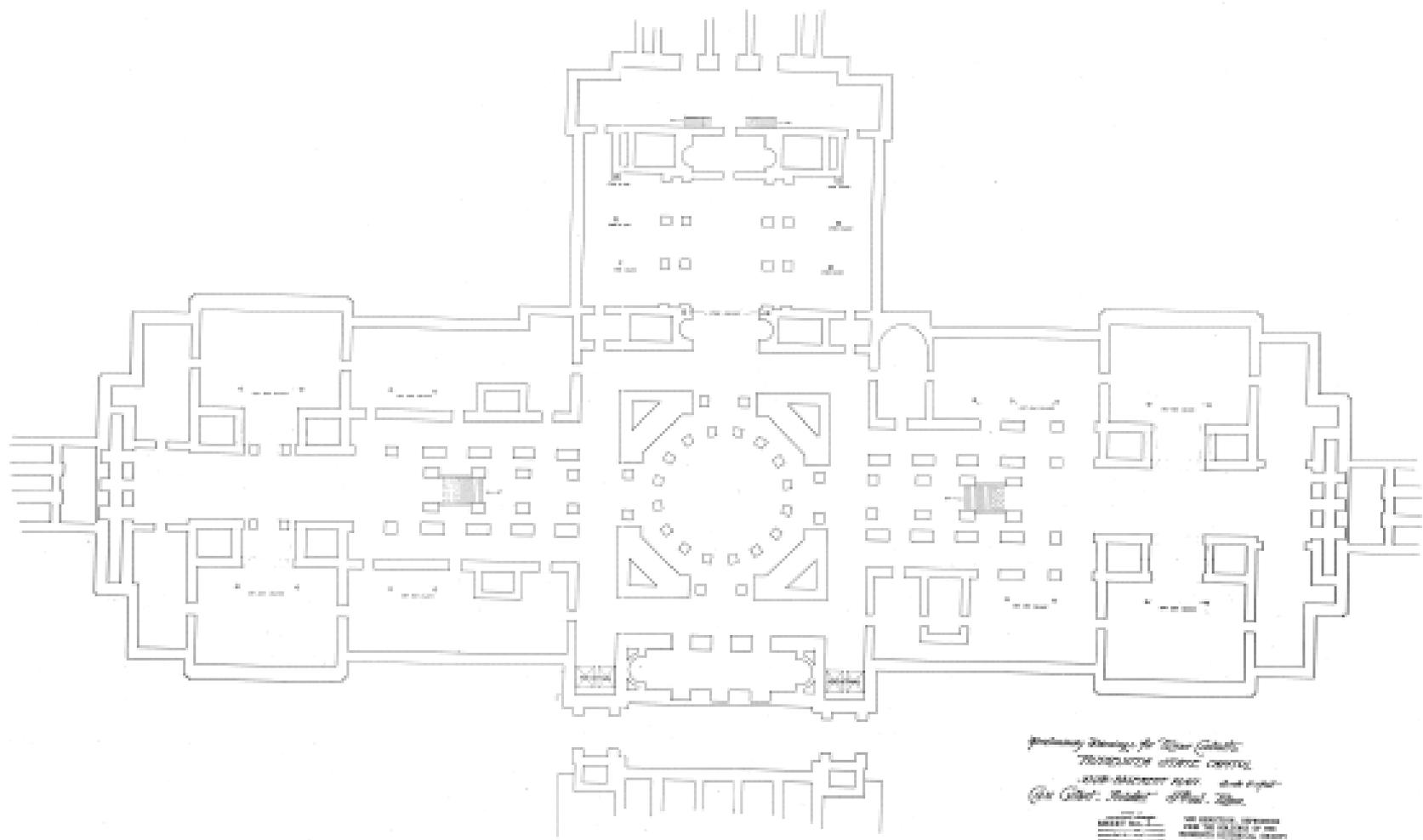


Minnesota State Capitol Preservation

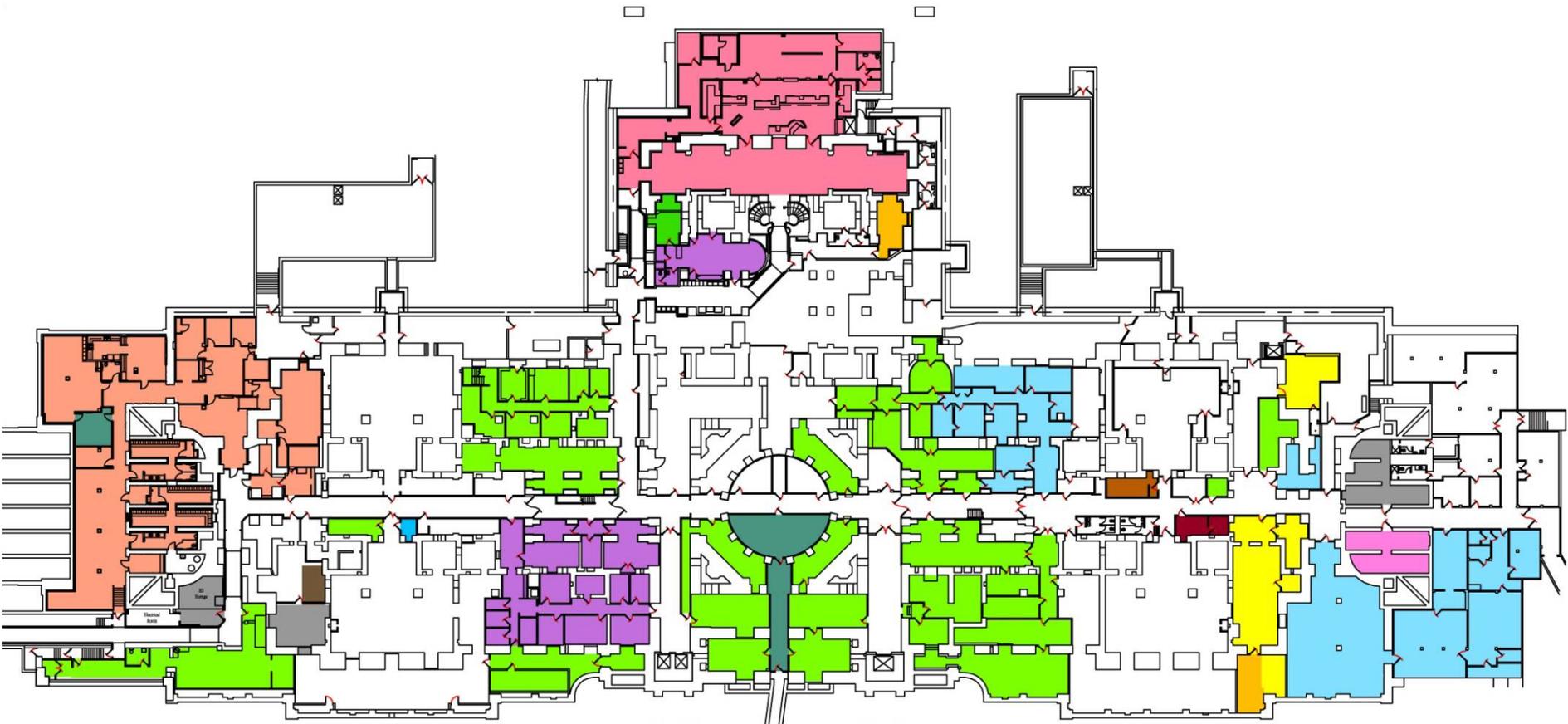


Presentation from the Preservation Subcommittee - Overview



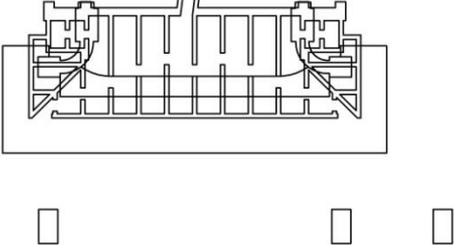


Basement

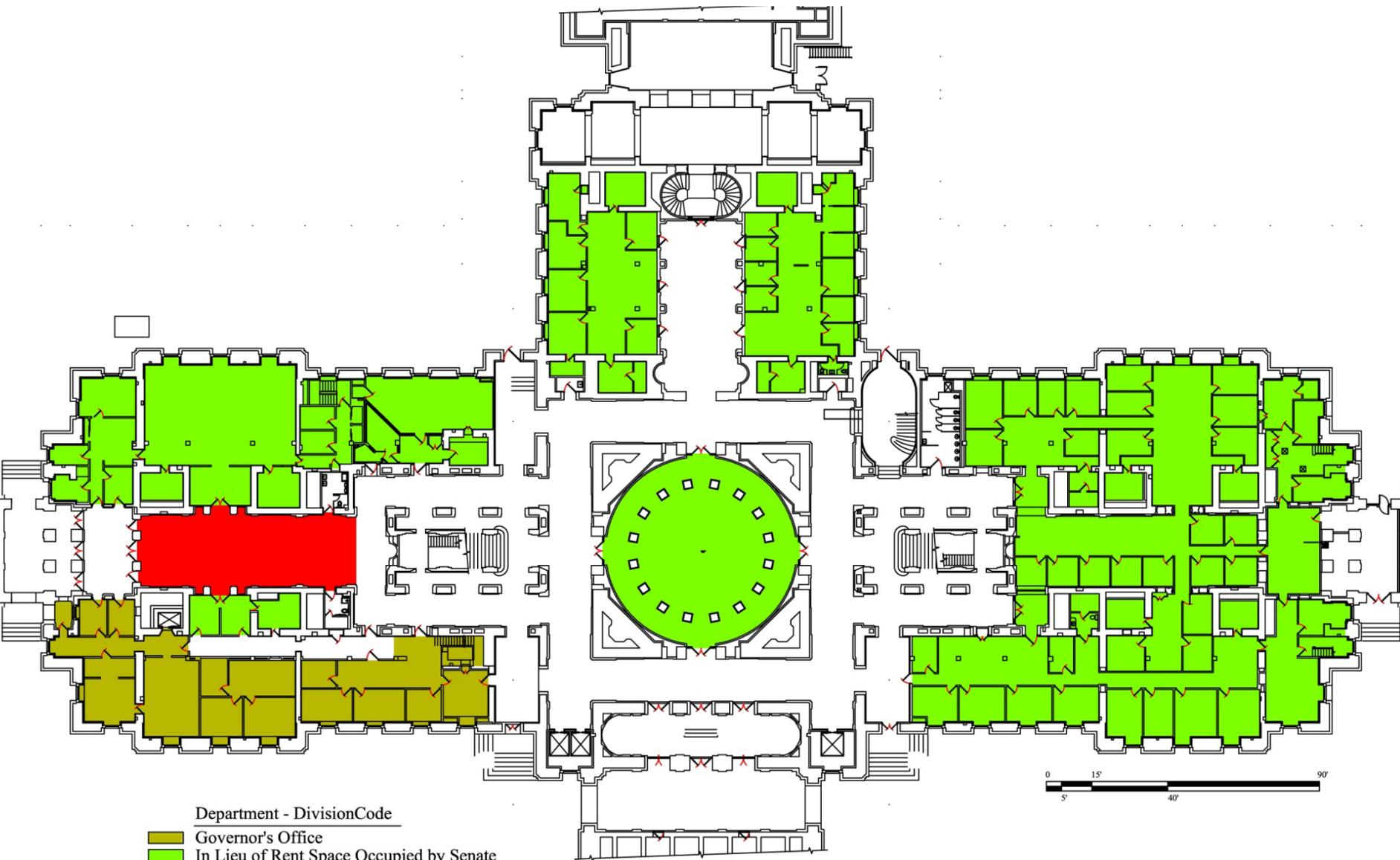


Department - Division Code

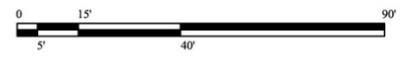
- In Lieu of Rent Space Occupied by Services for the Blind
- In Lieu of Rent Space (House) Occupied by MN Historical Society
- US West Communications
