

2014

Report from the Capitol Preservation Commission



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MOCA

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Submitted on behalf of the
Capitol Preservation Commission

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Capitol Preservation Commission

This report is submitted on behalf of the Capitol Preservation Commission whose duties and responsibilities are to preserve the Minnesota State Capitol as outlined below.

Commission Members

The 2011 Legislation forming the Capitol Preservation Commission created a 22 member commission. Membership was defined in statute as consisting of the:

- Governor, Lt. Governor, Attorney General, and the Chief Justice of the Supreme Court;
- Senate Majority Leader, two additional members of the Senate Majority and two members of the Senate Minority;
- Speaker of the House, two additional members of the House Majority and two members of the House Minority;
- Commissioners of Administration and Public Safety;
- Historical Society Director and the Executive Secretary of the Capitol Area Architectural and Planning Board; and
- Four public members.

The 2013 State Capitol Preservation Commission Members:

- Governor Mark Dayton
- Lieutenant Governor Yvonne Prettner Solon
- Attorney General Lori Swanson
- Chief Justice Lorie Skjerven Gildea
- Senate Majority Leader Tom Bakk
- Speaker Paul Thissen – Designee Representative Mary Murphy
- Senator Ann Rest
- Senator Warren Limmer
- Senator LeRoy Stumpf
- Senator David Senjem
- Representative Diane Loeffler
- Representative Dean Urdahl
- Representative Alice Hausman
- Representative Matt Dean
- Commissioner Spencer Cronk, Department of Administration
- Commissioner Ramona Dohman, Department of Public Safety
- Historical Society Director and CEO, D. Stephen Elliott
- Executive Secretary Nancy Stark, Capitol Area Architectural and Planning Board
- Ted Lentz—Public Member
- James Dayton—Public Member
- Dana Badgerow—Public Member
- Peter Hilger – Public Member

Duties and Responsibilities of the Commission

1. The commission shall develop a comprehensive, multiyear predesign plan for the restoration of the Capitol building, review the plan periodically, and, as appropriate, amend and modify the plan. The predesign plan shall:
 - Identify appropriate and required functions of the Capitol building
 - Identify and address space requirements for legislative, executive, and judicial branch functions
 - Identify and address the long-term maintenance and preservation requirements of the Capitol building

In developing the predesign plan, the commission shall take into account:

- The comprehensive plan for the Minnesota State Capitol Area, as amended in 2010, (www.caapb.state.mn.us)
 - The rules governing zoning and design for the Capitol Area
 - Citizen access
 - Information Technology needs
 - Energy efficiency
 - Security, educational programs including public and school tours
 - Any additional space needs for the efficient operation of state government
2. The commission shall develop and implement a comprehensive financial plan to fund the preservation and restoration of the Capitol building.
 3. By January 15 of each year, the commission shall report to the chairs and ranking minority members of the legislative committees with jurisdiction over the commission regarding the activities and efforts of the commission in the preceding calendar year, including recommendations adopted by the commission, the comprehensive financial plan required under paragraph (a), clause (5), and any proposed draft legislation necessary to implement the recommendations of the commission.

EXECUTIVE SUMMARY

This is the third annual Capitol Preservation Commission Report highlighting the progress of efforts to restore the Minnesota State Capitol. Since the first report, substantial progress has been made in moving the project forward. The restoration project received appropriations of \$37.4 million in 2012 and \$109 million in 2013. Governor Dayton has recommended \$126.3 million in his 2014 bonding proposal to fully fund the \$272.7 million project. The funding to date has allowed for the hiring of a project team to oversee design and construction, schematic designs were developed and approved, stonework on the exterior façade has begun, and tenants have been relocated from the Capitol basement allowing the first phase of interior work to begin.

The project team oversaw an intensive collaborative process with tenants and stakeholders to develop the schematic design package. The design development process was directed by the guiding principles established by the Capitol Preservation Commission that the restoration efforts focus on architectural integrity, building function, and life safety and security. MOCA, the Owner's Program Manager, developed a Design Scoping Workshop (DSW) process composed of 11 specific workshops to facilitate program definition and schematic design development for restoration of the Minnesota State Capitol. The 11 workshops incorporated all of the design guidelines and imperatives previously established by the Capitol Preservation Commission. Stakeholders participated alongside the project team throughout the DSW. The DSW categories were:

