prolonged visual task of reading.
- D. Fluorescent strip fixtures have been mounted above the laylight to provide downlight through a "cube cell" style louver.
- E. Surface mounted fluorescent fixtures mounted on the vaulted ceiling provide supplemental illumination for the current visual task of intense reading.
- F. The lighting in the south wing has been restored to the original configuration. Reading lamps are utilized to provide supplemental illumination for study.

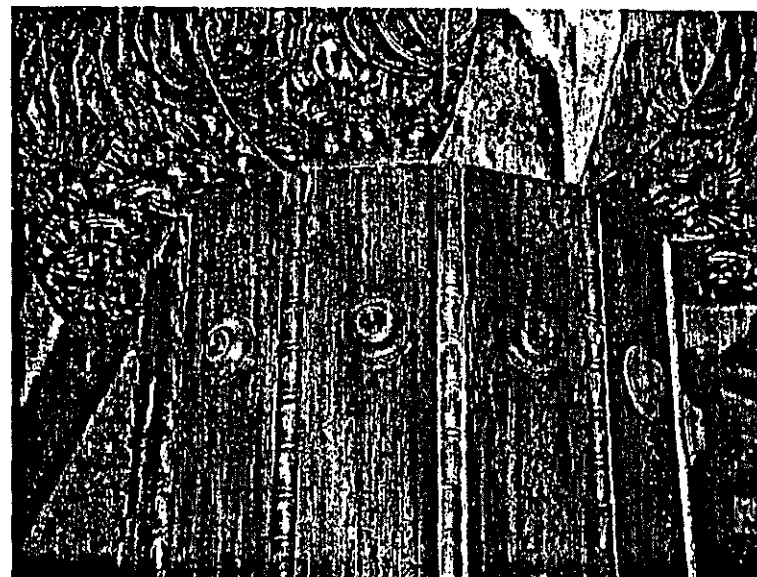
RECOMMENDATIONS

- 1. Add new fluorescent fixtures (Type SM) to uniformly uplight "laylight" of each skylight. Paint interior surfaces of laylight high reflectance white.
- 2. Reactivate filament lamp "points of light" in plaster ornament of each arch soffit.
- 3. Reactivate the "bracelet" of twelve filament lamps around each wood paneled column.
- 4. Add supplemental lighting to achieve sufficient illumination levels for the multipurpose function anticipated for this room. Supplemental illumination could be achieved through:
 - a. Four recessed downlights installed into the vaulted plaster ceiling adjacent to each skylight.
 - b. Add a modern light structure to the space that provides both uplight and downlight as required. This structure would have "clean" simple lines and would intentionally not match the historical character of the space.
- 5. Remove the low ceiling in the north wing to expose the original coffered ceiling. Reactivate the original lighting scheme in the north wing. Lighting scheme will be similar to that of the south wing with single filament lamps mounted in the plaster cornice. Cornice lighting may be supplemented by the use of multiple lamp electroliers in character with the scheme used in other areas of the building.

NOTE: Illumination levels in this space may range from as low as 5 foot-candles for dining/special event functions to 50 foot-candles appropriate for the reading task associated with meeting and study functions.



Reading Room, Column - Existing Condition



Reading Room, Column - Existing Condition

MEP DESIGN NARRATIVE

DIVISION 15 & 16 – MEP GENERAL REQUIREMENTS

GANZ HALL

- SCOPE:
- A. Replace the HVAC system and controls for the Hall, Entry and associated spaces.
 - B. Upgrade the backstage toilet room.
 - C. Upgrade and replace the lighting systems serving the hall, entry and support spaces, all in keeping with the overall historical renovation.
 - D. Upgrade power distribution to support HVAC upgrades.

HVAC: Work on the HVAC system shall include replacing the existing air handling system, duct distribution, heating, cooling and humidification systems, and other miscellaneous systems as may become necessary. A new air handling system shall be located in the interstitial space below the hall. The air handling system shall be of modular construction, and shall include double wall housing, outside air intake sized for 100% economizer, mixed air section, 4" 35% prefilters, 65% cartridge filters, hot water coil, access section, chilled water coil, and supply fan with variable frequency drive. The system shall have a capacity of approximately 12,000 cfm. New ductwork shall emanate from the air handling system, and shall include sound traps and 1" and 2" thick acoustical lining as required. Incorporation of acoustical recommendations made by the acoustical engineer for the project shall be closely followed, since acoustics in the hall are critical. Linear supply diffusers and return grilles shall be located respectively in the top of each bay's woodwork

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and within the floor, similar to current locations.

The system shall receive chilled water from the central chilled water plant which is being constructed as part of a chilled water plant project. The pro-rated cost for providing this chilled water to this project is estimated at \$72,000. This project shall include approximately 600 feet of 6" chilled water mains and approximately 150 feet of 2" chilled water branches. The mains shall include valved/capped stubs for future branch connections for other areas of the building. Chilled water piping shall be insulated with minimum 1" fiberglass insulation with all service jacket. Two secondary chilled water distribution pumps shall be part of this project.

The system shall receive hot water from a new steam to hot water heat exchanger located in the basement. This project shall include approximately 200 feet of 3" steam piping and 200 feet of 2" condensate return piping. This project shall also include approximately 200 feet of 4" hot water mains and 400 feet of 2" hot water branches. The mains shall include valved/capped stubs for future branch connections for other areas of the building. Steam, condensate and hot water piping shall be insulated with minimum 1"-1-1/2" fiberglass insulation with all service jacket. Two hot water distribution pumps shall be provide, as will a duplex condensate return pump.

A steam to steam humidifier shall be used to provide a minimum of 35% relative humidity in the space with an ambient condition of -10 °F and code minimum ventilation. An estimated 200 feet of 2" steam piping and 200 feet of 1-1/2" condensate return piping will be required for the humidifier.

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All components of the HVAC system, including air handling unit, heat exchanger, hot and chilled water pumps shall be connected to a direct digital control (DDC) system.

The existing backstage toilet room will be remodeled, and shall include new water closet and lavatory. The fixtures shall be handicapped accessible. New domestic hot and cold water shall be routed to beyond the periphery of the project, and shall be connected to existing mains at that location. Makeup water shall be provided to the humidifier. Modifications to existing drainage shall be accomplished to provide floor drains at the new air handling unit and humidifier.

SPRINKLER: The space is not currently served by a sprinkler system. No upgrades for sprinkler systems are anticipated at this time.

ELECTRICAL: Modifications and upgrades to the local electrical power system shall be provided to support new HVAC upgrades. This shall include starters and disconnects for all pumps, feeders to air handling unit VFD, and providing miscellaneous power for controls. Miscellaneous power distribution modifications shall occur through out the space, to provide housekeeping outlets, toilet room GFI's, etc. as deemed appropriate.

A new lighting system shall be incorporated within the hall. Ambient lighting shall include historically correct custom lighting fixtures. Other performance lighting may also be required. New switching and dimming systems shall be incorporated.

New fire alarm devices, emergency lighting and exit

signage will be provided as required to meet the latest code requirements. Miscellaneous empty conduit systems shall be provided to provide for phone and telecom systems. This tele/com work will be minimal.

MICHIGAN AVENUE LOBBY

- SCOPE:**
- A. Install a new HVAC system and controls for the Lobby. Currently, the space is heated by perimeter cast iron radiators. It is not currently ventilated or air conditioned, causing deterioration of the space.
 - B. Emergency lighting and fire alarm will be reviewed and upgraded to comply with current code, in keeping with the overall university masterplan.

HVAC: Work on the HVAC system shall include installing a new air handling system and duct distribution system to serve the lobby. A new air handling system shall be located in a new mechanical room in the basement below the revolving door entrance of the lobby. Space for this mechanical room will need to be taken from a portion of the area currently used as a carpentry shop. The air handling system shall be of modular construction, and shall include double wall housing, 100% return air, 4" 35% efficient prefilters, hot water coil, access section, chilled water coil, and supply fan. The system shall have a capacity of approximately 6,000 cfm. An outside air connection shall be made, if possible, although routing of this duct to the outdoors may not be possible. New supply and return ductwork shall emanate from the air handling system, and shall include sound traps and 1" and 2" thick acoustical lining as required. Ductwork shall be

routed up in a small room area immediately south of the revolving doors in the lobby. Supply air shall discharge out of the ornamental area above the revolving doors (See Photo A1). Because of the short duct runouts, hard surfaces in the lobby and large air quantities being delivered from a single location incorporation of acoustical recommendations made by the acoustical engineer for the project shall be closely followed.

The system shall receive chilled water from the central chilled water plant, which is being constructed as part of a chilled water plant project. The pro-rated cost for providing this chilled water to this project is estimated at \$27,000. This project shall include approximately 300 feet of 2" chilled water branches. Chilled water piping shall be insulated with minimum 1" fiberglass insulation with all service jacket. Two secondary chilled water distribution pumps shall be part of this project.

The system shall receive hot water from a new steam to hot water heat exchanger located in the basement. This project shall include approximately 200 feet of 3" steam piping and 200 feet of 2" condensate return piping. This project shall also include approximately 100 feet of 4" hot water mains and 200 feet of 2" hot water branches. The mains shall include valved/capped stubs for future branch connections for other areas of the building. Steam, condensate and hot water piping shall be insulated with minimum 1"-1-1/2" fiberglass insulation with all service jacket. Two hot water distribution pumps shall be provide, as will a duplex condensate return pump. The existing steam radiators at the perimeter shall be retained and converted to hot water use. Additional radiation shall be installed where the existing handicapped entrance is being removed. New hot water cabinet heaters shall be

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installed within the vestibule created at the new handicapped entrance.

All components of the HVAC system, including air handling unit, heat exchanger, hot and chilled water pumps shall be connected to a direct digital control (DDC) system.

SPRINKLER: The space is not currently served by a sprinkler system. No upgrades for sprinkler systems are anticipated at this time.

ELECTRICAL: Modifications and upgrades to the local electrical power system shall be provided to support new HVAC upgrades. This shall include starters and disconnects for all pumps, air handling unit, cabinet heaters, etc., and providing miscellaneous power for controls. Miscellaneous power distribution modifications shall occur through out the space, to provide housekeeping outlets, etc. as deemed appropriate. New lighting shall be provided for the new entrance vestibule. Lighting in the main lobby shall remain as is. New fire alarm devices, emergency lighting and exit signage will be provided as required to meet the latest code requirements.

WABASH AVENUE LOBBY

- SCOPE:**
- A. Install a new HVAC system and controls for the Lobby. Currently, the space is heated by perimeter cast iron radiators. Minimal air conditioning is provided via a supply register within the soffit along the all of Herman Crown Center.
 - B. Lighting will be upgraded in the lobby, as well as

- on all 10 floors and landing levels of the stairs.
- C. Emergency lighting and fire alarm will be reviewed and upgraded to comply with current code, in keeping with the overall university masterplan..
- D. Upgrade power distribution to support HVAC upgrades.
- E. Install video surveillance cameras in the Lobby.

HVAC:

Work on the HVAC system shall include installing a new air handling system and duct distribution system to serve the lobby. A new air handling system shall be located in a new mechanical room in the basement below the lobby. Space for this mechanical room will need to be taken from the storage area within the basement. The air handling system shall be of modular construction, and shall include double wall housing, 100% return air, 4" 35% efficient prefilters, hot water coil, access section, chilled water coil, and supply fan. The system shall have a capacity of approximately 3,000 cfm. New supply and return ductwork shall emanate from the air handling system, and shall include sound traps and 1" and 2" thick acoustical lining as required. Ductwork shall be routed up to the lobby in a shaft provided on the back of the existing guard station. Supply and return air shall be via sidewall registers in this duct riser. Because of the short duct runouts, hard surfaces in the lobby and large air quantities being delivered from a single location incorporation of acoustical recommendations made by the acoustical engineer for the project shall be closely followed.

The system shall receive chilled water from the central chilled water plant, which is being constructed as part of a chilled water plant project. The pro-rated cost for providing this chilled water to this project is estimated at

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\$14,000. This project shall include approximately 400 feet of 2" chilled water branches. Chilled water piping shall be insulated with minimum 1" fiberglass insulation with all service jacket.

The system shall receive hot water from a new steam to hot water heat exchanger located in the basement. This project shall include approximately 200 feet of 3" steam piping and 200 feet of 2" condensate return piping. This project shall also include approximately 100 feet of 4" hot water mains and 200 feet of 2" hot water branches. The mains shall include valved/capped stubs for future branch connections for other areas of the building. Steam, condensate and hot water piping shall be insulated with minimum 1"-1-1/2" fiberglass insulation with all service jacket. Two hot water distribution pumps shall be provide, as will a duplex condensate return pump. The existing cabinet heaters within the lobby shall be replaced with new hot water units. A new baseboard heater will be provided at the new freestanding guards desk.

All components of the HVAC system, including air handling unit, heat exchanger, hot and chilled water pumps shall be connected to a direct digital control (DDC) system.

SPRINKLER: The space is not currently served by a sprinkler system. No upgrades for sprinkler systems are anticipated at this time.

ELECTRICAL: Modifications and upgrades to the local electrical power system shall be provided to support new HVAC upgrades. This shall include starters and disconnects for all pumps, air handling unit, cabinet heaters, etc., and providing miscellaneous power for controls. Provide miscellaneous

power and telecom at new guard station desk.

A new lighting system shall be incorporated within the lobby. Ambient lighting shall include historically correct custom lighting fixtures. Switching shall be from remote locations. Lighting within each floor of the stair, at both the full floor and landing levels, shall be upgraded. New wall sconces shall be installed to replace existing sconces. (See Photo A2). New fire alarm devices, emergency lighting and exit signage will be provided as required to meet the latest code requirements.

New video surveillance cameras will be installed within the Lobby.

FAINMAN LOUNGE

- SCOPE:
- A. Install a new HVAC system and controls for the Lounge. Currently, the east "porch" is heated by perimeter cast iron radiators. The lounge and "porch" are not currently ventilated or air conditioned, leading to deterioration of historical elements.
 - B. Emergency lighting and fire alarm will be reviewed and upgraded to comply with current code, in keeping with the overall university masterplan.
 - D. Upgrade power distribution to support HVAC upgrades.

HVAC: Work on the HVAC system shall include extending ductwork from a the Lower Level Michigan Avenue air handling system. This system shall be re-built or replaced

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under a separate project. This unit The pro-rated cost for providing this ventilation from this project is estimated at \$35,000. New ductwork shall emanate from the 3rd floor ceiling. Supply and return ductwork shall each drop in approximately 8 locations from the 3rd floor ceiling to serve the 2nd floor lounge areas.

These supply and return duct risers shall be enclosed within shafts between corridor lockers and within two classrooms at the 3rd floor level. Six duct risers shall serve linear diffusers installed in the existing north/south plaster soffits in the center of the lounge (See Photo A4). . Consisting of ornate plaster detail and stencil work, these soffits must be carefully opened up during construction to permit the installation. The two remaining groups of duct risers shall serve the exterior "porch" areas. Ductwork for this area will be routed horizontally near the exterior wall to serve this significant east exposure. (See Photo A3). It is estimated that approximately 9000 cfm and 8 VAV boxes will be required to handle this space. VAV boxes will include hot water reheat coils.