- Plant Management Space Occupied by MN Historical Society
- Plant Management
- Plant Management/Materials Transfer
- In Lieu of Rent Space (Senate) Occupied by Governor's Office
- In Lieu of Rent Space Occupied by Senate
- In Lieu of Rent Space Occupied by House
- Cafeteria
- Media
- Public Safety - Capitol Complex Security
- Supreme Court
- Vacant



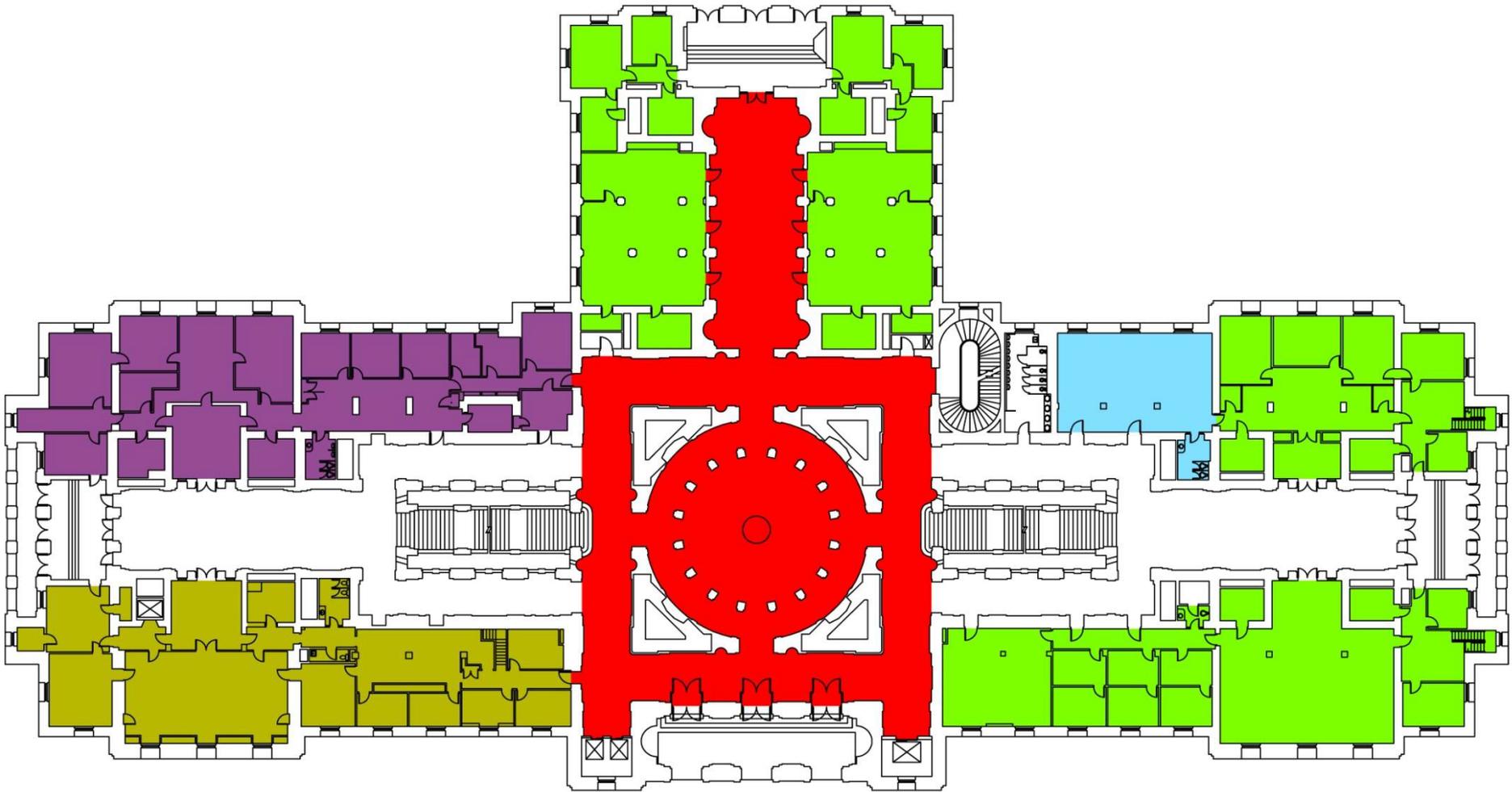
Basement



- Department - DivisionCode
- Governor's Office
 - In Lieu of Rent Space Occupied by Senate
 - Ceremonial