- DSW#1 – BIM (Building Information Modeling)
- DSW#2 – Historic Preservation
- DSW#3 – Mechanical, Electrical, Plumbing, Building Systems
- DSW#4 – Security, Life Safety, Accessibility, and Vertical Transportation
- DSW #5 – Committee Room/Chambers and Meeting Rooms Workshop
- DSW #6 – Office/Swing and Space Allocation Workshop
- DSW #7 – Grounds Workshop
- DSW #8 – Public Spaces Workshop
- DSW #9 – FF&E Workshop
- DSW #10 – Decorative Paint & Art Workshop
- DSW #11 – Historic Lighting in Historic Spaces

The Capitol Preservation Commission approved the schematic design package in July 2013. The commission also approved Work Package #1 that consists of demolition and abatement of the basement areas to allow the least disruption to functioning spaces by new mechanical systems. Based on the approvals, preparation of Design Developments began in July and approved construction work began in September. 100% Design Development documents were submitted in January 2014. The remaining work packages 2-4 are expected to be considered by the commission at various points in 2014.

2013 ANNUAL STATE CAPITOL PRESERVATION COMMISSION REPORT

The following is a brief discussion of the project activities and accomplishments during 2013.

Capitol Restoration Design Guidelines and Imperatives

Design Guidelines and Imperatives are a set of qualitative statements related to the restoration of the Minnesota State Capitol that go beyond the typical programming and planning documents. These guidelines capture the essential elements that make up the Capitol. The elements are clearly defined in a principle statement, descriptive written text, and specific graphic material. They convey to the architect and the construction manager the desires and objectives of the Capitol Preservation Commission at both the general and specific building element levels. To view this set of Design Guidelines and Imperatives as they are being developed, go to

<http://www.mn.gov/capitol/preservation>, click on reference materials.

Design Scoping Workshops, Summaries and Imperatives

Following the development of the Design Guidelines and Imperatives, MOCA, the Owner's Program Representative, established 11 workshops with the Department of Administration, Architects (HGA Architects) and the Construction Manager (J. E. Dunn Construction). These workshops were designed to accomplish two very important elements of the overall process:

1. To clearly communicate the goals and the intention of the Capitol Preservation Commission and tenants by incorporating these goals into the design guidelines and imperatives.
2. To develop collaboration between the owner (Department of Administration), Owners Program Manager (MOCA), Architects (HGA Architects) and Construction Manager at Risk or CMr (J. E. Dunn) through intensive hands-on working sessions where solutions to the various problems were discovered over bi-weekly workshops.

These workshops were to identify issues and raise concerns but ultimately present possible solutions to the issues at hand. During each workshop, time was set aside for the tenants, other stakeholders and Capitol Preservation Commission members to receive an update on the progress and recommendations under consideration.

At the conclusion of each workshop, a summary session was held and was open to all interested parties. During the summary sessions, follow up assignments were made, the architects were released to move forward with the development of schematic design and the OPM was asked to finalize the imperatives for the project. The CMr was asked to incorporate the decision or recommendations from the workshop and update the working cost model to ensure the project remains within budget. Schedule was also discussed and updated based upon the recommendations and outcome of the working session.

This entire process has been designed to move the project forward in an organized manner while staying focused on quality, budget and schedule. This same process has been used on similar large scale projects and resulting in the high quality projects that are on budget and ahead of schedule.

The following is a brief summary of all of the design scoping workshops for continuity of information. Workshops 1 – 4 were held in 2012 while workshops 5 – 11 were held in 2013:

Design Scoping Workshop #1 – BIM (Building Information Modeling)

Workshop held in 2012

The first of the Design Scoping Workshops (DSW) was held on November 1, 2012 and focused on the architects and CMr use of Building Information Modeling (BIM). BIM is a computer aided drafting tool that develops the building designs in full three dimensions and incorporates the quantities of products and materials into one large data base that the 3D drawing accesses to complete the documents. This is a relatively new tool and the protocol of how to use it and level of detail is critical to establish at the beginning of the project. Unlike the other workshops, this workshop was held for only one day. Subsequent discussions were held to ensure that BIM remained properly integrated into the project.

Design Scoping Workshop #2 – Historic Preservation

Workshop Held in 2012

The Historic Preservation DSW was held on November 13, 14 and 15 of 2012, with the summary session, budget session and schedule session held on November 16, 2012.