Supply and return ductwork shall include 1" thick acoustical lining as required. Incorporation of acoustical recommendations made by the acoustical engineer for the project shall be closely followed, since acoustics in the hall are critical.

Chilled water to the air handling unit designated to serve the Fainman Lounge is being installed under a separate project. The pro-rated cost for providing this chilled water to this project is estimated at \$47,000.

The system shall receive hot water from a new steam to hot water heat exchanger located in the basement. This

project shall include approximately 200 feet of 3" steam piping and 200 feet of 2" condensate return piping. This project shall also include approximately 200 feet of 4" hot water mains and 200 feet of 1-1/2" hot water branches. The mains shall include valved/capped stubs for future branch connections for other areas of the building. Steam, condensate and hot water piping shall be insulated with minimum 1"-1-1/2" fiberglass insulation with all service jacket. Two hot water distribution pumps shall be provide, as will a duplex condensate return pump. The existing steam radiators and associated exposed piping shall be removed. New hot water fin tube radiation shall be installed, including architectural enclosures.

All components of the HVAC system, including air handling unit, heat exchanger, hot and chilled water pumps shall be connected to a direct digital control (DDC) system.

SPRINKLER: The space is not currently served by a sprinkler system. No upgrades for sprinkler systems are anticipated at this time.

ELECTRICAL: Modifications and upgrades to the local electrical power system shall be provided to support new HVAC upgrades. This shall provide power for controls to VAV boxes.

Miscellaneous power distribution modifications shall occur through out the space, to provide additional outlets for the use of student computers. Power outlets shall be located on each face of the 6 main columns in the lounge. These columns are plaster finish with "scagliola" finish. Explorative work will be necessary to determine whether it is possible to feed these locations from conduit drops emanating from the 3rd floor, without removal of the

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plaster cladding on the columns. Additional outlets shall be located at the perimeter of the "porch" and integrated into or below the fin tube radiation.

A new lighting system shall be incorporated within the lounge and "porch" areas. Ambient lighting shall include historically correct custom lighting fixtures. Lighting will be remotely switched.

New fire alarm devices, emergency lighting and exit signage will be provided as required to meet the latest code requirements. Miscellaneous empty conduit systems shall be provided to provide for telecom systems. Similar to added power outlets, telecom outlets shall be located on each face of the 6 plaster clad columns in the lounge. These will be fed from conduit drops emanating from the 3rd floor, without removal of the cladding on the columns. Additional telecom outlets shall be located at the perimeter of the "porch" and integrated into or below the fin tube radiation.

SULLIVAN ROOM

- SCOPE:**
- A. Install a new HVAC system and controls for the Lounge. Currently, the room is heated by perimeter steam fired fin tube radiation. The room is not currently ventilated or air conditioned. In order to control further deterioration of the space, air conditioning and ventilation systems are required.
 - B. Emergency lighting and fire alarm will be reviewed and upgraded to comply with current code, in keeping with the overall university masterplan.

HVAC: Work on the HVAC system shall include extending ductwork from a new central air handling unit, provided under a separate project. The pro-rated cost for providing this ventilation from this project is estimated at \$10,000. New ductwork shall emanate from the 3RD floor ceiling. Supply and return ductwork shall be exposed in the room to the west of Sullivan and shall enter from the west wall of the room, where sidewall registers and grilles will be used. (See Photo A5). Minimal work for ductwork will be required within the room itself. It is estimated that approximately 2000 cfm and 1 VAV box will be required to handle this space.

Supply and return ductwork shall include 1" thick acoustical lining as required. Incorporation of acoustical recommendations made by the acoustical engineer for the project shall be closely followed, since acoustics in the hall are critical.

Chilled water to the air handling unit designated to serve the Sullivan Room is being installed under a separate project. The pro-rated cost for providing this chilled water to this project is estimated at \$5,000.

The system shall receive hot water from the new steam to hot water heat exchanger installed as described for Fainman Lounge. This project shall include approximately 200 feet of 1" hot water branches. Hot water piping shall be insulated with minimum 1" fiberglass insulation with all service jacket. The existing steam fin tube radiation and enclosure shall be replaced and re-piped with new hot water piping. The new hot water fin tube radiation shall include an architectural enclosure.

All components of the HVAC system, including air handling unit, heat exchanger, hot and chilled water pumps shall be connected to a direct digital control (DDC) system.

SPRINKLER: The space is not currently served by a sprinkler system. No upgrades for sprinkler systems are anticipated at this time.

ELECTRICAL: Modifications and upgrades to the local electrical power system shall be provided to support new HVAC upgrades. This shall provide power for controls to VAV boxes.

Minimal power distribution modifications shall occur through out the space, to provide additional receptacle outlets. Several telecom outlets shall be provided within the room. New fire alarm devices, emergency lighting and exit signage will be provided as required to meet the latest code requirements.

FACULTY LOUNGE

- SCOPE:**
- A. Install a new HVAC system and controls for this room. Currently, the room is heated by perimeter steam fired fin tube radiation. The room is air conditioned by a vertical water cooled self contained unit in a closet adjacent to the room. This unit does not provide code ventilation to the space.
 - B. Emergency lighting and fire alarm will be reviewed and upgraded to comply with current code, in keeping with the overall university masterplan.

HVAC:

Work on the HVAC system shall include extending ductwork from a new central air handling unit, provided under a separate project. This unit will be located on the roof and serve additional areas of the Congress Parkway exposure. The pro-rated cost for providing this ventilation from this project is estimated at \$10,000. New ductwork shall emanate from the 2nd floor ceiling. Supply and return ductwork shall enter from the north wall of the room, where sidewall registers and grilles will be used. Minimal work for ductwork will be required within the room itself. It is estimated that approximately 2000 cfm and 1 VAV box will be required to handle this space.

Supply and return ductwork shall include 1" thick acoustical lining as required. Incorporation of acoustical recommendations made by the acoustical engineer for the project shall be closely followed, since acoustics in the hall are critical.

Chilled water to the air handling unit designated to serve the Faculty Lounge is being installed under a separate project. The pro-rated cost for providing this chilled water to this project is estimated at \$5,000.

The system shall receive hot water from the new steam to hot water heat exchanger installed as described for Ganz Hall. This project shall include approximately 400 feet of 1" hot water branches. Hot water piping shall be insulated with minimum 1" fiberglass insulation with all service jacket. The existing steam fin tube radiation and enclosure shall be replaced and re-piped with new hot water piping. The new hot water fin tube radiation shall include an architectural enclosure.

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All components of the HVAC system, including VAV boxes and fin tube radiation shall be connected to a direct digital control (DDC) system.

SPRINKLER: The space is not currently served by a sprinkler system. No upgrades for sprinkler systems are anticipated at this time.

ELECTRICAL: Modifications and upgrades to the local electrical power system shall be provided to support new HVAC upgrades. This shall provide power for controls to VAV boxes.

Miscellaneous power and telecom distribution modifications shall occur through out the space, to provide additional outlets for the use of student computers. An estimated 10 locations are to be provided.

A new lighting system shall be incorporated within the lounge. Ambient lighting shall include historically correct custom lighting fixtures. Lighting will be locally switched.

New fire alarm devices and emergency lighting will be provided as required to meet the latest code requirements. Miscellaneous empty conduit systems shall be provided to provide for telecom systems.

GRAND STAIRCASE

- SCOPE:**
- A. Upgrade the backlit lighting of stained glass panels located in the staircase.
 - B. Emergency lighting and fire alarm will be reviewed and upgraded to comply with current code, in keeping with the overall university masterplan.

ELECTRICAL: This renovation shall upgrade the backlit lighting of stained glass panels located in the staircase (See Photo A6).

Fire Alarm and emergency lighting will be upgraded, all in keeping with the overall university masterplan. The work shall be included as part of a historical conservation project.

10TH FLOOR READING ROOM

- SCOPE:**
- A. Replace the HVAC system and controls serving this hall. Currently, the HALL is heated by perimeter steam fired fin tube radiation. The room is ventilated and air conditioned by a system serving classrooms and offices on Upper Michigan Avenue. Because of the use of this space, a dedicated air handling system needs to be provided for this room.
 - B. Emergency lighting and fire alarm will be reviewed and upgraded to comply with current code, in keeping with the overall university masterplan.

HVAC: Work on the HVAC system shall include installing a new dedicated rooftop air handling unit to serve this area. The existing air conditioning system, emanating from the Upper Michigan Avenue Supply Unit shall be disconnected.

The new rooftop air handling system shall be located on the roof, just west of the multipurpose room. The air handling system shall include outside air intake, 100% economizer, return/exhaust fan with variable frequency drive, mixed air section, 4" 35% prefilters, 65% cartridge

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filters, hot water coil, access section, chilled water coil, and supply fan with variable frequency drive. The system shall have a capacity of approximately 18,000 cfm. New ductwork shall emanate from the air handling system, and shall be routed across the roof. Roof penetrations shall be made to serve new linear supply diffusers located in approximately 12 locations adjacent to the non-functional skylights (See Photo A7). Return air will be integrated into these skylights. Supply air will be extended to the north and south single story areas, where it will serve supply diffusers for these areas. The system shall include sound traps and 1" and 2" thick acoustical lining as required. Incorporation of acoustical recommendations made by the acoustical engineer for the project shall be closely followed, since acoustics in the hall are critical. The system will be zoned into approximately 8 thermal zones, created by VAV boxes. Each VAV box shall include a hot water reheat coil.

The system shall receive chilled water from the central chilled water plant, which is being constructed as part of a chilled water plant project. The pro-rated cost for providing this chilled water to this project is estimated at \$100,000. This project shall include approximately 600 feet of 6" chilled water mains and approximately 150 feet of 3" chilled water branches. The mains shall include valved/capped stubs for future branch connections for other areas of the building. Chilled water piping shall be insulated with minimum 1" fiberglass insulation with all service jacket. Two secondary chilled water distribution pumps shall be part of this project.

The system shall receive hot water from the new steam to hot water heat exchanger described in the Fainman Lounge section. This project shall also include

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custom lighting fixtures. Switching shall be from remote sources.

New fire alarm devices, emergency lighting and exit signage will be provided as required to meet the latest code requirements. Provide power and telecom at an estimated 40 wall locations.

CODES

All work shall follow the requirements of the City of Chicago, the requirements of all local utilities, and all governing authorities. All work shall also conform to the Americans with Disabilities Act (ADA), Illinois Accessibility Code, and the latest standards as published by SMACNA, ASPE, ASHRAE, NEMA, NFPA, and UL.

TEMPERATURE AND HUMIDITY CRITERIA

Unless specifically indicated otherwise, each area shall be designed based on an outdoor ambient condition of 95°F. dry bulb/ 75 ° F. wet bulb in the summer, and -10° F. dry bulb in the winter. Indoor temperature in occupied spaces shall be based on 75 °F. dry bulb, 50% maximum relative humidity in the summer, and 72 °F. dry bulb in the winter. Spaces will generally not be humidified, unless noted otherwise. Loads shall be based on delivering code ventilation requirements, design people and lighting occupancy, and appropriate envelope loads including fenestration, walls, roofs, infiltration, etc..

approximately 200 feet of 4" hot water mains and 400 feet of 1-1/2" hot water branches. The mains shall include valved/capped stubs for future branch connections for other areas of the building. Steam, condensate and hot water piping shall be insulated with minimum 1"-1-1/2" fiberglass insulation with all service jacket. Two hot water distribution pumps shall be provide, as will a duplex condensate return pump. The existing decorative non-functional cast iron radiators shall remain (See Photo A8). They shall be carefully removed to replace the existing fin tube element located behind them with new hot water fin tube radiation. The existing cast iron radiators shall be replaced and used as the enclosure for the new fin tube element.

All components of the HVAC system, including air handling unit, heat exchanger, hot and chilled water pumps shall be connected to a direct digital control (DDC) system.

SPRINKLER: The space is not currently served by a sprinkler system. No upgrades for sprinkler systems are anticipated at this time.

ELECTRICAL: Modifications and upgrades to the local electrical power system shall be provided to support new HVAC upgrades. This shall include starters and disconnects for all pumps, feeders to air handling unit VFD's, and providing miscellaneous power for controls. Miscellaneous power distribution modifications shall occur through out the space, to provide housekeeping outlets as deemed appropriate.

A new lighting system shall be incorporated within the hall. Ambient lighting shall include historically correct

MEP PHOTOS



Photo A1 - Location of new supply air discharge in Michigan Avenue Lobby to be above revolving doors



Photo A2 - Wall sconces in Wabash Stair to be replaced

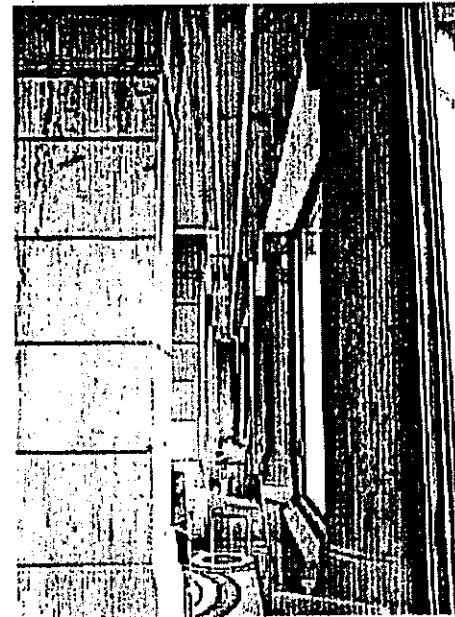


Photo A3 - Ductwork to run along perimeter of porch in Fainman Lounge to serve east exposure

Room



Photo A4 - Linear diffusers, fed from the 3rd floor above shall be used to serve Fainman Lounge

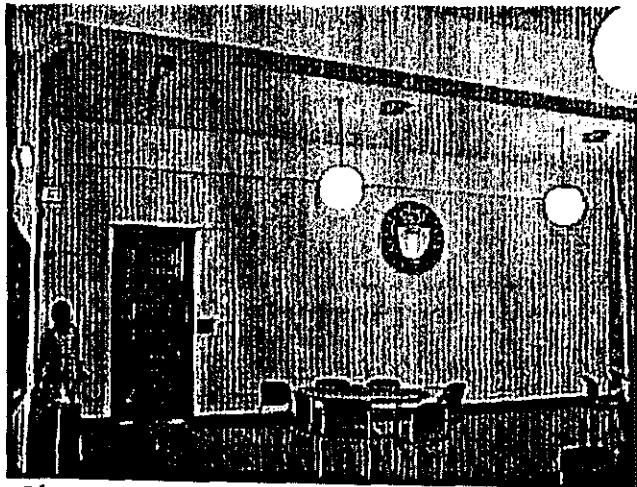


Photo A5 - Location of ductwork serving the Sullivan Room to be run exposed in the room west of the Sullivan

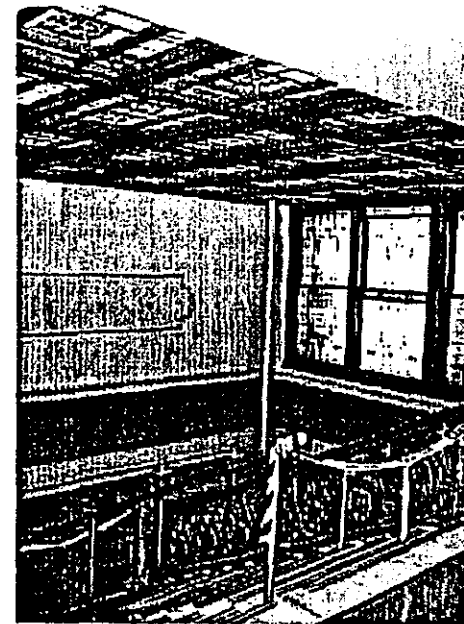


Photo A6 - Grand Stair stained glass to be relit with new back lighting

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Photo A8 – Non functional cast iron radiators to be retained. Fin tube radiation located behind radiator to be replaced