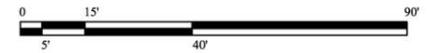


Ground Floor

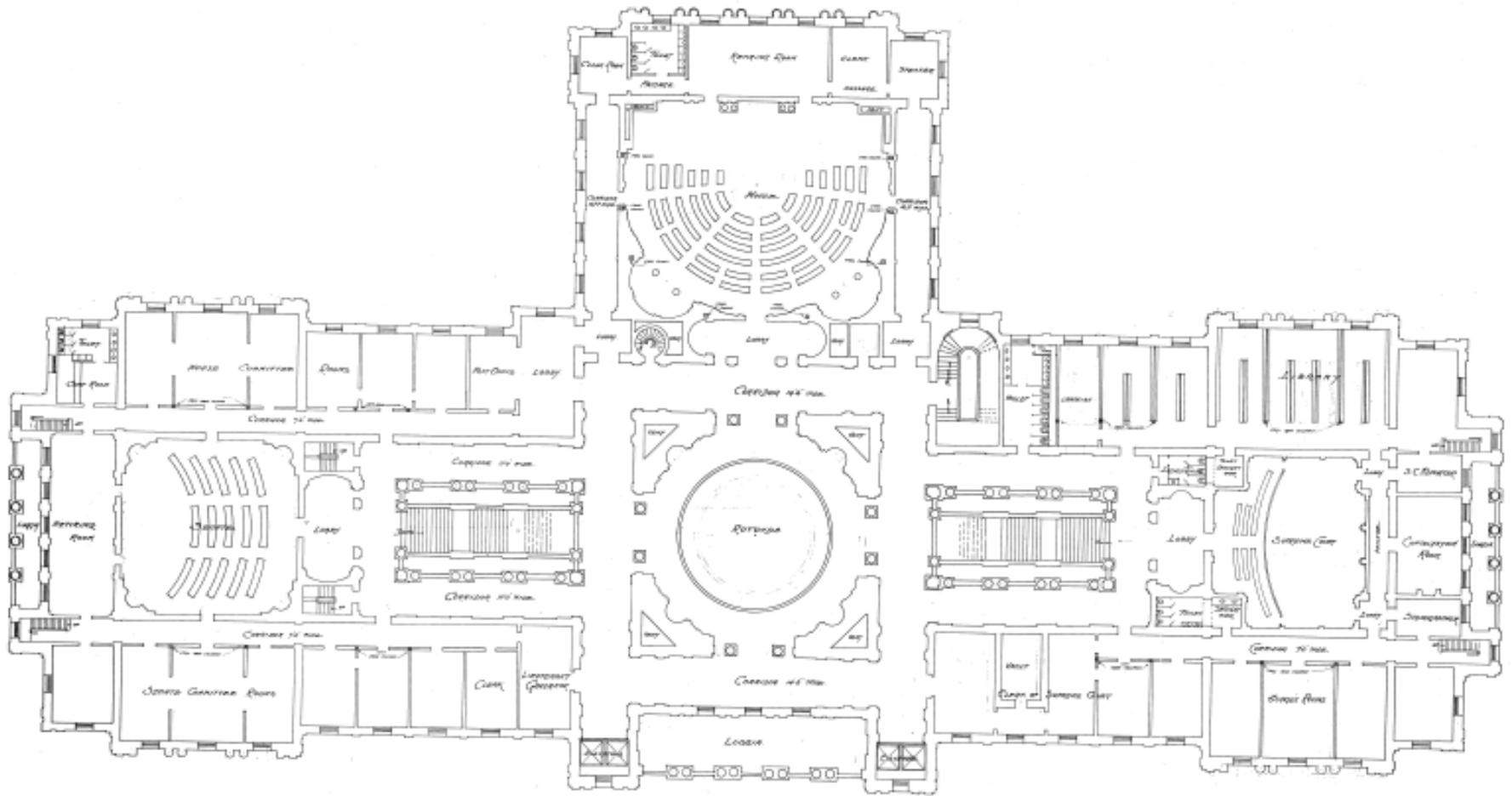


Department - DivisionCode

- Attorney General
- Governor's Office
- In Lieu of Rent Space Occupied by Senate
- In Lieu of Rent Space Occupied by House
- Ceremonial



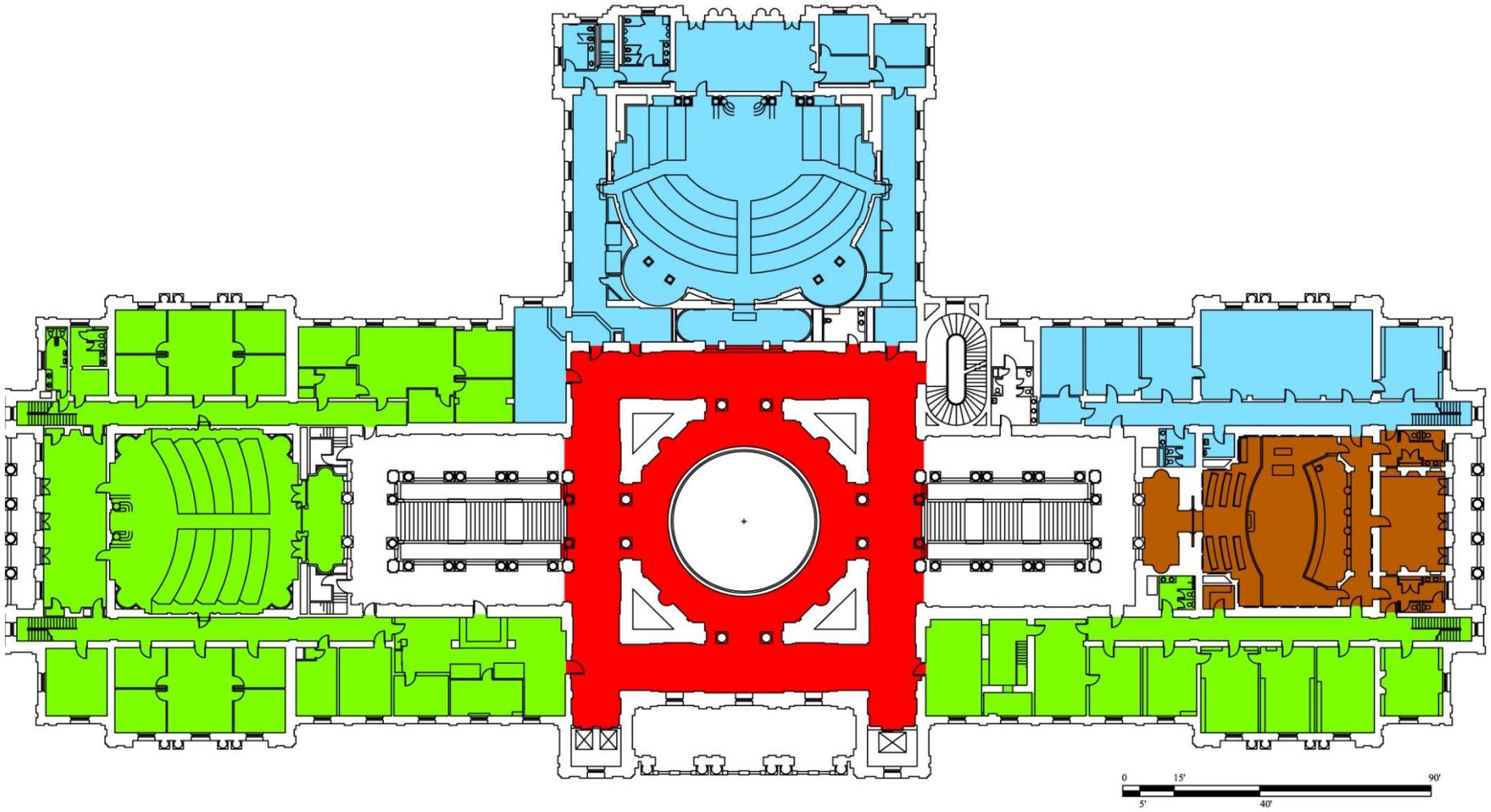
First Floor



*Preliminary Drawing for Major Contracts
 MINNESOTA STATE CAPITAL
 SECOND FLOOR PLAN - and Elevation
 (as given by Architect - 1888)*