This DSW was the first of the intense working sessions. The Workshop began with a discussion of the Design Guidelines that were focused on the historic preservation. Working groups developed the following historic preservation categories for the Capitol:

- Zone 1 – Protects the most significant areas in the building. No alterations to these spaces should occur. Space in Zone 1 is primarily in accordance with the original use. Little deviation from this use exists in the building today. Temporary uses such as food service carts and media connections should be carefully planned to preserve the original configuration and finishes.
- Zone 2 – Is significant in existing architectural character and finishes. Careful planning, design and construction activities should preserve and restore these spaces. Included are the important minor corridors, existing stairs, significant meeting rooms and other building features that have changed over time and should be restored.
- Zone 3 – Offers flexibility for use and configuration. Original historic finishes in these areas have been lost over time or covered with newer finishes. New finishes in these areas should be compatible in character and design with the original finishes in the building with some allowance for configurations and alterations to accommodate new building systems and functions. Spaces in this zone were changed early in the life of the building, some even by Cass Gilbert.
- Zone 4 – Includes reclaimed spaces in the Basement Level and spaces that had ultimate flexibility in the original design. Spaces under the Terrace and stairs are included in this zone. All

areas and support Staff functions should be designed for access to natural light and be provided with building systems and services equal to other areas in the Capitol.

Design Scoping Workshop #3 – Mechanical, Electrical, Plumbing Building Systems (MEP)

Workshop held in 2012

The MEP Building Systems DSW was held on November 27, 28, and 29 of 2012, with the summary session, budget session and schedule session held on November 30, 2012.

The key finding of this workshop, which is also consistent with the comprehensive master plan, is that “the mechanical and ventilation system in the building should be replaced in its entirety.” Any system replacement should be done in accordance with the following five established principles:

- Provide a modern standard of function to support building operations for the next 100 years.
- Systems should be designed to minimize the operational costs of the building using a life cycle cost approach versus a first cost.
- All systems shall be accommodated within the existing footprint of the building and be designed and installed to minimize the loss of useable space.
- Systems must be designed and installed to maintain the historic fabric of the building.
- All work shall conform to the State of Minnesota’s Capitol Complex Construction Guidelines and Standards

Utilizing these principles and the comprehensive master plan, the design team proposed two solutions:

- All Air handlers in the Basement
 - *Advantages*
 - 1. All air handling equipment is located so that it is not above occupied space
 - 2. Equipment is consolidated in one location.
 - 3. Vibration is easier to manage in the Basement.
 - *Disadvantages*
 - 1. Duct chases will be larger in a system that supplies all the air from the lowest point
 - 2. Fresh air from the roof is difficult to duct to the basement
 - 3. Ducts under the floor in the basement have not been fully evaluated
- Combination of air handling units in Basement and on the Roof
 - *Advantages*
 - 1. Duct sizes and chases through the building will be smaller than the option that locates all air handlers in the Basement.
 - 2. Ducts under the floor in the basement will be smaller because some air is supplied by air handling units located in the attic or on the roof.
 - 3. Fresh air can be brought directly into the upper units reducing duct space and louver requirements.
 - 4. Security requirements are easier to manage.
 - *Disadvantages*

- 1. New equipment space must be built in the attic or on the roof.
- 2. Fresh air from the roof is difficult to duct to the basement
- 3. Vibration, noise and protection from water damage must be carefully designed, constructed and maintained.
- 4. Equipment is located over occupied space and significant historic finishes.

Upon further investigation and taking building security considerations into account, the combination of air handling units in the basement and air handlers on the roof was the preferred scheme by most of the attendees.

In addition to these two design options for the MEP systems, the design team also investigated the following concepts:

- Reclaim/found attic space
- Equipment room
- Systems distribution
- Lower level equipment space vs. office space
- Building systems
- Heating and cooling plant
- Building automation systems

Over the course of the next five months as the design scoping workshops proceeded, the architect, engineer, and OPM will continue to refine the solutions to the overall building systems and the strategy for replacement of these systems. The workshops dealing with security and life safety, accessibility and vertical transportation, committee rooms and communication systems and space planning have big impacts on the final determination of the MEP systems and the sequence of replacement use. The architects and engineers will continue to review these options and will provide further recommendations as the project becomes more defined.

Design Scoping Workshop #4 – Security, Life Safety, Accessibility and Vertical Transportation

Workshop held in 2012

The Security, Accessibility, Life Safety and Vertical Transportation workshop was held on December 11, 12 and 13, 2012, with the Summary Session, budget session and schedule session held on December 14, 2012.