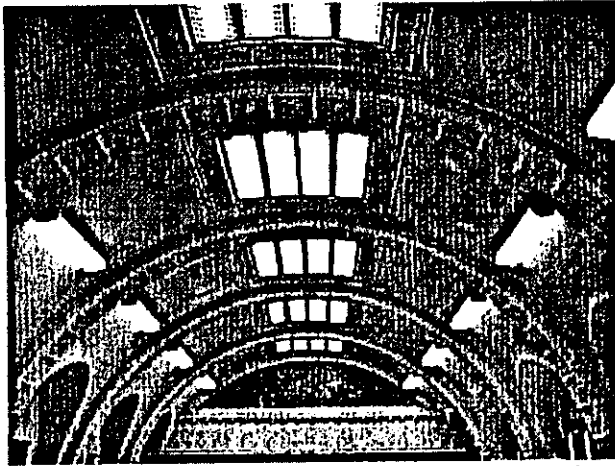
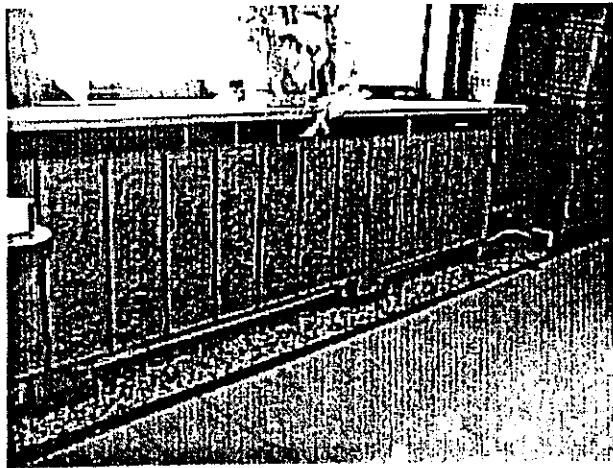


Photo A7 – Supply linear diffusers to be installed in barrel arch, near existing inactive skylights



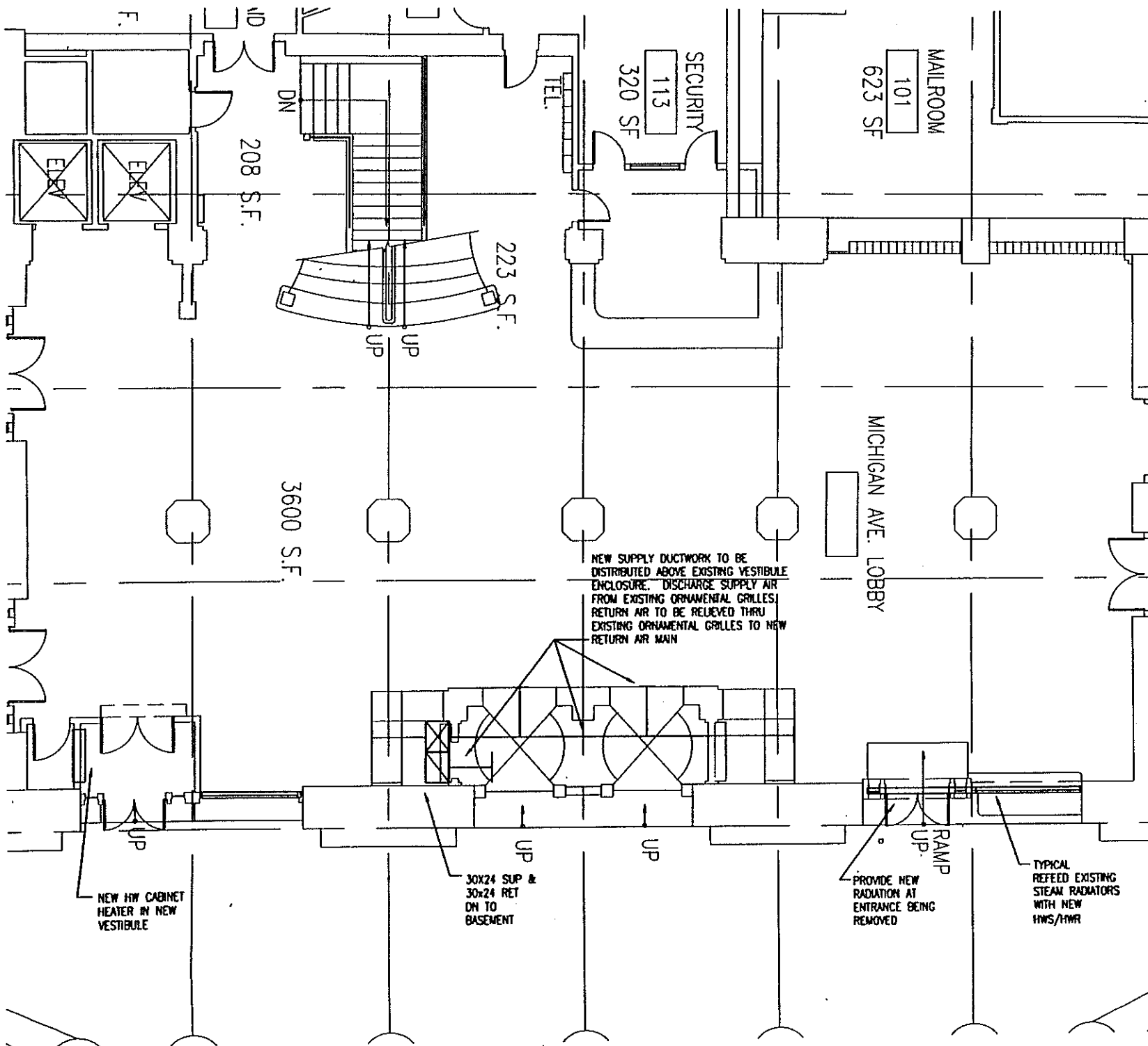
BOOTHHANSEN

Booth Hansen Associates
Architects/Planners
555 S. Dearborn Street
Chicago, IL 60605

MEP REQUIREMENTS
 $3/32" = 1'-0"$

THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

FIRST FLOOR
MICHIGAN AVE. LOBBY



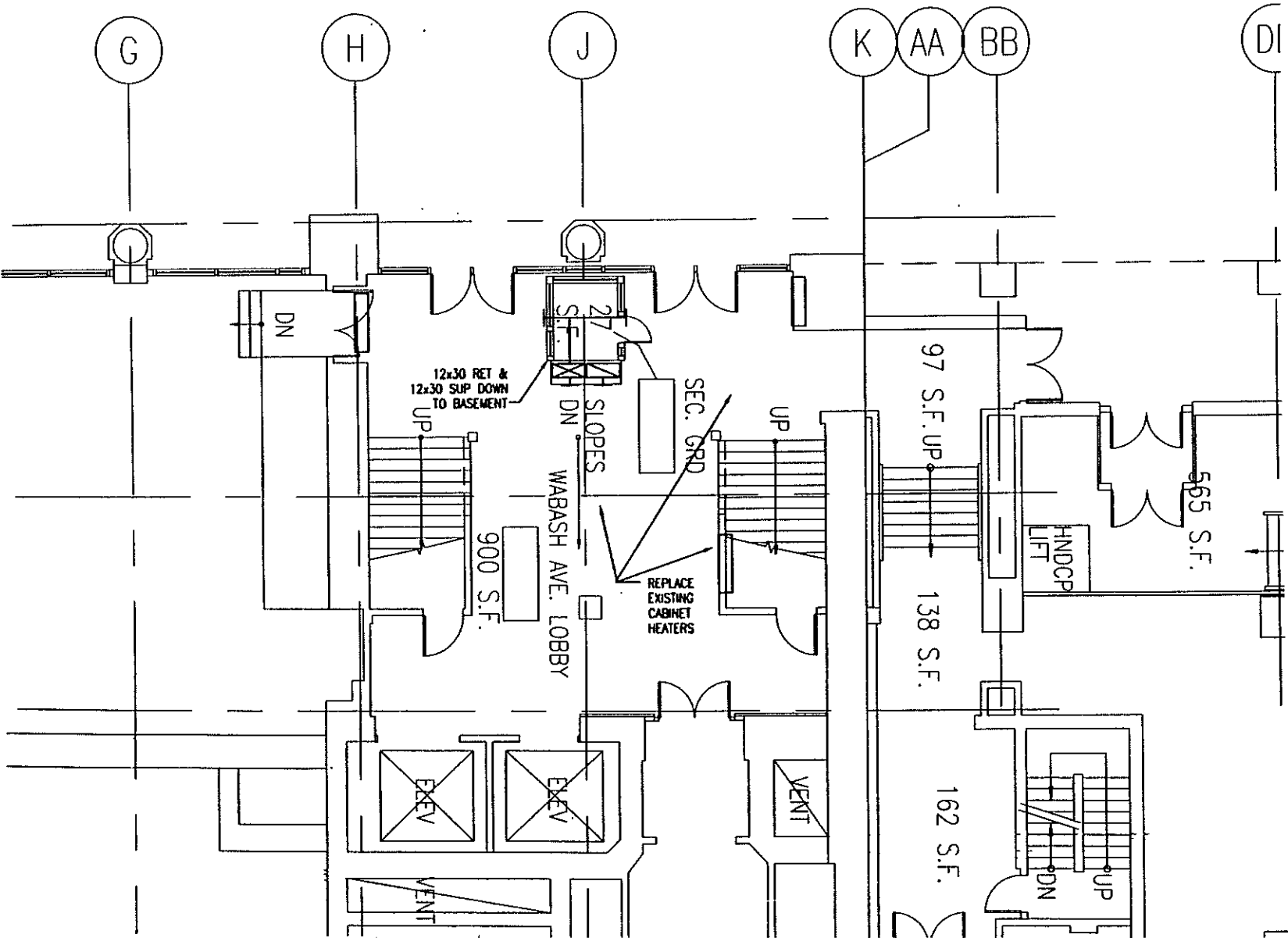
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Chicago, IL 60605

MEP REQUIREMENTS
 $3/32" = 1'-0"$

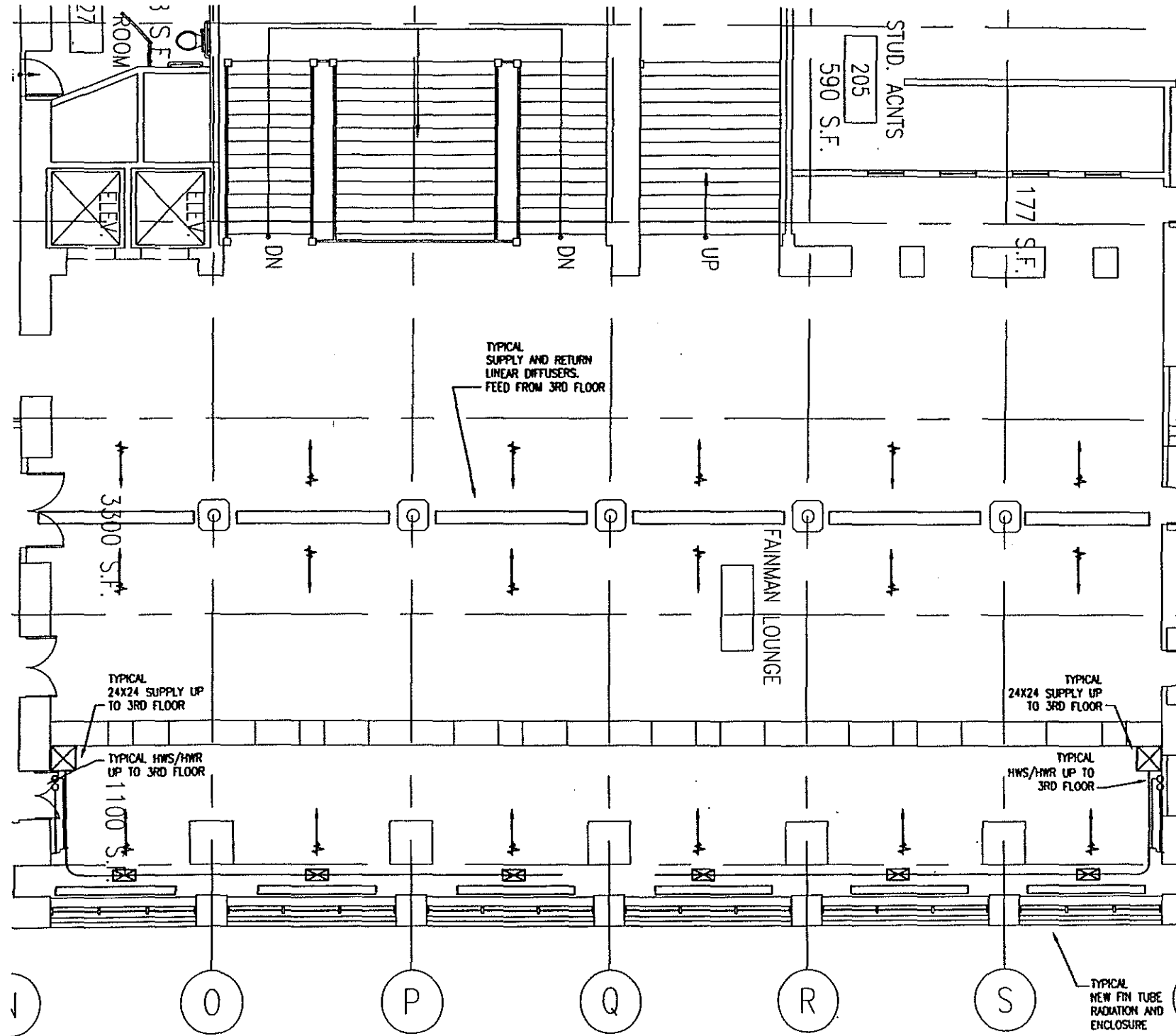
**THE AUDITORIUM
BUILDING**
ROOSEVELT UNIVERSITY

FIRST FLOOR
WABASH AVE. LOBBY



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555 S. Dearborn Street
Chicago, IL 60605