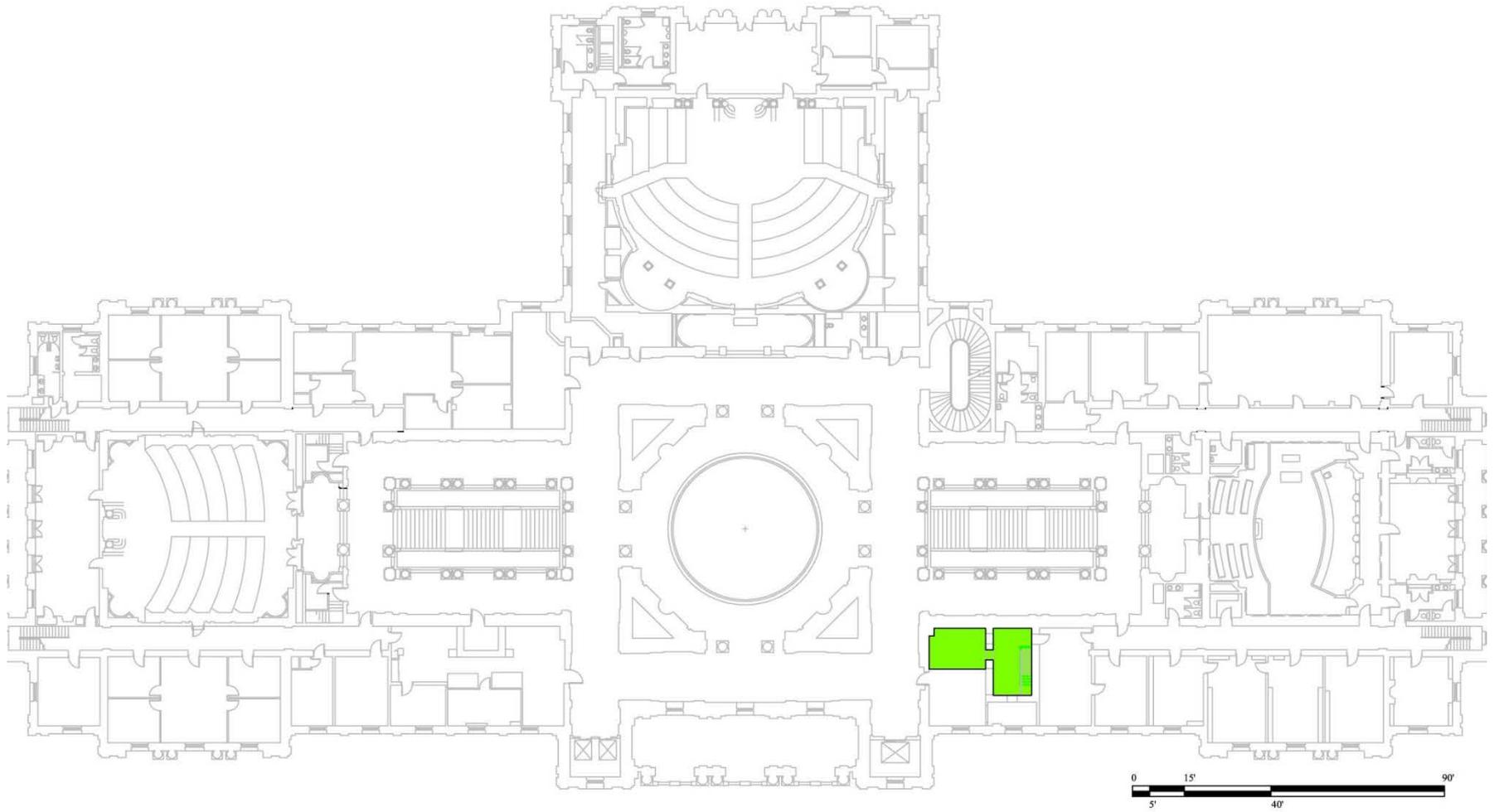
SHEET No. 4
 SEE EXHIBIT REFERRED
 FROM THE RECORDS OF THE
 MINNESOTA HISTORICAL SOCIETY
 1888

Second Floor



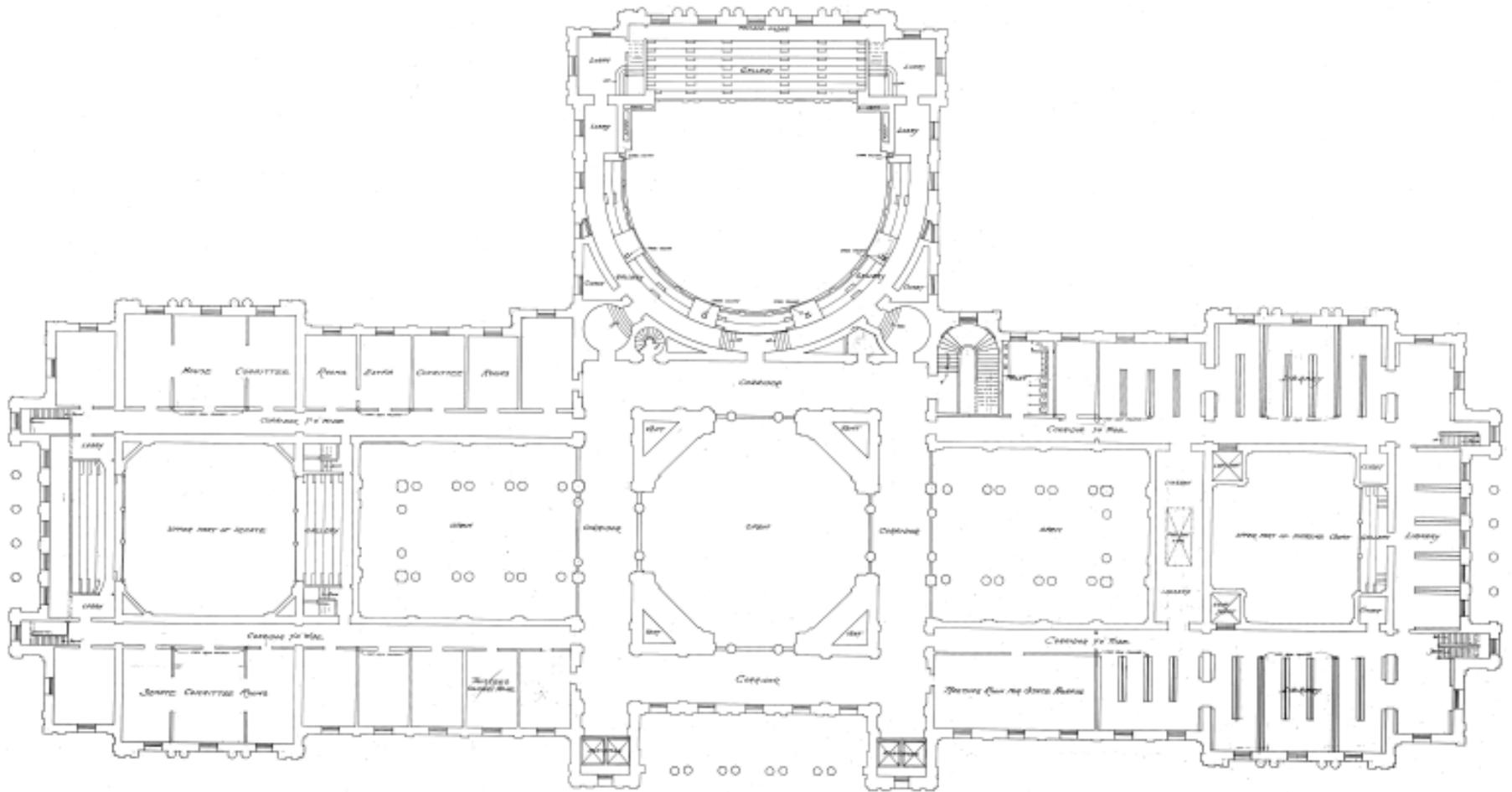
- Department - Division Code
- Supreme Court
 - In Lieu of Rent Space Occupied by Senate
 - In Lieu of Rent Space Occupied by House
 - Ceremonial