MEP REQUIREMENTS
 $3/32" = 1'-0"$

THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

SECOND FLOOR
FAINMAN LOUNGE

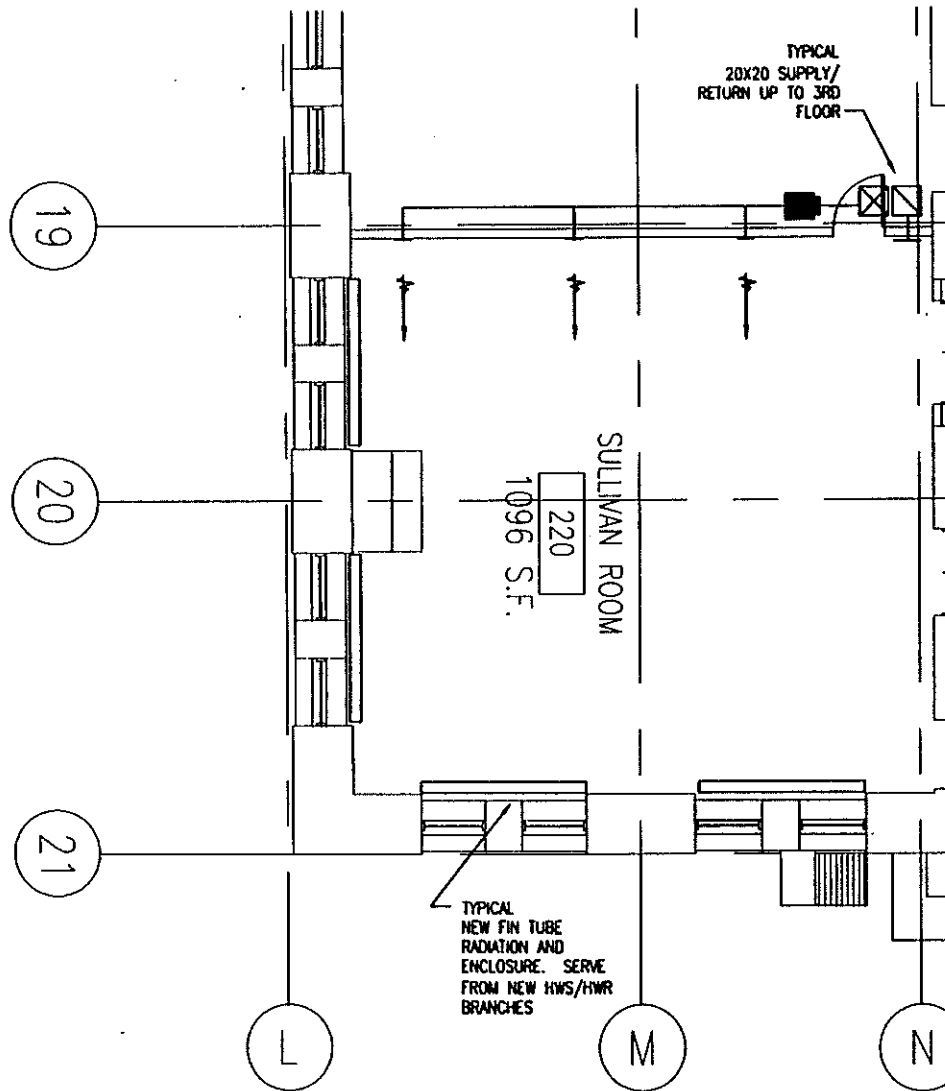
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MEP REQUIREMENTS
 $\frac{3}{32}'' = 1'-0''$

**THE AUDITORIUM
BUILDING**
ROOSEVELT UNIVERSITY

SECOND FLOOR
SULLIVAN ROOM



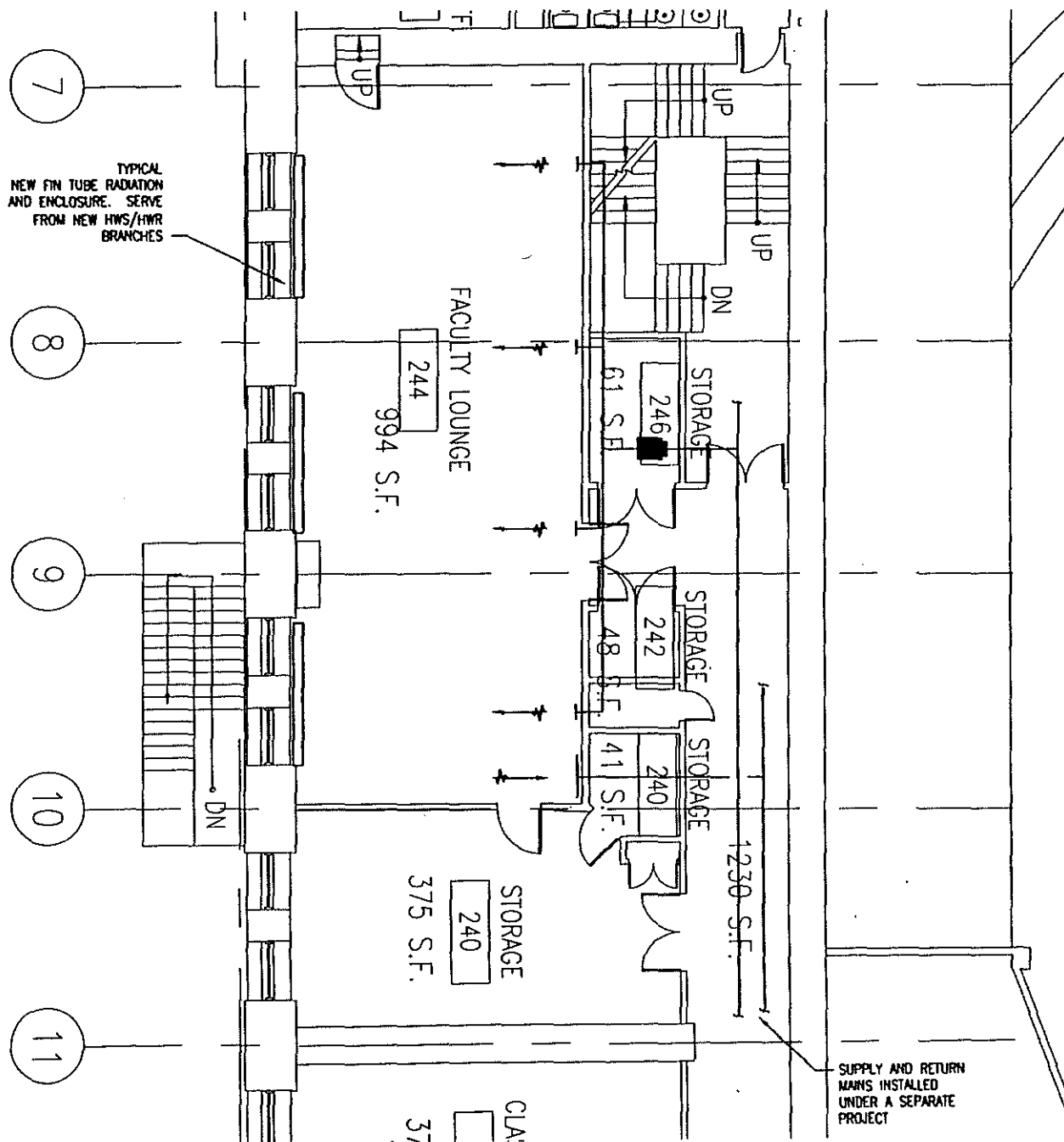
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MEP REQUIREMENTS
3/32" = 1'-0"

THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

SECOND FLOOR
FACULTY LOUNGE



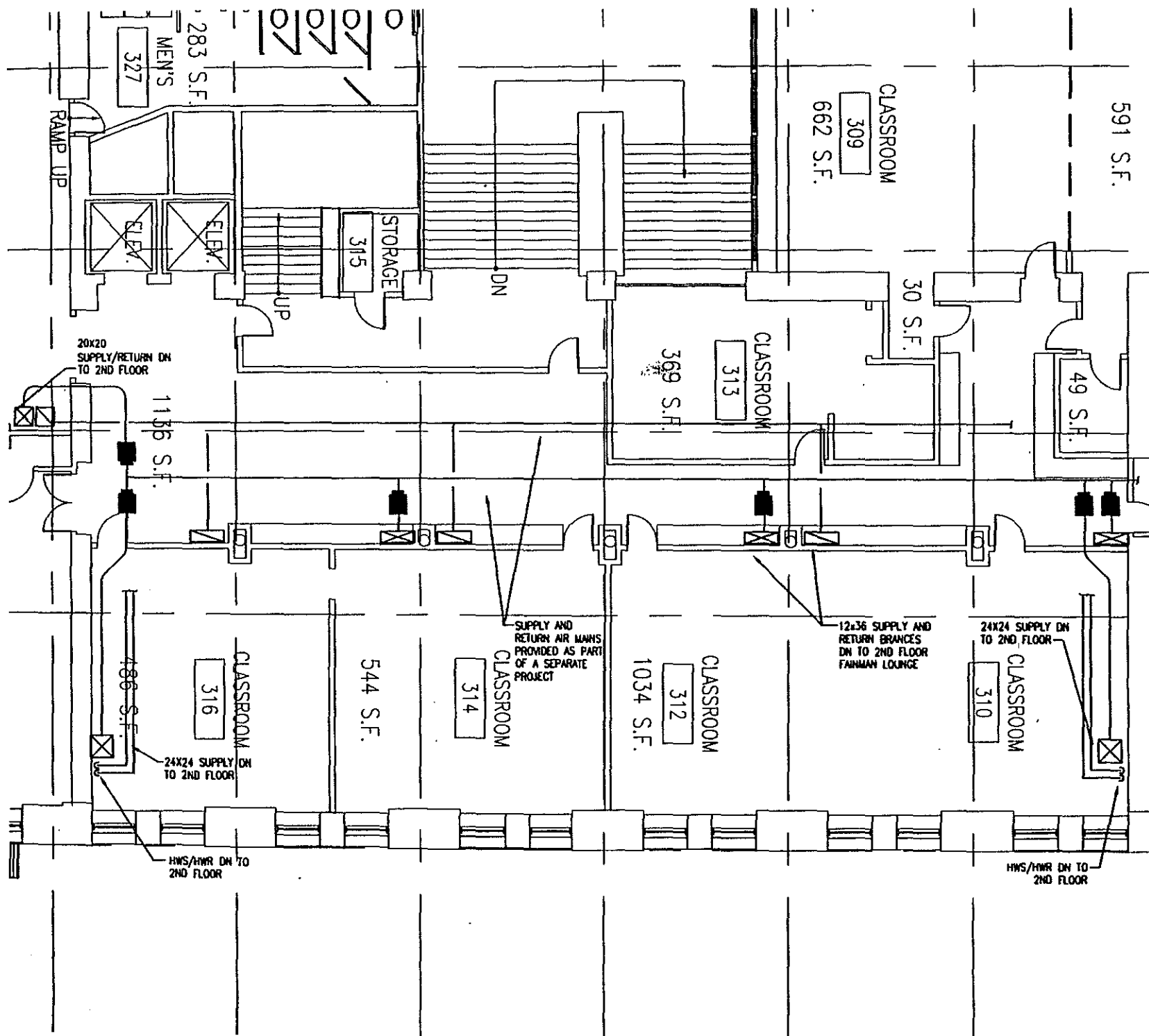
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MEP REQUIREMENTS

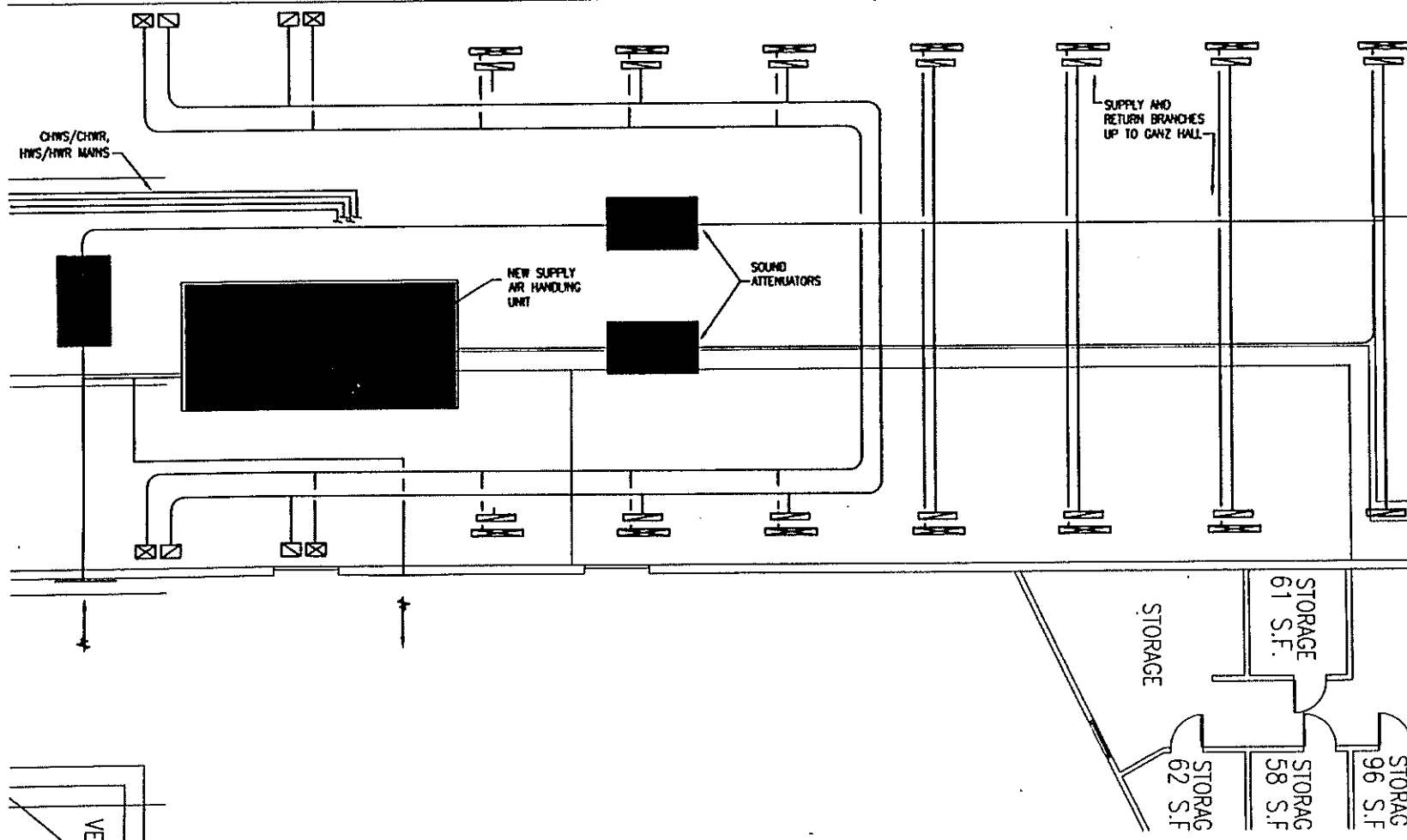
THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