Second Floor



Department - Division Code
 In Lieu of Rent Space Occupied by Senate

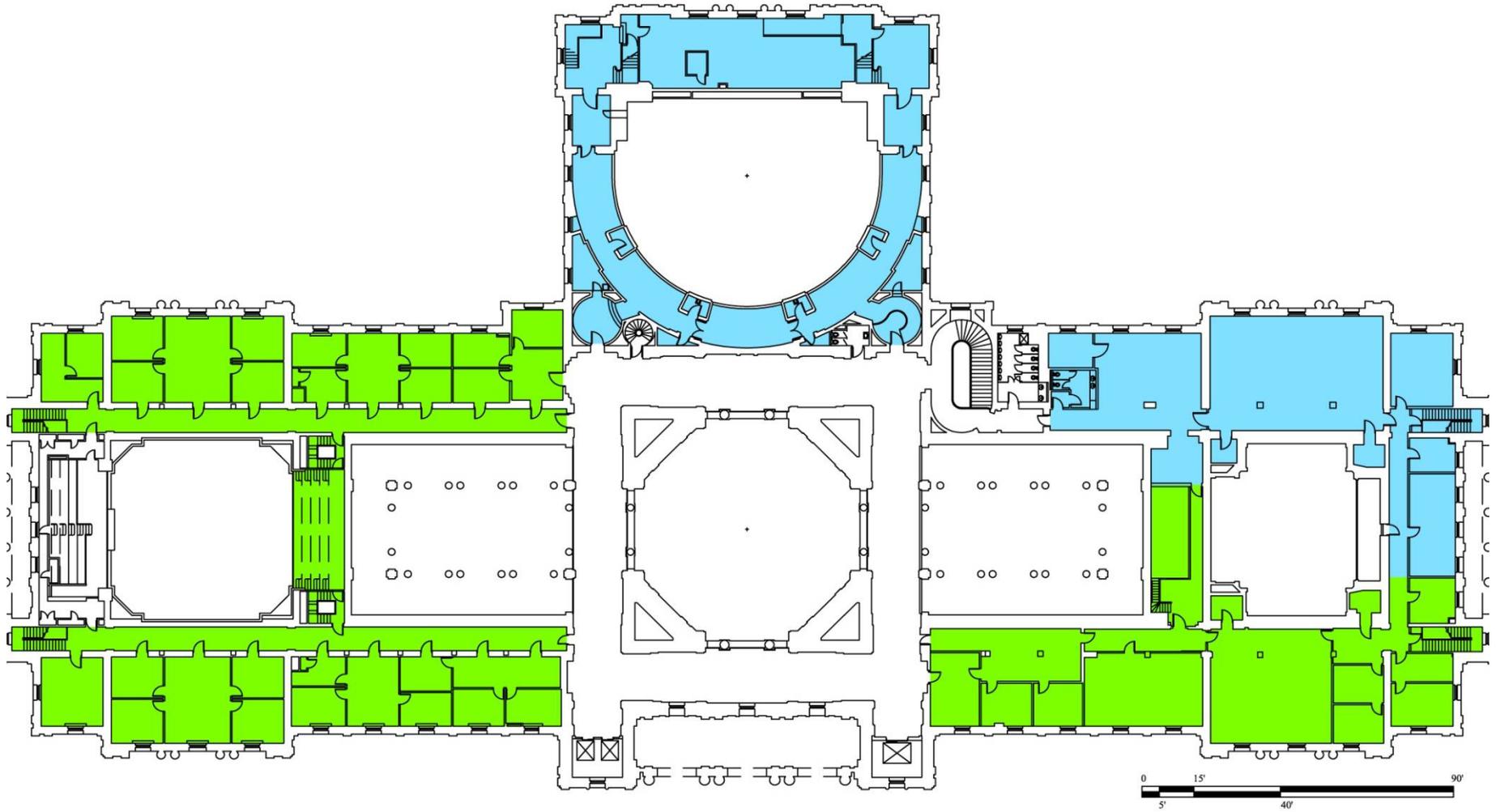
Second Floor Mezzanine



Preliminary Drawings for Floor Contracts
MINNESOTA STATE CAPITOL
 THIRD FLOOR PLAN - 2nd 1/2-1st
 Cass Gilbert, Architect - St. Paul, Minn.

SHSLEY No. 1
 ONE HUNDRED, APPROVED
 FROM THE HOLDINGS OF THE
 MINNESOTA HISTORICAL SOCIETY
 1909

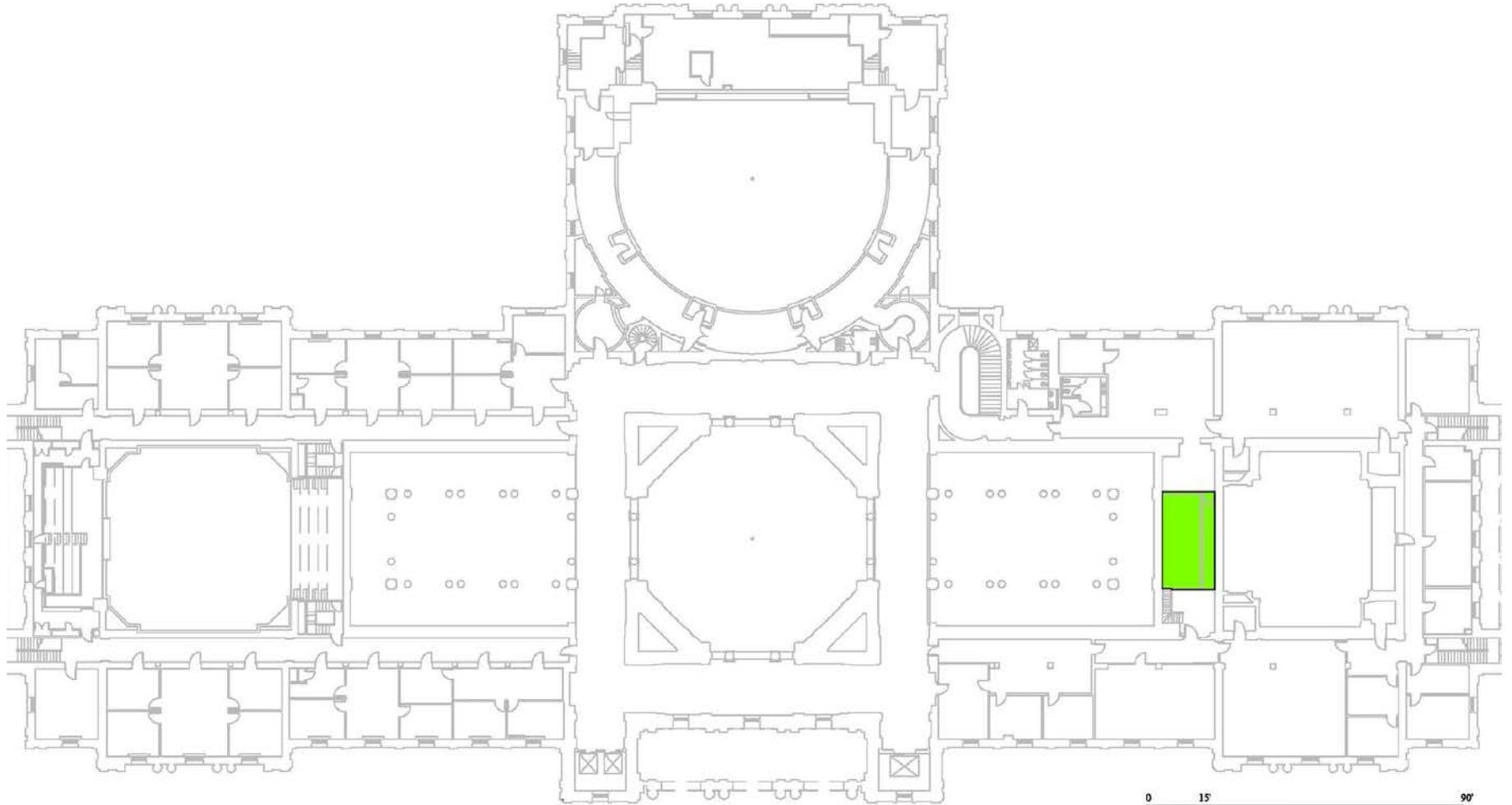
Third Floor



Department - Division Code

- In Lieu of Rent Space Occupied by Senate
- In Lieu of Rent Space Occupied by House