THIRD FLOOR @
FACULTY LOUNGE



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MEP REQUIREMENTS

THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

SIXTH FLOOR @
GANZ HALL

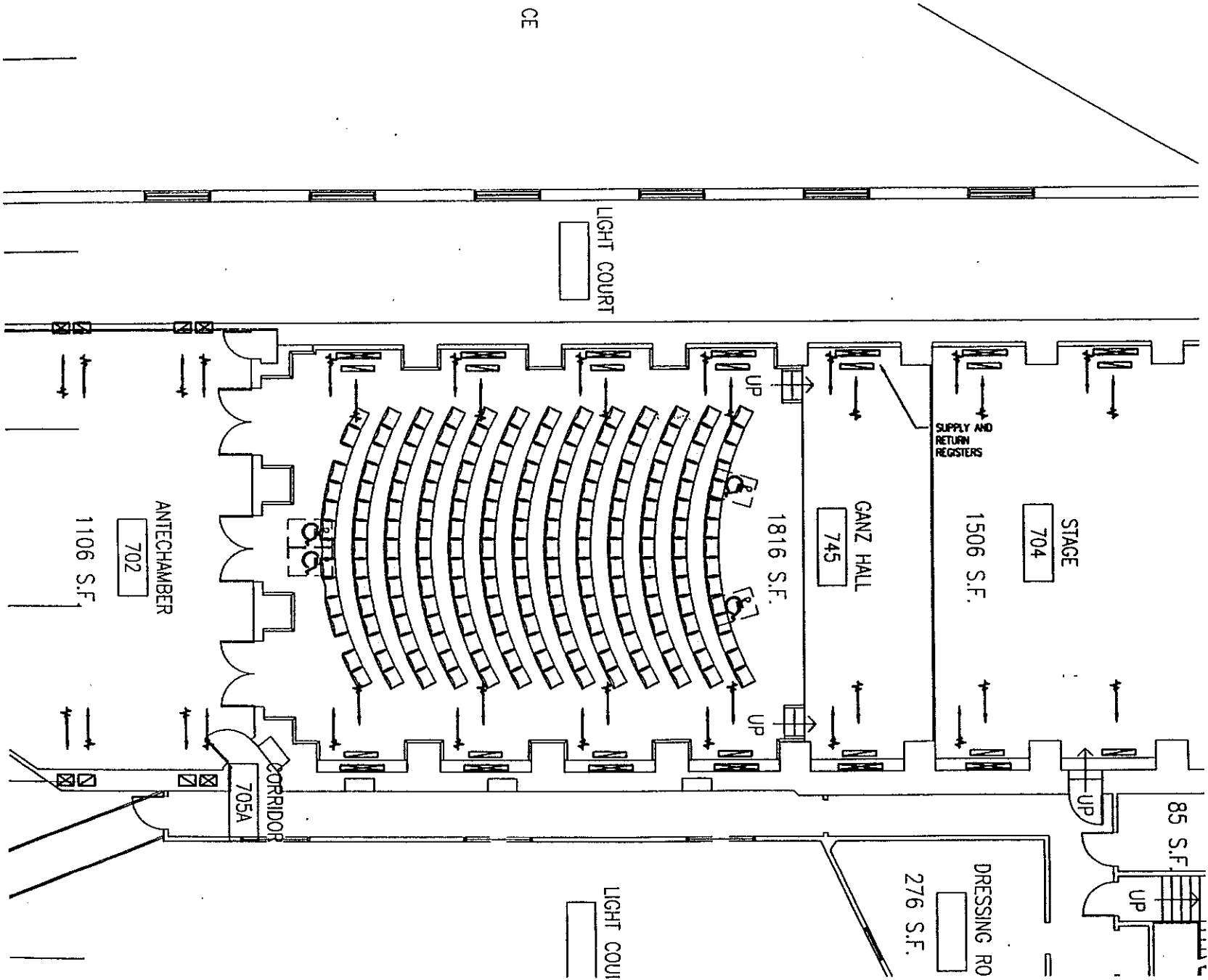
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MEP REQUIREMENTS

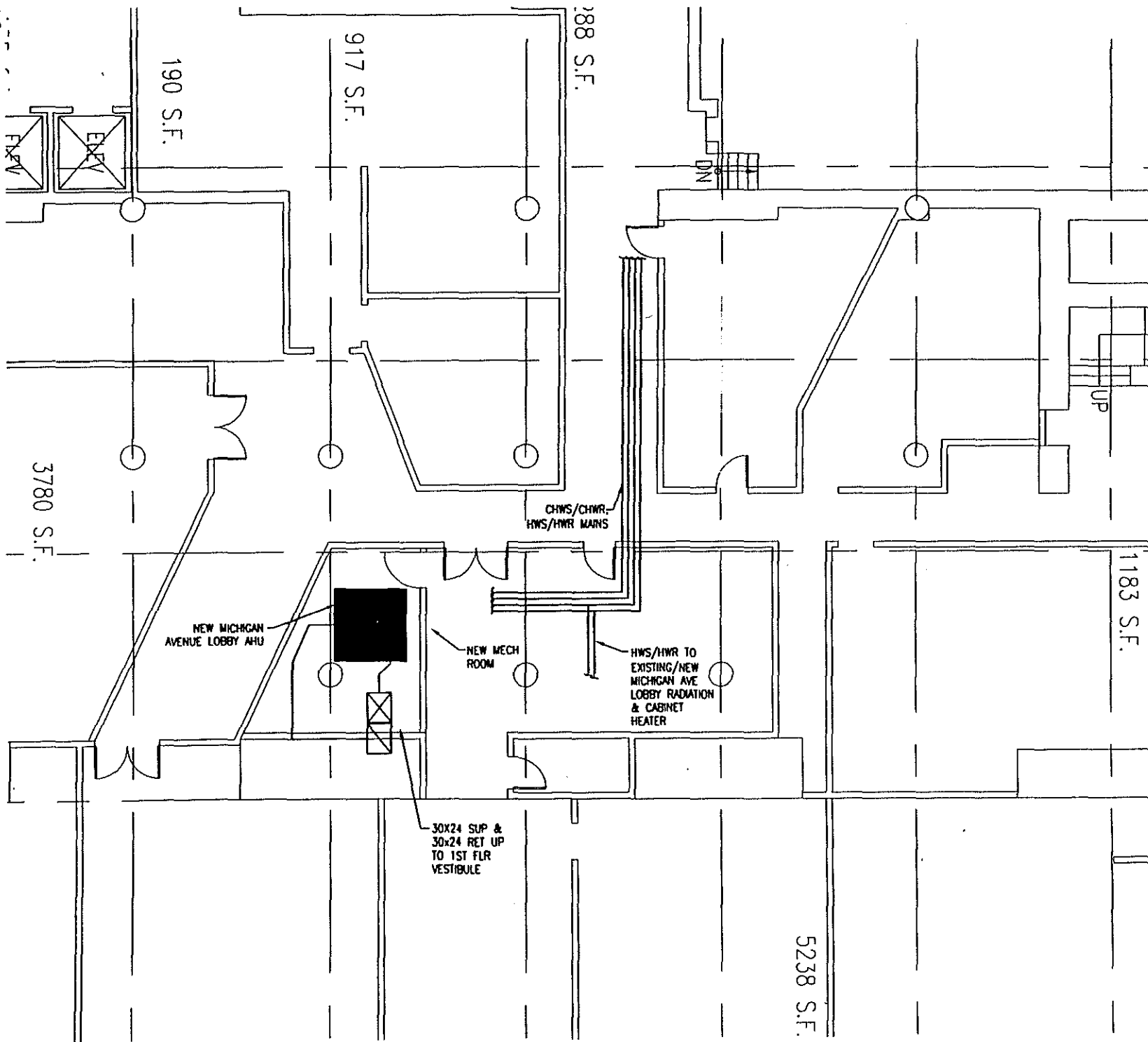
**THE AUDITORIUM
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SEVENTH FLOOR @
GANZ HALL



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Chicago, IL 60605



MEP REQUIREMENTS
 $\frac{3}{32}'' = 1'-0''$

THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

BASEMENT @
MICHIGAN AVE. LOBBY

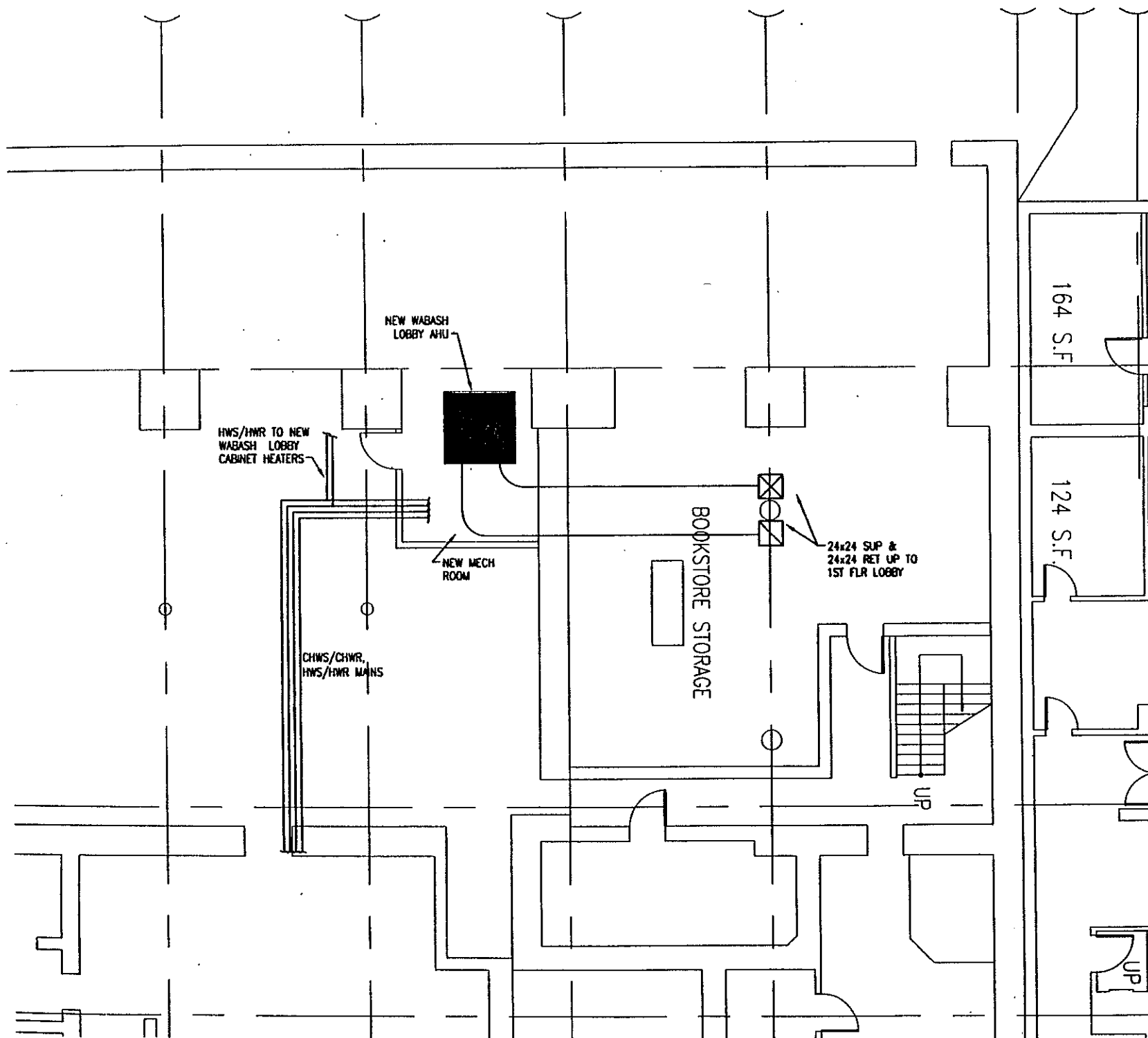
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Chicago, IL 60605

MEP REQUIREMENTS
3/32" = 1'-0"

THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

BASEMENT @
WABASH AVE. LOBBY



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**THE AUDITORIUM
BUILDING**
ROOSEVELT UNIVERSITY

**THE AUDITORIUM
BUILDING**
ROOSEVELT UNIVERSITY

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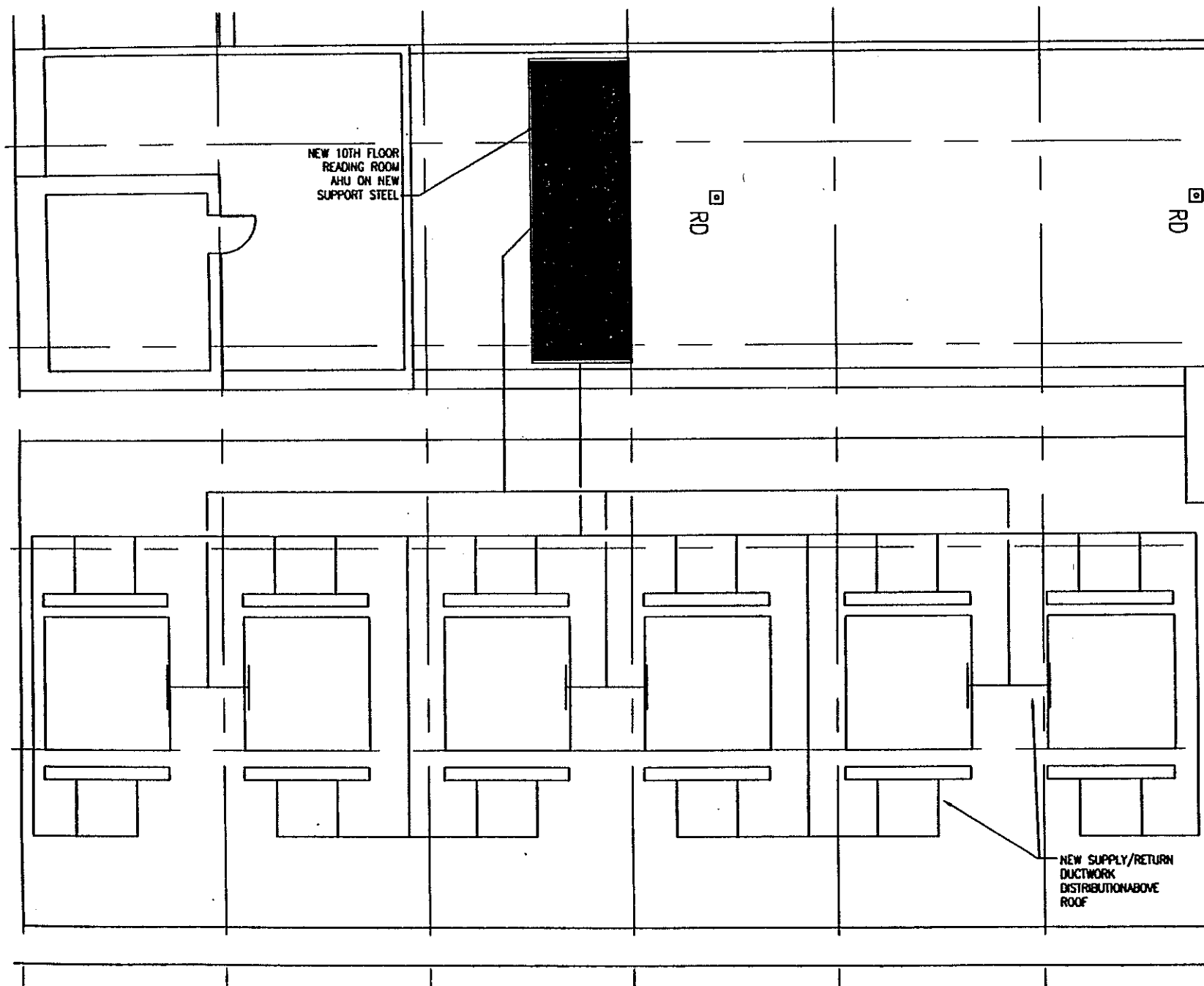
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Chicago, IL 60605

MEP REQUIREMENTS
 $3/32" = 1'-0"$

THE AUDITORIUM
BUILDING
ROOSEVELT UNIVERSITY

ROOF @
READING ROOM



AUDITORIUM BUILDING CONSERVATION MASTERPLAN

MICHIGAN AVENUE, CHICAGO, ILLINOIS

PRELIMINARY ESTIMATE

November 20, 2000

BOOTH/HANSEN ASSOCIATES
555 SOUTH DEARBORN STREET
CHICAGO
ILLINOIS
60605

CONSTRUCTION RESOURCES & MANAGEMENT
8002 RFD
LONG GROVE
ILLINOIS
60047

CLARIFICATIONS & EXCLUSIONS

Basis

This Preliminary cost estimate is based on the drawings and other information provided by the office of Booth/Hansen, Chicago, Illinois received October 26, 2000.