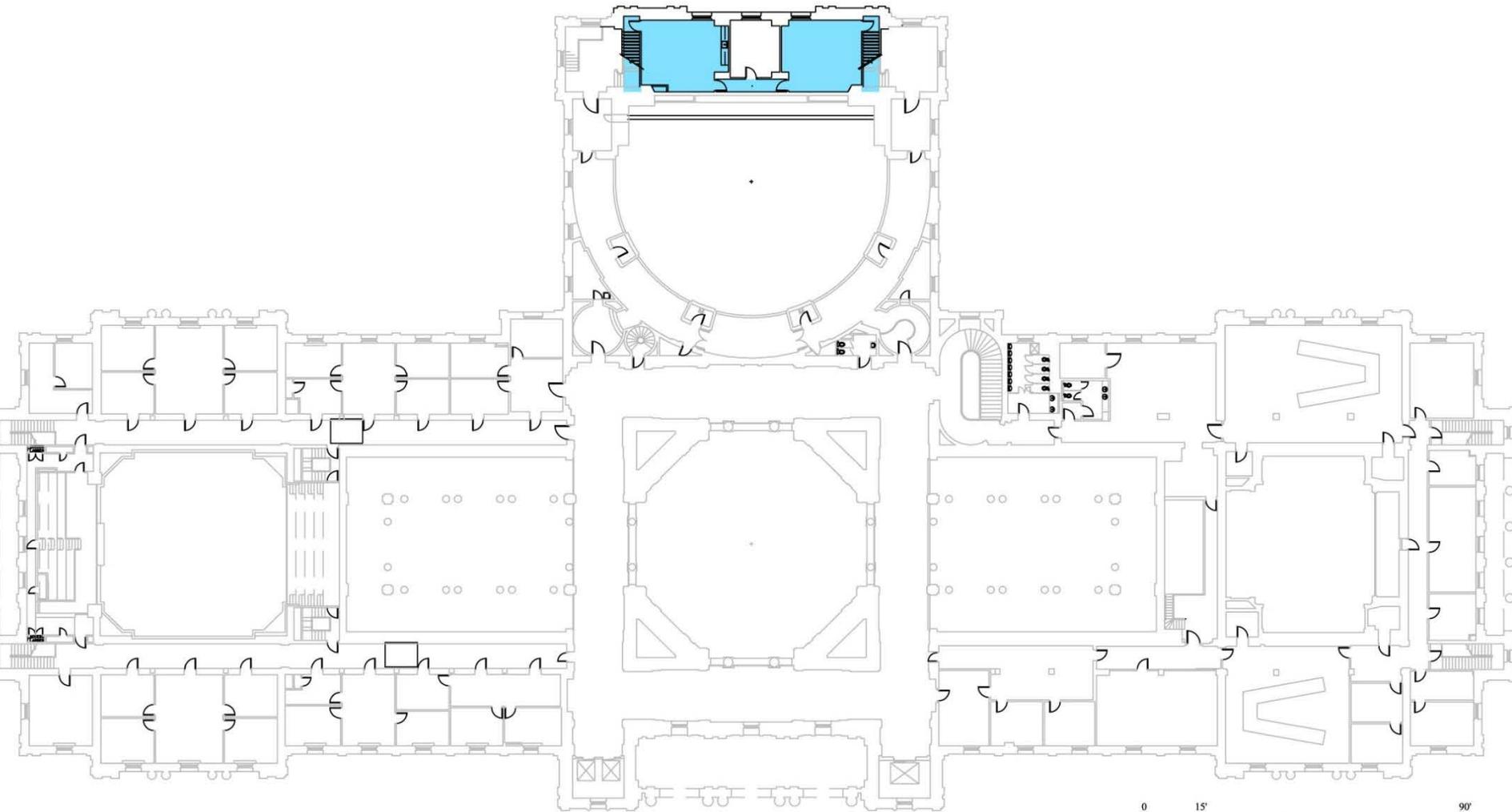
Third Floor



Department - Division Code

 In Lieu of Rent Space Occupied by Senate

Third Floor Mezzanine



Department - Division Code

 In Lieu of Rent Space Occupied by House

Fourth Floor

Guiding Principles

- Building Function
- Form
- Life Safety
- Security
- Architectural Integrity
- Growth
- Accessibility
- Phasing
- Funding
- Expansion

Architectural Integrity

- Implies that the restoration of the capitol architecture is the most important aspect of the restoration.
- Not everything must be absolutely returned to the 1905 plan.
- The building must work for the next 100 years.
- When considering new space in the capitol, it should be done with great care and respect to how Cass Gilbert would have done it in 1905.
- It is critical to preserve the integrity of the building and its great architecture.

Building Function

- The building must work to improve and support the function of Government.
- Some in the group felt strongly that by solving some of the functional issues with the building, it would also solve issues within State Government.
- Understanding the government function and process of work in the Capitol will help to identify how it should be laid out going forward.

Life Safety and Security

- The public and those who work and visit the capitol deserve to have a building that is safe:
 - Safe from security threats
 - Safe from fire
 - Safe from deterioration of systems
- It must provide for accessibility of all Minnesotans.
- It should be brought up to current life safety codes.

Commission Action Item

Approval of the Guiding Principles that will govern the Capitol Restoration.

Minnesota State Capitol Preservation



Overview of Appropriations and Benchmarking

STATE CAPITOL BUILDING

SPECIFIC CAPITAL APPROPRIATIONS SUMMARY

1985 – Present

Project Types

- Selective Remodeling
- Exterior Maintenance and Repairs
- Selective Life-safety, ADA and Security Work
- Structural Repairs (Exterior, Basement, SE & SW Terraces)
- Elevator equipment
- Paint and plaster repairs
- Pre-design and design work for restoration of Capitol Building Interior
- Current work described in upcoming slides

Total Amount: \$69,167,000

Capitol Building Funding 1985-1989

<u>Year</u>	<u>Amount</u>	<u>Purpose</u>
1985	\$1,790,000	General Renovation
	\$ 250,000	Clean, tuck-pointing. (Exterior)
	\$ 582,000	Dome and Lantern. (Exterior)
1987	\$1,500,000	Exterior (rehab. Phase III-MD). (Exterior)
	\$4,800,000	Senate Chamber
1988	\$ 350,000	Space planning
	\$ 220,000	Dome (Exterior)
1989	\$3,000,000	Senate remodel-north corridor; HR 107 & 112
	\$ 575,000	Ph. III & IV (MD general plan) (Exterior)
	\$2,200,000	House Chamber

Capitol Building Funding 1990-1999

<u>Year</u>	<u>Amount</u>	<u>Purpose</u>
1990	\$ 300,000	Remodel in east wing (Per House & Senate)
1992	\$1,645,000	Fire mgmt system; investigation and testing of roof and Quadriga
1994	\$ 400,000	Campus security lighting.
	\$5,000,000	Roofs (Exterior), Quadriga restoration
	\$ 65,000	Exterior maintenance manual
1995	\$1,715,000	Renovation/Pre-design
1996	\$7,400,000	NE & NW Terraces (\$4.8), lantern (\$1.4), cafeteria (\$1.2), structural stabilization. (Exterior & Bsmt.)
	\$1,500,000	Elevators' equipment. (Admin)
1997	\$1,035,000	Add to Café in Subd. 4 of '96, and Subd. 2 of '94.
1998	\$6,600,000	Structural stabilization. (Exterior & Bsmt.) SE & SW Terraces
	\$1,500,000	Accessibility (doors & hardware). (Admin)
1999	\$ 520,000	Security upgrades. (Admin)

Capitol Building Funding 2000-2009

<u>Year</u>	<u>Amount</u>	<u>Purpose</u>
2000	\$1,000,000	Remodel in east wing. (Per House & Senate)
	\$ 300,000	Pre-design
2002	\$ 54,000	Paint & Plaster: G-2
	\$ 646,000	General fund for restoration of painting and plaster of ground, 1 st and 2 nd floors
2005	\$ 1,170,000	Paint & Plaster: third floor
	\$ 1,200,000	Schematic: entire Capitol Bldg.
2006	\$ 2,400,000	Repair & Restoration Capitol Building Dome (\$1.4)
		Continued design for Capitol Building Interior (\$1.0)
2007	\$ 250,000	To the LCC for planning process related to Capitol Building and Complex
2008	\$13,400,000	Renovation of State Capitol Building, including but not limited to stabilization of plaza and the building's exterior envelope, replacement of air handling units at risk of failure, and projects to improve interior emergency lighting, dome lighting and catwalks

Capitol Building Funding 2010-2011

Year	Amount	Purpose
2010	\$ 1,250,000	Security upgrades campus-wide, including State Capitol Building
2011	\$ 550,000	Capitol Preservation Commission
	<u>\$ 4,000,000</u>	Asset Preservation for Capitol Building
TOTAL 1985-2011	\$69,167,000	

State Capitol Building Asset Preservation Projects

<u>Recent Asset Preservation Appropriations</u>	<u>Amount</u>
Laws of 2006	
Ch. 258, Sec. 12, Subd. 3	\$1,084,000
Ch. 258, Sec. 13	\$1,466,000
Laws of 2008	
Ch. 179, Sec. 12, Subd. 3	\$13,400,000
Laws of 2011	
1 st Special Session, Ch. 12, Sec. 9, Subd. 3	<u>\$4,000,000</u>
Total:	\$19,950,000

Dome Water Infiltration & Structure



State Capitol Building

Completed Asset Preservation Projects

Dome (Outer and Middle)

- Masonry Cleaning & Re-Pointing
- Structural Steel Repair
- Ventilation
- Drain & Waterproof membrane
- Upper Dome windows and Louvers

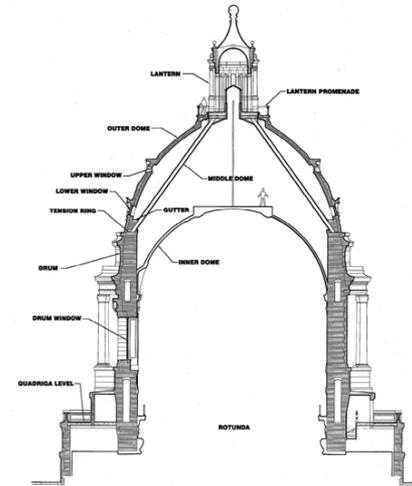
Internal

- Stone Displacement at North Entry
- Rain Leader and Sewer Vents Investigation
- Senate Media AHU #26 Replacement
- Hot Water Heating System Study

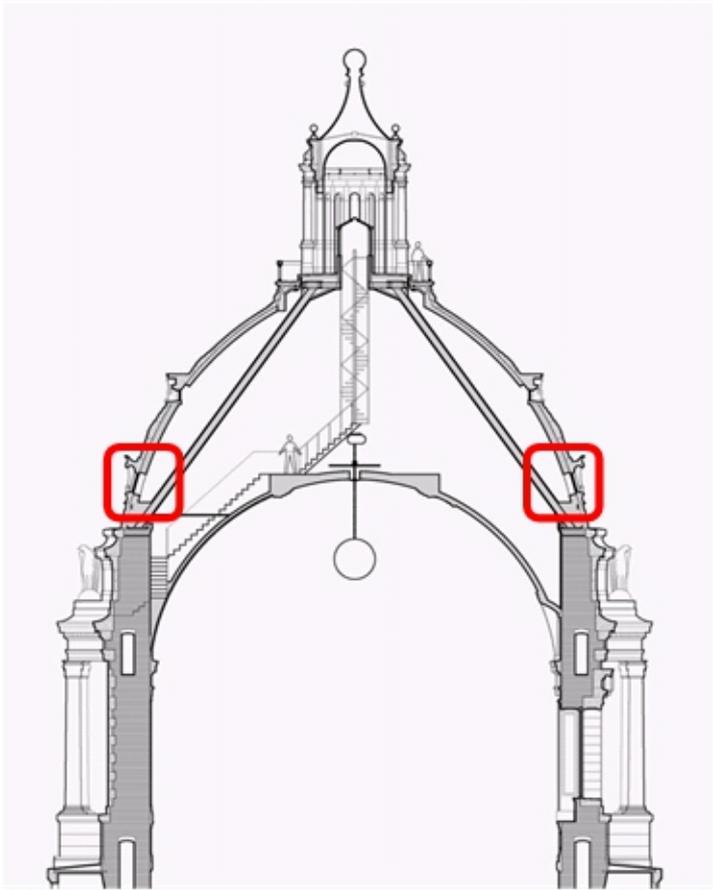
Exterior

- Main Roof Evaluation
- French Doors Study

Facility Condition Assessment



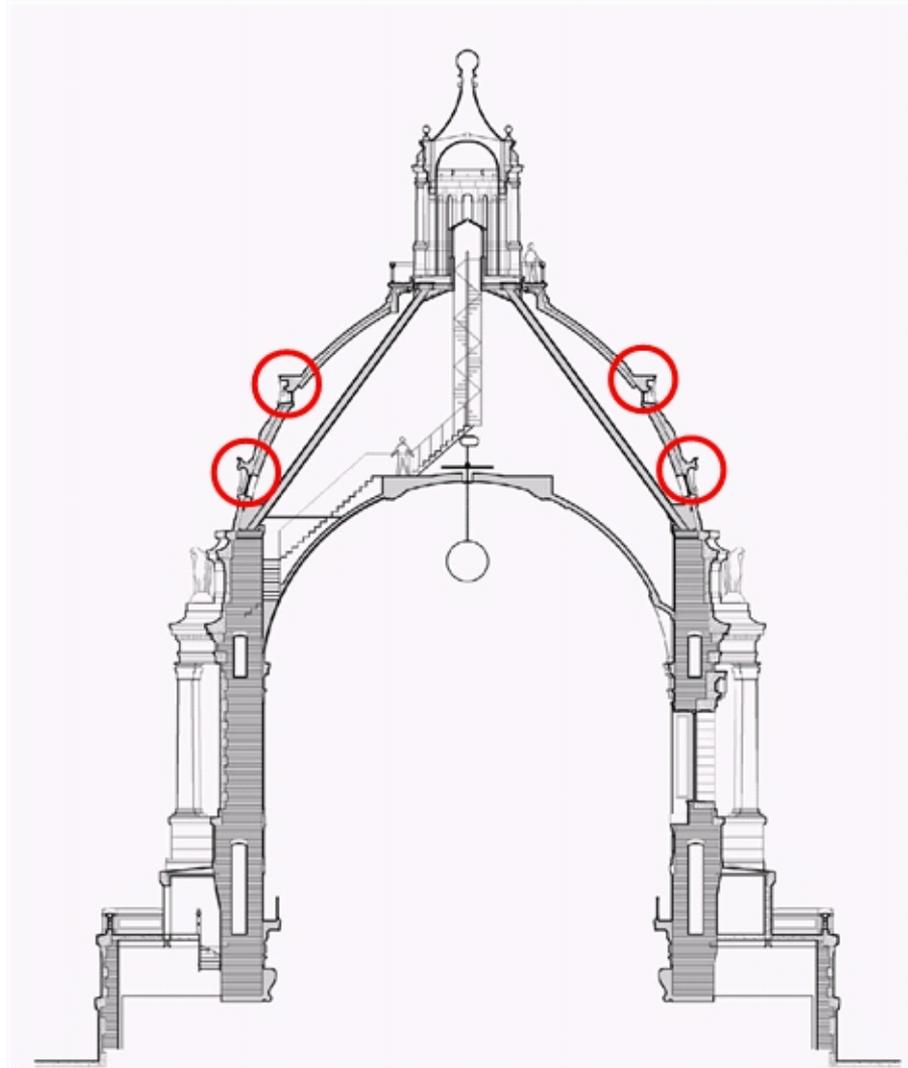
Installed Middle Dome Steel Reinforcement



Installed New Copper Drainage Gutter System



Replaced Dome Windows and Louvers



State Capitol Building

Current Asset Preservation Projects

Current Work

Phase

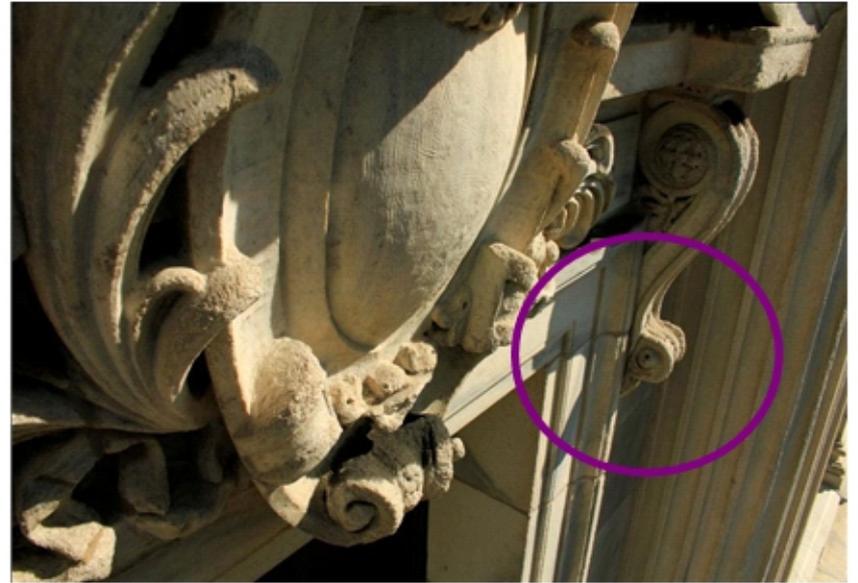
- Dome
 - Finial Repair & Re-gilding
 - Replace 12 Large Drum Windows
 - Exterior
 - Comprehensive Exterior Stone Assessment
 - Main Roof Replacement
 - West Plaza and Stair Repair
 - Internal
 - Replace Hot Water Heating System
 - Storm Sewer/Sanitary Sewer Separation
 - Senate Media HVAC Upgrade B29 & B32
- Construction
- Design
- Investigation
- Investigation/Design
- Design
- Construction
- Design/Construction
- Construction

Drum Window Replacement









State Capitol Building

Planned 2012 Asset Preservation Projects

Phase

- Dome
 - Stone Repairs Construction
 - Moisture Monitoring Equipment Construction
 - Replace 12 Large Drum Windows Construction
- Exterior
 - East and North Stair and Plaza Investigation
 - West Plaza and Stair Repair Construction
 - Main Roof Replacement Construction
 - Stone Repairs requiring immediate attention Design/Construction

Comparison of other State Capitols

Benchmarking

Benchmarking is a process that uses information from other State Capitols, comparing their scope and costs, allows for identification of what the restoration might cost prior to defining the full scope of the restoration project.

Cost Benchmarking – What did they spend?

- Escalation at 2% per year from 2007 to 2011
- Escalation at 4% (+/-) per year from 2011 to 2015
- For Estimating Purposes, 2015 picked as Midpoint of Minnesota Capitol Preservation Work

Scope Benchmarking - What did they buy regarding?

- Adjusted Scope
- Our Guiding Principles:
 - Architectural Integrity
 - Building Function
 - Life Safety

Kansas State Capitol

Built in 1903

Restoration 2007-2011 = \$162m

Escalated to 2015 = \$205m

Adjusted Scope (2015) = \$187m

Renovated SF = More than 300,000 sf

Cost/SF = \$624/sf



Additional Program: Underground 550-car parking garage was added at approximately \$14,850,000 in 2007 escalated to 2015 = \$17,360,000

Architectural Integrity: Efficient use of existing and new spaces and appropriate care of irreplaceable historic materials.