This estimate has been priced at costs that are projected to the first quarter of 2001.

Bidding criteria

This estimate has been prepared on the basis of a minimum of 6 competitive bids being sought for each separate project with only one bid being accepted and the contract awarded to one general contractor.

If prime contracts are bid and awarded this estimate will require adjustment.

Assumptions

It is assumed that each project will be bid and constructed as one contract, if the works are carried out in separate phases this estimate will require adjustment.

It is assumed that work will be performed during regular hours and that the building will be occupied.

Exclusions

It should be noted that the following items are specifically excluded:-

1. Premium costs for overtime working,
2. Owners costs for disruption, additional security, etc.,
3. Contracts for work direct with the owner,
4. Professional fees, permits and testing expenses,
5. Work associated with hazardous materials,
6. Owner administrative legal or finance charges,
7. Escalation.

CLARIFICATIONS & EXCLUSIONS (Continued)

General conditions, design and construction contingencies

Jobsite general conditions, home office overhead, profit and bonds are added at the summary of each estimate. At this time it is appropriate to use the compounded rate of 15.00%.

An allowance of 10.00% for undeveloped design details, bid addenda and clarifications has been added at the summary of each estimate.

An allowance of 10.00% for change orders and unexpected conditions has been added at the summary of each estimate.

Opinion of probable cost

This estimate is an opinion of the probable construction cost for this project based on the information provided. Construction Resources and Management has no control over final material selection, bidding strategies and market conditions therefore no guarantee can be given that the actual construction cost will not vary from this estimate.

It is imperative that as the design progresses additional estimates are produced to ensure compliance with the projected final cost.

Project Title : Auditorium Building Conservation Masterplan

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

GENERAL SUMMARY

Category/element	Cost/\$
Michigan Avenue Lobby	1,165,494
Grand Staircase	560,491
Wabash Avenue Lobby	1,702,941
Fainman Lounge	1,729,309
Sullivan Room	180,934
Faculty Lounge	302,080
Ganz Hall	1,802,301
Reading Room	2,934,138
ESTIMATED COST	\$10,377,688

Project Title : Auditorium Building Conservation Masterplan - Michigan Avenue Lobby

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Demolition	1	25,000.00	LS	25,000	
Miscellaneous holes, cores and chases	1	1,500.00	LS	1,500	
Temporary barriers, screens, etc.	1	15,000.00	LS	15,000	
Temporary protection	1	3,000.00	LS	3,000	
Dumpster - disposal of debris	12	420.00	EA	5,040	
Patch/level subfloor	1	1,000.00	LS	1,000	
Grind concrete slab to create slope - handicap access	1	2,500.00	LS	2,500	53,040
<u>Architectural enclosure:</u>					
Custom replica cast metal window wall/entry system	360	200.00	SF	72,000	
Ditto pair entry doors	1	7,500.00	EA	7,500	
Custom replica cast metal bench	18	450.00	LF	8,100	
Shop drawings, patterns, molds and samples	1	25,000.00	LS	25,000	
Power operated handicap access	1	7,500.00	EA	7,500	
Custom hardware set - entry door	1	1,500.00	EA	1,500	
Patch sidewalk at new entry system	1	2,500.00	LS	2,500	
Infill wall - entrance	1	500.00	LS	500	
Ditto - mailboxes	2	900.00	EA	1,800	126,400
<u>Finishes, etc.:</u>					
Interior stained glass window, oak frame	113	165.00	SF	18,645	
Pair custom oak panel entrance doors and frame, hardware and finishes	1	4,300.00	EA	4,300	
Ditto - interior	3	4,300.00	EA	12,900	
New bronze elevator doors and frames	2	10,000.00	EA	20,000	
Strip and stain existing lunettes, doors, frames and trim - custom color	1	15,000.00	LS	15,000	
Patch and repair mosaic floor (10% allowance)	405	236.00	SF	95,580	
Clean mosaic floor	3,643	2.00	SF	7,286	
Miscellaneous repairs to existing bases	1	1,500.00	LS	1,500	
Miscellaneous cleaning stone finishes	1	3,000.00	LS	3,000	
Faux stone finish	144	110.00	SF	15,840	
Repair and clean faux stone columns	3	4,800.00	EA	14,400	
Apply gold leaf to existing column capital	3	1,000.00	EA	3,000	
Wood panel - elevator lobby	1	31,500.00	LS	31,500	

Project Title : Auditorium Building Conservation Masterplan - Michigan Avenue Lobby

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Finishes, etc. (Continued):</u>					
Patch plasterwork at mechanical and electrical penetrations	38	81.50	EA	3,097	
Miscellaneous plaster patching (allowance)	1	10,000.00	LS	10,000	
Miscellaneous painting	1	5,000.00	LS	5,000	
Miscellaneous painting and touchup in adjacent areas	1	1,000.00	LS	1,000	262,048
<u>Furniture:</u>					
Custom period seating	32	450.00	EA	14,400	
Ditto sofa	3	2,500.00	EA	7,500	
Miscellaneous furniture	1	5,000.00	LS	5,000	
Signage	1	5,000.00	LS	5,000	
Building directory	1	15,000.00	LS	15,000	
Ornamental grille	100	125.00	SF	12,500	59,400
<u>Miscellaneous:</u>					
Miscellaneous trim and patching	1	2,500.00	LS	2,500	
Alterations to basement - new mechanical room	1	30,000.00	LS	30,000	
Historic investigation of original colors	80	80.00	HR	6,400	
Miscellaneous gypsum board enclosures in adjacent areas	1	10,000.00	LS	10,000	48,900
<u>Mechanical systems:</u>					
<u>Plumbing:</u>					
New floor drain and associated work for condensate drain	1	2,000.00	LS	2,000	
<u>HVAC:</u>					
Selective demolition and disposal of obsolete work	1	1,000.00	LS	1,000	
New system comprising airhandling unit with coils, filters; air distribution with dampers, sound attenuation, grilles, diffusers, etc.	1	50,000.00	LS	50,000	
Chilled water pumps (2)	1	10,000.00	LS	10,000	
Hot water pumps (2)	1	10,000.00	LS	10,000	
Heat exchanger	1	10,000.00	LS	10,000	
Duplex condensate pump set	1	6,000.00	LS	6,000	
Insulated steam, condensate, hot, chilled and condensate drain piping; connections to equipment and provision for future, etc.	1	51,000.00	LS	51,000	
Chilled water plant (prorated cost)	1	27,000.00	LS	27,000	

Project Title : Auditorium Building Conservation Masterplan - Michigan Avenue Lobby

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Mechanical systems (Continued):</u>					
Rework existing radiation and add new	1	10,000.00	LS	10,000	
New cabinet heaters and associated work	1	6,000.00	LS	6,000	
DDC controls	1	20,000.00	LS	20,000	
Miscellaneous work, shop drawings, testing, balancing, identification, etc.	1	6,000.00	LS	6,000	
General work associated with the mechanical systems	1	5,000.00	LS	5,000	214,000
<u>Electrical systems:</u>					
Add 100A switch to existing panel	1	900.00	EA	900	
Run 100A feeder to panel	100	14.00	LF	1,400	
100A panel	1	1,900.00	EA	1,900	
Connect motors - 1hp - 15hp	6	650.00	EA	3,900	
Size #2 starter	5	1,200.00	EA	6,000	
Add 100A switch to existing panel	1	900.00	EA	900	
Run 100A feeder to panel	100	14.00	LF	1,400	
100A panel	1	1,900.00	EA	1,900	
Connect motors - 1hp - 15hp	6	650.00	EA	3,900	
Size #2 starter	5	1,200.00	EA	6,000	
Relamp fixture - XA	12	303.00	EA	3,636	
Ditto - XB	89	33.00	EA	2,937	
Ditto - XD	4	21.00	EA	84	
Ditto - XH	6	45.00	EA	270	
Replace globe - XD fixture	1	136.00	EA	136	
Add type SL track - 4'	2	270.00	EA	540	
Add type SL light	6	400.00	EA	2,400	
Add track feeder	1	250.00	EA	250	
Add SB fixture	24	335.00	EA	8,040	

Project Title : Auditorium Building Conservation Masterplan - Michigan Avenue Lobby

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Electrical systems (Continued):</u>					
Lighting fixture - battery pack	6	600.00	EA	3,600	
Ditto - exit	8	600.00	EA	4,800	
Receptacle	40	260.00	EA	10,400	
Fire alarm devices	13	500.00	EA	6,500	
General work associated with the electrical systems	1	2,000.00	LS	2,000	73,793
<u>General conditions and contingencies:</u>				Subtotal	837,581
General conditions, overhead & profit				15.00%	125,637
Design contingency				10.00%	96,322
Construction contingency				10.00%	105,954
ESTIMATED COST					\$1,165,494

Project Title : Auditorium Building Conservation Masterplan - Grand Staircase

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Demolition	1	5,000.00	LS	5,000	
Miscellaneous holes, cores and chases	1	3,300.00	LS	3,300	
Temporary barriers, screens, etc.	1	10,000.00	LS	10,000	
Temporary protection	1	3,000.00	LS	3,000	
Dumpster - disposal of debris	4	420.00	EA	1,680	22,980
<u>Finishes, etc.:</u>					
Strip, clean and refinish cast metal newel post	12	980.00	EA	11,760	
Ditto balustrade	110	120.00	LF	13,200	
Ditto mahogany handrail	550	55.00	LF	30,250	
Refinish wood door - first floor landing	1	400.00	EA	400	
Remove and reinstall art glass ceiling and wall panels	1	18,000.00	LS	18,000	
Infill vent opening	1	500.00	LS	500	
Mosaic floor - first landing	272	236.00	SF	64,192	
Patch mosaic floor - second landing (allowance)	50	397.00	SF	19,850	
Clean existing finishes to remain	1	1,000.00	LS	1,000	
Clean and repair stonework	1	15,000.00	LS	15,000	
Strip paint from plaster frieze and hand tool finish	850	100.00	SF	85,000	
Patch plaster at vent	1	250.00	LS	250	
Patch ornamental plaster at door	1	1,400.00	LS	1,400	
Patch or hand tool plasterwork	150	30.00	SF	4,500	
Ditto underside of stair	800	30.00	SF	24,000	
Cut out and patch ornamental plasterwork	30	120.00	SF	3,600	
Patch plasterwork at mechanical and electrical penetrations	40	81.50	EA	3,260	
Miscellaneous plaster patching	1	5,000.00	LS	5,000	
Paint ornamental plasterwork	880	1.30	SF	1,144	
Paint plaster walls and staircase	7,000	0.65	SF	4,550	
Ditto soffits	960	0.65	SF	624	307,480
<u>Miscellaneous:</u>					
Miscellaneous painting and touch up of adjacent areas	1	1,500.00	LS	1,500	
Miscellaneous trim and patching	1	2,500.00	LS	2,500	
Historic investigation of original colors	80	80.00	HR	6,400	10,400

Project Title : Auditorium Building Conservation Masterplan - Grand Staircase

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Electrical systems:</u>					
Add fixture - type SA	1	1,194.00	EA	1,194	
Ditto - type SC	11	894.00	EA	9,834	
Ditto - type SD	11	1,396.00	EA	15,356	
Ditto - type SM - 8'	12	526.00	EA	6,312	
Ditto - type SN	36	300.00	EA	10,800	
Ditto - type ST	20	455.00	EA	9,100	
Ditto - emergency	4	600.00	EA	2,400	
Ditto - exit	4	600.00	EA	2,400	
Receptacle	4	260.00	EA	1,040	
Fire alarm devices	4	500.00	EA	2,000	
General work associated with the electrical systems	1	1,500.00	LS	1,500	61,936
<u>General conditions and contingencies:</u>		Subtotal			402,796
General conditions, overhead & profit		15.00%			60,419
Design contingency		10.00%			46,322
Construction contingency		10.00%			50,954
ESTIMATED COST					\$560,491

Project Title : Auditorium Building Conservation Masterplan - Wabash Avenue Lobby

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Demolition	1	20,000.00	LS	20,000	
Miscellaneous holes, cores and chases	1	2,700.00	LS	2,700	
Form opening in roof structure for new skylight	1	20,000.00	LS	20,000	
Temporary barriers, screens, etc.	1	15,000.00	LS	15,000	
Temporary protection	1	7,500.00	LS	7,500	
Dumpster - disposal of debris	6	420.00	EA	2,520	
Patch subfloors	120	15.00	SF	1,800	69,520
<u>Architectural enclosure:</u>					
Custom replica cast metal entrance, tinted insulated glass	434	200.00	SF	86,800	
Ditto single entrance door	2	6,000.00	EA	12,000	
Ditto revolving door	2	65,000.00	EA	130,000	
Shop drawings, patterns, molds and samples - entry framing system	1	25,000.00	LS	25,000	
Custom hardware set - entry door	2	1,500.00	EA	3,000	
Skylight	50	95.00	SF	4,750	
Patch sidewalk at new entry system	1	1,500.00	LS	1,500	263,050
<u>Finishes, etc.:</u>					
Strip, clean and refinish cast metal newel post	45	980.00	EA	44,100	
Ditto balustrade	400	120.00	LF	48,000	
Ditto mahogany handrail	500	55.00	LF	27,500	
Custom replica cast metal balustrade	100	350.00	LF	35,000	
Ditto newel post (allowance)	5	4,000.00	EA	20,000	
Shop drawings, patterns, molds and samples - balustrade components	1	25,000.00	LS	25,000	
Interior glazing, frosted glass and oak frame	192	75.00	SF	14,400	
Guard station desk (allowance)	1	20,000.00	LS	20,000	
Refinish elevator doors and frames	18	1,500.00	EA	27,000	
New bronze elevator doors and frames	2	10,000.00	EA	20,000	
Paint/refinish retained doors	1	3,000.00	LS	3,000	
Gypsum board infill - unused stair access	1	900.00	LS	900	
Custom clay tile mosaic floor - lobby	400	165.00	SF	66,000	
Ditto - 7th, 8th and 10th lobby	400	165.00	SF	66,000	
Patch and repair custom clay tile mosaic floor - landings	100	270.00	SF	27,000	
Clean clay tile mosaic floor	3,000	2.00	SF	6,000	

Project Title : Auditorium Building Conservation Masterplan - Wabash Avenue Lobby

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Finishes, etc. (Continued):</u>					
Ornamental plaster panels - lobby stair soffit	340	75.00	SF	25,500	
Patch or hand tool plasterwork (10% allowance)	1,260	30.00	SF	37,800	
Cut out and patch ornamental plasterwork (allowance)	1	2,700.00	LS	2,700	
Patch plasterwork at mechanical and electrical penetrations	68	81.50	EA	5,542	
Paint ornamental plasterwork	365	1.30	SF	475	
Paint existing plaster walls	8,000	0.65	SF	5,200	
Ditto soffits and beams	3,000	0.65	SF	1,950	
Miscellaneous painting and touch up in adjacent areas	1	5,000.00	LS	5,000	
Marble wainscot - first floor landing	200	75.00	SF	15,000	
Ditto - guard desk	56	75.00	SF	4,200	
Marble walls - lobby	480	75.00	SF	36,000	
Signage	1	5,000.00	LS	5,000	
Building directory	1	15,000.00	LS	15,000	609,267
<u>Miscellaneous:</u>					
Miscellaneous trim and patching	1	2,500.00	LS	2,500	
Historic investigation of original colors	40	80.00	HR	3,200	
Alterations to basement - new mechanical room (allowance)	1	30,000.00	LS	30,000	35,700
<u>Mechanical systems:</u>					
<u>Plumbing:</u>					
New floor drain and associated work for condensate drain	1	2,000.00	LS	2,000	
<u>HVAC:</u>					
Selective demolition and disposal of obsolete work	1	2,000.00	LS	2,000	
New system comprising airhandling unit with coils, filters; air distribution with dampers, sound attenuation, grilles, diffusers, etc.	1	28,000.00	LS	28,000	
Hot water pumps (2)	1	10,000.00	LS	10,000	
Heat exchanger	1	10,000.00	LS	10,000	
Duplex condensate pump set	1	6,000.00	LS	6,000	
Insulated steam, condensate, hot, chilled and condensate drain piping; connections to equipment and provision for future, etc.	1	52,000.00	LS	52,000	
Chilled water plant (prorated cost)	1	14,000.00	LS	14,000	
Replace cabinet heaters and associated work	1	10,000.00	LS	10,000	
DDC controls	1	20,000.00	LS	20,000	
Miscellaneous work, shop drawings, testing, balancing, identification, etc.	1	4,000.00	LS	4,000	
General work associated with the mechanical systems	1	4,000.00	LS	4,000	162,000

Project Title : Auditorium Building Conservation Masterplan - Wabash Avenue Lobby

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Electrical systems:</u>					
Add 100A switch to existing panel	1	900.00	EA	900	
Run 100A feeder to panel	100	14.00	LF	1,400	
100A panel	1	1,900.00	EA	1,900	
Connect motors - 1hp - 15hp	6	650.00	EA	3,900	
Size #2 starter	5	1,200.00	EA	6,000	
Add SA fixture	27	1,124.00	EA	30,348	
Add SC fixture	22	894.00	EA	19,668	
Add SR fixture	8	508.00	EA	4,064	
Lighting fixture - emergency	10	600.00	EA	6,000	
Receptacle	10	260.00	EA	2,600	
Fire alarm devices	10	500.00	EA	5,000	
General work associated with the electrical systems	1	2,500.00	LS	2,500	84,280
<u>General conditions and contingencies:</u>		Subtotal			1,223,817
General conditions, overhead & profit		15.00%			183,572
Design contingency		10.00%			140,739
Construction contingency		10.00%			154,813
ESTIMATED COST					\$1,702,941

Project Title : Auditorium Building Conservation Masterplan - Fainman Lounge

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Demolition	1	28,000.00	LS	28,000	
Miscellaneous holes, cores and chases	1	9,000.00	LS	9,000	
Temporary barriers, screens, etc.	1	15,000.00	LS	15,000	
Temporary protection	1	3,000.00	LS	3,000	
Dumpster - disposal of debris	12	420.00	EA	5,040	
Patch subfloors (10% allowance)	460	15.00	SF	6,900	66,940
<u>Architectural enclosure:</u>					
Custom replica cast metal window wall, low E insulated glass	1,104	200.00	SF	220,800	
Shop drawings, patterns, molds and samples	1	25,000.00	LS	25,000	245,800
<u>Finishes, etc.:</u>					
Clean up and repair Loggia stonework	1	5,000.00	LS	5,000	
Fin tube enclosure	92	175.00	LF	16,100	
Repair stained glass window	48	50.00	SF	2,400	
Light box	2	500.00	EA	1,000	
Custom historic replica fireplace	1	50,000.00	EA	50,000	
Rework partitions, ceilings, etc. at northwest office entrance	1	16,000.00	LS	16,000	
Pair oak doors and frame, hardware, finishes	2	4,300.00	EA	8,600	
New bronze elevator doors and frames	2	10,000.00	EA	20,000	
Custom carpet and pad (\$80.00/SY installed allowance)	3,312	8.90	SF	29,477	
Clean loggia floor	1,196	2.00	SF	2,392	
Miscellaneous repairs to existing bases	1	1,500.00	LS	1,500	
Repair and clean faux stone column cladding	1	10,000.00	LS	10,000	
Strip paint from plaster frieze and hand tool finish	1,640	100.00	SF	164,000	
Patch or hand tool plasterwork (10% allowance)	639	30.00	SF	19,170	
Cut out and patch ornamental plasterwork (10% allowance)	290	120.00	SF	34,800	
Patch plasterwork at mechanical and electrical penetrations	212	81.50	EA	17,278	
Paint ornamental plaster	1,930	1.30	SF	2,509	
Paint existing plaster walls	2,678	0.65	SF	1,741	
Paint existing plaster soffits and beams	4,672	0.65	SF	3,037	
New plaster ceiling, painted - loggia	1,104	12.00	SF	13,248	
Apply gold leaf finish to existing column capital	5	1,000.00	EA	5,000	
Stencil finish to plaster (allowance)	3,000	25.00	SF	75,000	
Miscellaneous painting and touchup in adjacent areas	1	3,000.00	LS	3,000	501,251

Project Title : Auditorium Building Conservation Masterplan - Fainman Lounge

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Furniture:</u>					
Custom period seating	30	450.00	EA	13,500	
Miscellaneous furniture	1	5,000.00	LS	5,000	
Signage	1	2,000.00	LS	2,000	20,500
<u>Miscellaneous:</u>					
Miscellaneous trim and patching	1	2,500.00	LS	2,500	
Gypsum board enclosures, supply and return ductwork risers - third floor classrooms	1	10,000.00	LS	10,000	
Historic investigation of stencil patterns and colors	80	80.00	HR	6,400	18,900
<u>Mechanical systems:</u>					
<u>HVAC:</u>					
Selective demolition and disposal of obsolete work	1	2,000.00	LS	2,000	
Air handling unit (prorated cost)	1	35,000.00	LS	35,000	
New system comprising air distribution with dampers, sound attenuation, grilles, diffusers, etc.	1	65,000.00	LS	65,000	
Hot water pumps (2)	1	10,000.00	LS	10,000	
Heat exchanger	1	10,000.00	LS	10,000	
Duplex condensate pump set	1	6,000.00	LS	6,000	
Insulated steam, condensate, hot water and condensate drain piping; connections to equipment and provision for future, etc.	1	45,000.00	LS	45,000	
Chilled water plant (prorated cost)	1	47,000.00	LS	47,000	
Remove existing radiation and add new	1	10,000.00	LS	10,000	
DDC controls	1	10,000.00	LS	10,000	
Miscellaneous work, shop drawings, testing, balancing, identification, etc.	1	6,000.00	LS	6,000	
General work associated with the mechanical systems	1	5,000.00	LS	5,000	251,000
<u>Electrical systems:</u>					
Add 200A switch to existing panel	1	1,200.00	EA	1,200	
Run 200A feeder to panel	150	22.00	LF	3,300	
200A panel	1	2,650.00	EA	2,650	
Connect motors - 1hp - 15hp	3	650.00	EA	1,950	
Size #2 starter	2	1,200.00	EA	2,400	
Lighting fixture - type SA	13	1,124.00	EA	14,612	
Ditto - SC	44	894.00	EA	39,336	
Ditto - SD	6	1,396.00	EA	8,376	

Project Title : Auditorium Building Conservation Masterplan - Fainman Lounge

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Electrical systems (Continued):</u>					
Ditto - SM - 8'	46	506.00	EA	23,276	
Ditto - SN	4	540.00	EA	2,160	
Ditto - SR	5	508.00	EA	2,540	
Ditto - exit	6	600.00	EA	3,600	
Ditto - emergency	6	600.00	EA	3,600	
Remove 1' X 4' fixture	19	45.00	EA	855	
Remove 2' X 4' fixture	3	60.00	EA	180	
Receptacle	36	260.00	EA	9,360	
Tel/data outlet	36	260.00	EA	9,360	
Investigation for drops	16	70.00	HR	1,120	
Fire alarm devices	10	500.00	EA	5,000	
General work associated with the electrical systems	1	3,500.00	LS	3,500	138,375
<u>General conditions and contingencies:</u>		Subtotal			1,242,766
General conditions, overhead & profit		15.00%			186,415
Design contingency		10.00%			142,918
Construction contingency		10.00%			157,210
ESTIMATED COST					\$1,729,309

Project Title : Auditorium Building Conservation Masterplan - Sullivan Room

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Remove window	8	175.00	EA	1,400	
Swing staging	1	7,500.00	LS	7,500	
Miscellaneous demolition	1	2,000.00	LS	2,000	
Temporary protection	1	3,000.00	LS	3,000	
Dumpster - disposal of debris	2	420.00	EA	840	14,740
<u>Finishes, etc.:</u>					
Custom wood historic profile sash windows (3'-6" X 9'), hardware and finishes	8	4,300.00	EA	34,400	
Fin tube enclosure	36	175.00	LF	6,300	
Miscellaneous trim and patching	1	3,000.00	LS	3,000	
Miscellaneous painting and touch up	1	2,000.00	LS	2,000	
Patch plasterwork at mechanical and electrical penetrations	12	81.50	SF	978	
Historic investigation of stencil patterns and colors	80	80.00	HR	6,400	
Ditto curtains	40	80.00	HR	3,200	56,278
<u>Mechanical systems:</u>					
<u>HVAC:</u>					
Selective demolition and disposal of obsolete work	1	1,000.00	LS	1,000	
Air handling unit (prorated cost)	1	10,000.00	LS	10,000	
New system comprising air distribution with dampers, grilles, diffusers, VAV box, etc.	1	16,000.00	LS	16,000	
Insulated hot water piping and connections to equipment, etc.	1	4,000.00	LS	4,000	
Chilled water plant (prorated cost)	1	5,000.00	LS	5,000	
Replace existing radiation and add new	1	10,000.00	LS	10,000	
DDC controls	1	3,000.00	LS	3,000	
Miscellaneous work, shop drawings, testing, balancing, identification, etc.	1	3,000.00	LS	3,000	
General work associated with the mechanical systems	1	2,500.00	LS	2,500	54,500

Project Title : Auditorium Building Conservation Masterplan - Sullivan Room

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Electrical systems:</u>					
Add exit sign	1	600.00	EA	600	
Add emergency light	1	600.00	EA	600	
Fire alarm devices	2	500.00	EA	1,000	
Tel/data outlet	2	260.00	EA	520	
Receptacle	4	260.00	EA	1,040	
General work associated with the electrical systems	1	750.00	LS	750	4,510
<u>General conditions and contingencies:</u>				Subtotal	130,028
General conditions, overhead & profit		15.00%			19,504
Design contingency		10.00%			14,953
Construction contingency		10.00%			16,449
ESTIMATED COST					\$180,934

Project Title : Auditorium Building Conservation Masterplan - Faculty Lounge

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Remove door	3	150.00	EA	450	
Remove window	6	175.00	EA	1,050	
Remove carpet and linoleum floor finish	1,040	0.75	SF	780	
Miscellaneous demolition	1	2,000.00	LS	2,000	
Miscellaneous holes, cores and chases	1	2,500.00	LS	2,500	
Temporary protection	1	3,000.00	LS	3,000	
Swing staging	1	7,500.00	LS	7,500	
Dumpster - disposal of debris	2	420.00	EA	840	
Patch floor (10% allowance)	104	15.00	SF	1,560	19,680
<u>Finishes, etc.:</u>					
Single custom oak panel door and frame, hardware and finishes	2	2,200.00	EA	4,400	
Pair ditto	1	4,300.00	EA	4,300	
Custom historic profile wood sash window, hardware, finishes 3'6"x9'0"	6	4,300.00	EA	25,800	
Custom carpet and pad (\$80.00/SY installed allowance)	1,040	8.90	SF	9,256	
Miscellaneous minor repairs to wood paneling (allowance)	1	1,500.00	LS	1,500	
Patch or hand tool plasterwork (10% allowance)	160	30.00	SF	4,800	
Cut out and patch ornamental plasterwork (allowance)	40	120.00	SF	4,800	
Patch plasterwork at mechanical and electrical penetrations	56	81.50	EA	4,564	
Paint ornamental plasterwork	200	1.30	SF	260	
Paint existing plaster walls	376	0.65	SF	244	
Paint existing ceiling and beams	1,400	0.65	SF	910	
Paint ventilation grille	4	50.00	EA	200	
Wood blind - 3'-6" X 9'	6	475.00	EA	2,850	
Fin tube enclosure	48	175.00	LF	8,400	
Miscellaneous trim and patching	1	3,000.00	LS	3,000	
Miscellaneous painting and touch up	1	2,000.00	LS	2,000	
Historic investigation of ceiling and plaster ornament colors	40	80.00	HR	3,200	80,484
<u>Mechanical systems:</u>					
<u>HVAC:</u>					
Selective demolition and disposal of obsolete work	1	2,000.00	LS	2,000	
Air handling unit (prorated cost)	1	10,000.00	LS	10,000	
New system comprising air distribution with dampers, grilles, diffusers, VAV box, etc.	1	12,000.00	LS	12,000	
Insulated hot water piping and connections to equipment, etc.	1	15,000.00	LS	15,000	

Project Title : Auditorium Building Conservation Masterplan - Faculty Lounge

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Mechanical systems (Continued):</u>					
Chilled water plant (prorated cost)	1	5,000.00	LS	5,000	
Replace existing radiation and add new	1	10,000.00	LS	10,000	
DDC controls	1	4,000.00	LS	4,000	
Miscellaneous work, shop drawings, testing, balancing, identification, etc.	1	2,000.00	LS	2,000	
General work associated with the mechanical systems	1	2,000.00	LS	2,000	62,000
<u>Electrical systems:</u>					
Demolition	1	1,000.00	LS	1,000	
Lighting fixture - type SF	3	6,545.00	EA	19,635	
Ditto - type SG	14	1,275.00	EA	17,850	
Ditto - type SJ	12	560.00	EA	6,720	
Ditto - emergency	3	600.00	EA	1,800	
Ditto - exit	3	600.00	EA	1,800	
Receptacle	6	260.00	EA	1,560	
Tel/data outlet	6	260.00	EA	1,560	
Fire alarm devices	3	500.00	EA	1,500	
General work associated with the electrical systems	1	1,500.00	LS	1,500	54,925
<u>General conditions and contingencies:</u>				Subtotal	217,089
General conditions, overhead & profit				15.00%	32,563
Design contingency				10.00%	24,965
Construction contingency				10.00%	27,462
ESTIMATED COST					\$302,080