Building Function: Maximization of existing spaces by converting underutilized areas, such as the basement, into usable spaces. Improvement of the building's function through the use of new building systems and computer technology.

Life Safety: Grade-level skylights provide natural lighting to ground-floor corridors and adjacent office spaces.

Michigan State Capitol

Built in 1878

Restoration 1989-1992 = \$ 58m

Escalated to 2015 = \$94m

Adjusted Scope (none)

Renovated SF = 225,000

Cost /SF = \$416 sf



Additional Program: None Identified

Architectural Integrity: Storage cabinets had been constructed in hallways, and half floors were built between the original floors and their 22 ft. ceilings. Cubbyholes were placed in every nook and cranny of the building. The Michigan Capitol was successfully restored to its true and intended beauty.

Building Function: A redesign of heating, cooling, plumbing, electricity, telephones, audio and video, voting systems, computers, etc. – that were not anticipated in the original design.

Life Safety: Skylights, decorative roof fixtures and glass ceiling panels that were previously removed for safety reasons were replaced and brought up to code.

Ohio State Capitol

Built in 1861

Restoration 1989-1996 = \$121m

Escalated to 2015 = \$184m

Adjusted Scope (2015) = undefined

Renovated SF = 273,000 sf (multiple buildings)

Cost/SF = \$674/sf



Additional Program: Creation of a television studio to produce educational programs and to broadcast legislative Sessions. Additional public and educational facilities, including the Ohio Statehouse Museum Education Center.

Architectural Integrity: The re-opening of numerous skylights and windows allows natural light once again to flood the building.

Building Function: Each legislator's desk offers a laptop computer connection that allows the legislator the opportunity to call up bills electronically via the Internet. Desks also are equipped with microphones and, in the House, an electronic voting system.

Life Safety: Deficiencies included lack of a sprinkler system, unclear emergency exit paths, antiquated electrical, heating, and cooling systems, asbestos requiring abatement, leaky roofs, and lack of a security system.

Texas State Capitol

Built in 1885

Restoration 1990-1994 = \$200m

Escalated to 2015 = \$318m

Adjusted Scope (2015) = \$223m

Renovated SF = \$360,000

Cost/SF = \$620



Additional Program: The Capitol Extension, an underground building designed to provide the Capitol with additional space without sacrificing its historical integrity. This project involved digging a 65-foot-deep site out of solid rock and provided the Capitol with approximately 667,000 additional gross square feet. At a cost of \$75,000,000 or adjusted at \$95,000,000

Architectural Integrity: Repairs were made to the metal dome and roof, granite, mortar and architectural detailing. The entire exterior of the building was restored and stabilized.

Function: Entirely new plumbing, electrical and communication systems also were installed

Life Safety: Installation of new infrastructure, including fire protection systems, water-conserving irrigation, and handicap-accessible walkways.

Utah State Capitol

Built in 1916

Restoration 2008 = \$210m

Escalated to 2015 = \$265m

Adjusted Scope (2015) = \$152 M

Renovated SF = 310,000

Cost/SF = \$492



Additional Program: Base Isolated the capitol at a cost of \$70,000,000. Added a 330 car garage at \$15,000,000 and re landscaped the entire 44 acres at \$6,000,000. Total additional scope of \$91 million adjusted to \$113 million.

Architectural Integrity: Restored the historic desire for terra cotta on the exterior of the drum. Replicated the original wood windows, completely restored all existing light fixtures and made new light fixtures as replicas of what was originally there.

Function: Provide new committee rooms which the capitol did not have, functionally reorganized the house and the senate space for greater government efficiency and collaboration. Provided an educational center for children as well as bus drop off and storage.

Life Safety: Complete Seismic upgrade, full fire protection with a smoke evacuation systems, sprinklers and alarm system. Provided over 350 security camera along with centaury stations on the perimeter. Landscaping and terrace was hardened to protect against attack

Virginia State Capitol

Built in 1785

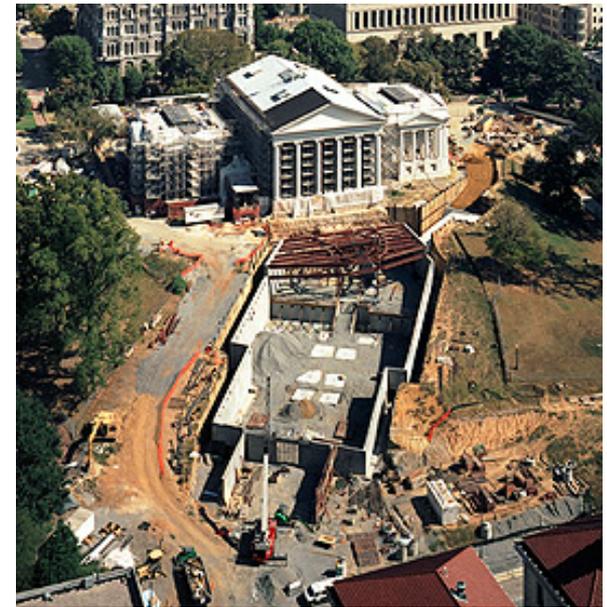
Restoration 2004-2007 = \$83m

Escalated to 2015 = \$105m

Adjusted Scope (2015) = \$98 m

Renovated SF = 89,978(Reno) 27,120(New)

Cost/SF = \$736



Additional Program: Construction of a 27,000 sf. extension for a visitor's center underground on the South side of the Capitol.

Architectural Integrity: Restoration of architectural and historic features, such as original decorative painting. Renovating and replacing the exterior surfaces

Building Function: Replacement of mechanical, plumbing, storm water systems, heating, air conditioning, and electrical distribution. Preventing water and moisture penetration into the building

Life Safety: Fire protection, communications, security

Wisconsin State Capitol

Built in 1917

Renovated in 2001 = \$145m

Escalated to 2015 = \$203m

Adjusted Scope (2015) = undefined

Renovated SF = 240,000

Cost/SF = \$848



Additional Program: The Capitol basement floor was lowered two feet to provide additional usable office space.

Architectural Integrity: Remodeling projects of the 1960s and 70s had introduced features out of character with the architecture of the Capitol, such as drop ceilings, movable partitions and fluorescent light fixtures, and many original decorative stencils were painted over. The restoration project returned public spaces to their original appearance

Function: Integrating modern technology into the original architecture. Electrical, mechanical (such as plumbing and heating) and communications systems.

Life Safety: Asbestos was removed, and air conditioning was added.

Minnesota State Capitol

Built in 1905

Estimated in 2007 = \$267m

Estimated to 2015 = \$337m

Adjusted Scope (2015) = \$198m

Renovated SF = 379,000

Cost/SF = \$523



- **Additional Program:** Expansion \$110,000,000 in 2007 escalated to 2015 = \$139,000,000
- **Architectural Integrity:** Restoration of interior space, decorative painting and historic spaces.
- **Building Function:** Functional organization to assist government in being more efficient. Mechanical, electrical and plumbing replaced with new systems
- **Life Safety:** ADA, Code upgrades, Smoke evacuation, fire alarm systems, emergency exit requirements.

Capitol Comparisons

State Capitol	Renovated Square Footage	Escalated to 2015	Adjusted Program	Adjusted \$/SF
Kansas Capitol	300,000 SF	\$205 million	\$187 million	\$624/SF
Michigan Capitol	225,000 SF	\$94 million	\$94million	\$416/SF
Ohio Capitol	273,000 SF	\$184million	\$184million	\$674/SF
Texas Capitol	360,000 SF	\$318 million	\$223million	\$620/SF
Utah Capitol	310,000 SF	\$265 million	\$152million	\$492/SF
Virginia Capitol	117,000 SF	\$105 million	\$98 million	\$736/SF
Wisconsin Capitol	240,000 SF	\$203 million	\$203 million	\$848/SF
AVERAGE	260,725 SF	\$196million	\$163million	\$600/SF
Minnesota Capitol*	387,000 SF	\$337million	\$198million	\$523/SF

* This is a benchmark only and is not intended to be a cost estimate for the renovation. Cost estimate will be completed as part of the pre-design and project definition phase.

Minnesota State Capitol Preservation



Process Recommendations for Going Forward

Recommendation for Going Forward

January 15, 2012 Deliverables

- Preliminary Comprehensive Pre-Design Plan
 - Functional diagrams for Legislature, Governor and Judiciary
 - Functional Mechanical, Electrical, & Plumbing diagrams
 - Master Plan/Pre-design High Level Planning document with step by step milestone identification
 - High Level Schedule with identification of Milestone dates and goals
 - High Level, Rough Order of Magnitude, systems and Renovation Estimate
- Capitol Preservation Commission's Annual Report to Legislature Approved by Commission

Commission Action Item

Approval of the Proposed Process and
deliverables for January 15, 2011