Project Title : Auditorium Building Conservation Masterplan - Ganz Hall**Estimate type : Preliminary****Project Location : Michigan Avenue, Chicago, Illinois****Date : November 20, 2000**

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Demolition	1	35,000.00	LS	35,000	
Remove EIFS cladding	1	2,000.00	LS	2,000	
Miscellaneous holes, cores and chases	1	3,500.00	LS	3,500	
Scaffolding	1	20,000.00	LS	20,000	
Temporary protection	1	15,000.00	LS	15,000	
Dumpster - disposal of debris	20	420.00	EA	8,400	83,900
<u>Building enclosure:</u>					
Replace glazing seals at aluminum windows	1	5,000.00	LS	5,000	
Miscellaneous exterior wall repairs (allowance)	1	25,000.00	LS	25,000	
Structural repairs clay floor tiles (allowance)	1	25,000.00	LS	25,000	
Repair stained glass	540	50.00	SF	27,000	
Metal panels at roof	550	25.00	SF	13,750	95,750
<u>Finishes, etc.:</u>					
Refinish door	7	250.00	EA	1,750	
Pair custom birch panel doors and frame, hardware and finishes	2	4,300.00	EA	8,600	
Restore and repair wood panels, doors and frames	1,800	90.00	SF	162,000	
Restore fretwork	1	50,000.00	LS	50,000	
Ledge at oil painting	6	400.00	EA	2,400	
Historic replica column capital	2	1,430.00	EA	2,860	
Custom wood grille	4	1,125.00	EA	4,500	
Plaster finish at murals	480	30.00	SF	14,400	
Restore paintings	1	140,000.00	LS	140,000	
Repair/stabilize plaster ornament	1	1,500.00	EA	1,500	
Gold leaf to moldings and ornament	1	5,200.00	LS	5,200	
Patch plasterwork at roof drain relocation	1	1,000.00	LS	1,000	
Patch plasterwork at mechanical and electrical penetrations	77	81.50	EA	6,276	
Miscellaneous plaster patching or hand tooling (allowance)	150	30.00	SF	4,500	
Miscellaneous cut out and ornamental plaster patching (allowance)	75	120.00	SF	9,000	
Paint ornamental plaster	750	1.30	SF	975	
Paint plaster walls	570	0.65	SF	371	
Stencil finish to plaster coffers	1,950	25.00	SF	48,750	
Ditto arched soffits	187	25.00	SF	4,675	
Ditto beams	865	25.00	SF	21,625	
Ditto ladies parlor	45	25.00	SF	1,125	
Ditto lunettes	190	50.00	SF	9,500	

Project Title : Auditorium Building Conservation Masterplan - Ganz Hall

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Finishes, etc. (Continued):</u>					
Handpainting (allowance)	1	4,000.00	LS	4,000	510,006
Miscellaneous painting and touchup in adjacent areas	1	5,000.00	LS	5,000	
<u>Miscellaneous:</u>					
Miscellaneous trim and patching	1	5,000.00	LS	5,000	48,900
Alterations to Ganz Hall interstitial space - mechanical room	1	15,000.00	LS	15,000	
Miscellaneous gypsum board enclosures in adjacent areas	1	7,500.00	LS	7,500	
Historic investigation of original colors	80	80.00	HR	6,400	
Remodeling existing toilet room (allowance)	1	15,000.00	LS	15,000	
<u>Mechanical systems:</u>					
<u>Plumbing:</u>					
Remove existing plumbing fixtures, modify rough-in, install new handicap accessible fixtures	1	5,000.00	LS	5,000	
Reroute water piping; water service to humidifier	1	10,000.00	LS	10,000	
Reroute roof drain - ante chamber	1	3,500.00	LS	3,500	
New floor drain and associated work for condensate drain	1	2,000.00	LS	2,000	
<u>HVAC:</u>					
Selective demolition and disposal of obsolete work	1	12,000.00	LS	12,000	425,500
New system comprising airhandling unit with coils, filters; air distribution with dampers, sound attenuation, grilles, diffusers, etc.	1	105,000.00	LS	105,000	
Toilet exhaust	1	3,000.00	LS	3,000	
Chilled water pumps (2)	1	12,000.00	LS	12,000	
Hot water pumps (2)	1	10,000.00	LS	10,000	
Heat exchanger	1	10,000.00	LS	10,000	
Duplex condensate pump set	1	6,000.00	LS	6,000	
Insulated steam, condensate, hot, chilled and condensate drain piping; connections to equipment and provision for future, etc.	1	114,000.00	LS	114,000	
Steam humidifier and accessories	1	10,000.00	LS	10,000	
Chilled water plant (prorated cost)	1	72,000.00	LS	72,000	
DDC controls	1	25,000.00	LS	25,000	
Miscellaneous work, shop drawings, testing, balancing, identification, etc.	1	6,000.00	LS	6,000	
Hoisting mechanical equipment	1	10,000.00	LS	10,000	
General work associated with the mechanical systems	1	10,000.00	LS	10,000	

Project Title : Auditorium Building Conservation Masterplan - Ganz Hall

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Electrical systems:</u>					
Add 100A switch to existing panel	1	900.00	EA	900	
Run 100A feeder to panel	100	14.00	LF	1,400	
100A panel	1	1,900.00	EA	1,900	
Connect motors - 1hp - 15hp	6	650.00	EA	3,900	
Size #2 starter	5	1,200.00	EA	6,000	
Lighting fixture - type SY	16	876.00	EA	14,016	
Ditto - SZ	8	783.00	EA	6,264	
Ditto - L1	42	1,008.00	EA	42,336	
Ditto - exit	4	600.00	EA	2,400	
Ditto - emergency	3	600.00	EA	1,800	
Add L1 mounting frame	150	30.00	LF	4,500	
Relamp XF fixture	8	25.00	EA	200	
Relamp XG fixture	6	45.00	EA	270	
Dimming panel	1	6,500.00	EA	6,500	
Receptacle	14	260.00	EA	3,640	
Tel/data outlet	14	260.00	EA	3,640	
Fire alarm devices	7	500.00	EA	3,500	
Stage lighting (allowance)	1	25,000.00	LS	25,000	
General work associated with the electrical systems	1	3,000.00	LS	3,000	131,166
<u>General conditions and contingencies:</u>		Subtotal		1,295,222	
General conditions, overhead & profit		15.00%		194,283	
Design contingency		10.00%		148,951	
Construction contingency		10.00%		163,846	
ESTIMATED COST				\$1,802,301	

Project Title : Auditorium Building Conservation Masterplan - Reading Room

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Demolition:</u>					
Demolition	1	45,000.00	LS	45,000	
Remove asbestos containing vinyl tile	1	25,000.00	LS	25,000	
Miscellaneous holes, cores and chases	1	12,000.00	LS	12,000	
Temporary barriers, screens, etc.	1	15,000.00	LS	15,000	
Temporary protection	1	5,000.00	LS	5,000	
Crane/hoisting	1	25,000.00	LS	25,000	
Scaffolding	1	30,000.00	LS	30,000	
Swing staging	1	30,000.00	LS	30,000	
Dumpster - disposal of debris	20	420.00	EA	8,400	
Patch/level subfloor	560	15.00	SF	8,400	203,800
<u>Structural:</u>					
Concrete filled metal pan stair and landings, handrails and finishes - rising 20'	1	18,000.00	EA	18,000	
Ditto - rising 40'	1	36,000.00	EA	36,000	
Form opening in roof structure for new skylights	6	15,000.00	EA	90,000	
Grind and tuckpoint masonry parapet (allowance)	1	25,000.00	LS	25,000	
Miscellaneous structural work (allowance)	1	20,000.00	LS	20,000	
Infill slab at stair removal - north end	1	15,000.00	EA	15,000	
Form opening in slab for new staircase	3	25,000.00	EA	75,000	
Steel supports for rooftop equipment	5	2,500.00	TN	12,500	291,500
<u>Building enclosure:</u>					
Custom wood historic profile sash window (7' X 9'), hardware and finishes	8	8,100.00	EA	64,800	
Ditto 2'6"x7'0"	1	2,250.00	EA	2,250	
Fit weatherstripping to existing windows - south wing	1	2,000.00	LS	2,000	
Skylight system	480	95.00	SF	45,600	
Roof repairs at skylights and penetrations etc	1	12,000.00	LS	12,000	126,650
<u>Finishes, etc.:</u>					
Strip, clean and refinish cast metal newel post	2	980.00	EA	1,960	
Ditto balustrade	20	120.00	LF	2,400	
Ditto mahogany handrail	20	55.00	LF	1,100	
Add wood guardrail to balustrade	1	1,500.00	LS	1,500	

Project Title : Auditorium Building Conservation Masterplan - Reading Room

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Finishes etc (Continued):</u>					
Gypsum board partitions - new stairwells	2,000	6.50	SF	13,000	
Infill opening in wall	2	750.00	EA	1,500	
Remove and reinstall ornamental nonfunctional cast iron radiators	1	10,400.00	LS	10,400	
New bronze elevator doors and frame	2	10,000.00	EA	20,000	
Single hollow metal door and frame, hardware and finishes - new stair enclosure	3	950.00	EA	2,850	
Single custom replica mahogany door and fretwork panel, frame, hardware and finishes	1	3,500.00	EA	3,500	
Ditto - pair	1	6,500.00	EA	6,500	
Add mahogany panel and fretwork false front to existing hollow metal door - single	1	2,000.00	EA	2,000	
Ditto - pair	1	4,000.00	EA	4,000	
Patch and repair mosaic floor (10% allowance)	568	236.00	SF	134,048	
Patch and repair mosaic floor - stair vestibule	80	236.00	SF	18,880	
Clean mosaic floor	5,108	2.00	SF	10,216	
Ditto - south wing	1,540	2.00	SF	3,080	
Miscellaneous repairs to existing bases	1	2,500.00	LS	2,500	
Area carpets (allowance)	600	9.00	SF	5,400	
Strip and stain existing painted mahogany paneling - north wing	1	9,500.00	LS	9,500	
Repair and refinish wood paneling and trim	1,100	27.00	SF	29,700	
Repair wood column and capital	8	1,500.00	EA	12,000	
Custom historic replica mahogany paneling	200	125.00	SF	25,000	
Patch or hand tool finish plasterwork walls (10% allowance)	150	30.00	SF	4,500	
Patch plasterwork arched ceiling (10% allowance)	650	30.00	SF	19,500	
Cut out and patch ornamental plasterwork (10% allowance)	656	120.00	SF	78,720	
Clean and repair ornamental plasterwork - south wing (allowance)	1	5,000.00	LS	5,000	
Patch plasterwork at mechanical and electrical penetrations	287	81.50	EA	23,391	
Paint ornamental plaster	6,560	1.30	SF	8,528	
Paint existing plaster walls	1,504	0.65	SF	978	
Paint existing plaster soffits and beams	8,017	0.65	SF	5,211	
Miscellaneous painting and touch up in adjacent areas	1	5,000.00	LS	5,000	
Suspended gypsum board ceiling, painted - periodical room	1,200	4.50	SF	5,400	
Stencil work - vault	1,500	25.00	SF	37,500	
Ditto - north wing	1,200	25.00	SF	30,000	
Minor repair stencil work - south wing	1	2,000.00	LS	2,000	

Project Title : Auditorium Building Conservation Masterplan - Reading Room

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Finishes, etc. (Continued):</u>					
Painting restoration (allowance)	2	60,000.00	EA	120,000	
Stained glass skylight, oak frame	480	165.00	SF	79,200	
Wood blind - 3'-6" X 7'	13	370.00	EA	4,810	
Ditto - 2'-6" X 7'	27	265.00	EA	7,155	
Signage	1	3,000.00	LS	3,000	760,926
<u>Miscellaneous:</u>					
Miscellaneous trim and patching	1	5,000.00	LS	5,000	
Alterations to partitions, doors, finishes, etc. - relocated library offices (allowance)	1	27,000.00	LS	27,000	
Historic investigation of original colors	80	80.00	HR	6,400	
Miscellaneous gypsum board enclosures in adjacent areas	1	10,000.00	LS	10,000	48,400
<u>Mechanical systems:</u>					
<u>HVAC:</u>					
Selective demolition and disposal of obsolete work	1	10,000.00	LS	10,000	
New system comprising rooftop unit with coils, filters; air distribution with dampers, sound attenuation, grilles, diffusers, VAV boxes, etc.	1	160,000.00	LS	160,000	
Chilled water pumps (2)	1	16,000.00	LS	16,000	
Hot water pumps (2)	1	10,000.00	LS	10,000	
Duplex condensate pump set	1	6,000.00	LS	6,000	
Insulated hot, chilled and condensate drain piping; connections to equipment and provision for future, etc.	1	94,000.00	LS	94,000	
Chilled water plant (prorated cost)	1	100,000.00	LS	100,000	
Rework existing radiation and add new	1	15,000.00	LS	15,000	
DDC controls	1	25,000.00	LS	25,000	
Miscellaneous work, shop drawings, testing, balancing, identification, etc.	1	6,000.00	LS	6,000	
Hoisting mechanical equipment	1	15,000.00	LS	15,000	
General work associated with the mechanical systems	1	25,000.00	LS	25,000	
<u>Miscellaneous mechanical:</u>					
Miscellaneous relocation of ductwork at new ceilings	1	26,000.00	LS	26,000	
Relocate fire extinguisher	1	500.00	LS	500	
Relocate fire standpipes	1	10,000.00	LS	10,000	
Mechanical renovation at relocated library offices	1	9,000.00	LS	9,000	527,500

Project Title : Auditorium Building Conservation Masterplan - Reading Room

Estimate type : Preliminary

Project Location : Michigan Avenue, Chicago, Illinois

Date : November 20, 2000

Description	Quantity	Rate \$	Unit	Subtotal \$	Total \$
<u>Electrical systems:</u>					
Add 100A switch to existing panel	1	900.00	EA	900	
Run 100A feeder to panel	100	14.00	LF	1,400	
100A panel	1	1,900.00	EA	1,900	
Connect motors - 1hp - 15hp	5	650.00	EA	3,250	
Ditto - 25hp	1	950.00	EA	950	
Size #2 starter	5	1,200.00	EA	6,000	
Lighting fixture - type SB	135	365.00	EA	49,275	
Ditto - SK	14	560.00	EA	7,840	
Ditto - SM - 8'	24	536.00	EA	12,864	
Ditto - SP	72	235.00	EA	16,920	
Ditto - SQ	12	440.00	EA	5,280	
Ditto - emergency	6	600.00	EA	3,600	
Ditto - exit	6	600.00	EA	3,600	
Remove existing lamp holder	1	70.00	EA	70	
Receptacle	12	260.00	EA	3,120	
Tel/data outlet	12	260.00	EA	3,120	
Fire alarm devices	6	500.00	EA	3,000	
Lighting and miscellaneous work - periodical room	1	7,200.00	LS	7,200	
Ditto - north wing	1	11,550.00	LS	11,550	
Electrical renovation at relocated library offices	1	5,000.00	LS	5,000	
General work associated with the electrical systems	1	3,000.00	LS	3,000	149,839
<u>General conditions and contingencies:</u>				Subtotal	2,108,615
General conditions, overhead & profit				15.00%	316,292
Design contingency				10.00%	242,491
Construction contingency				10.00%	266,740
ESTIMATED COST					\$2,934,138