The workshop was broken down into specific mini-workshops where intense focus could be brought for a period of time on a specific topic in order to reach some general consensus and resolution. The following topics and processes were reviewed:

Security

The workshop began with a focus on Security issues and began the resolution of the following items:

- Secure Entry Locations
- Card Reader Locations

- Tunnel Security
- Exterior/Site Security
- Parking Security
- Office Suite Security
- Possible Camera Locations
- Intrusion Detection Systems (Sensor Driven)
- Individual Security

Life Safety

The Life Safety review considered the occupancy and load factor determinations for the building. Those elements are set by code and determine the required building exit widths and number of restrooms and associated fixtures.

Exit Stairs and Restrooms

The Occupancy numbers indicated that in the worst case (which is what the code assumes) requires 8 exit width stairs. This would be roughly equal to 1,450 square feet per floor throughout the building for a total of 6,480 square feet. The code further allows for the reuse of existing stairs to a limited degree. By utilizing one of the west Senate stairs, the two stairs on the east, and the original elliptical stair, two additional stairwells would be required. By extending the two Senate stairs from the galleries to ground, the requirement would be to add only one (1) new stair.

The restoration team identified a location for the insertion of a new stair in the northwest quadrant that runs from the roof to the basement and connects with the new tunnel, which will serve as an exit. It was recommended that this be a utility stair, one that is not highly finished. This solution resulted in a loss of space for the one stair and the extension of three other stairs for a total loss of approximately 500 to 800 square feet. This would also require that the entire building be outfitted with a fire suppression system except in areas that exceed 55 feet in height.

The restrooms designed originally by Cass Gilbert alternate by floor and sex. The men's restrooms are located on floors 1 and 3 and the women's are located on Ground and 2. The total current number of restrooms throughout the building does not meet the current need requirements. Using the concept of "Gender Equity" the design team developed a layout for a men's and women's restroom to be located on each floor that are accessible through an existing opening. That design avoids damaging the historic fabric of the Zone 1 space. These new restrooms would be fully accessible. The associated space loss would be minimal due to the reduction of small or individual restrooms scattered throughout the Capitol.

The design team also identified locations for "Family Restrooms" to be located in the main corridor close to the stacked restrooms. These rooms can be utilized by families and by those needing companion assistance.

Accessibility

The access and accessibility into the Capitol includes many facets, such as the access from the parking lots to the Capitol, and others like the steepness of the tunnel between the Capitol and State Office Building that are beyond the scope and footprint of the Capitol. Other elements such as access throughout the Capitol such as to committee rooms and restrooms are within the immediate scope of the restoration project. Nonetheless, several accessibility issues were identified to be addressed in separate projects.

The Restoration Team along with the Minnesota State Council on Disabilities focused on providing at least one non-mechanical entry for getting into the building. It was determined that the primary access for people with disabilities should be through the south entry.

The Restoration Team also studied the House and Senate chambers and galleries. It was determined that access to both of the chambers for members is acceptable. Both bodies have made or are currently making the chambers accessible. Likewise, both the House and Senate galleries are accessible and could be greatly improved with some minor modifications to the seating. The architects were asked to study this further.

Conversely, the Supreme Court has a much different set of issues to address. These break down into three areas:

- Access to the Bench – Provide a portable lift that could be brought out to the hallway behind the bench for access when needed.
- Access to the Well – Accommodations may be made by allowing the individual attorney to enter the well through one of the two side doors in the front of the Chamber off of the auxiliary corridor.
- Access to the Gallery – Is only possible by adding a lift or ramp. There are presently two small storage rooms on the west side of the Chamber accessible from the auxiliary corridor to the south of the Chamber. These two rooms could be converted to a ramp or to a mechanical lift. Most felt that a ramp, because of the reliability, was the better option.

In addition to the issues related to the chambers and galleries of the House, Senate and Supreme Court, there were also other issues that were studied and will continue to be refined over time. These include:

- Parking and access from Lot B to the Capitol Building through the tunnel
- An identified area of refuge for use prior to evacuation.
- Intercom system that may be combined with security systems
- Scrolling transcript for the hearing impaired in committee rooms
- Wayfinding materials in a variety of formats

Vertical Transportation

Vertical transportation within a facility like the Capitol is critical to its functionality. Currently there are three elevators that service all of the floors of the Capitol. Two of these elevators are very small and cannot carry a large number of passengers. The third elevator is a larger elevator that can carry an adequate number of people. It also functions as a service elevator. However, all three of the elevators

are excessively slow. The decision was to continue to use three elevators but increase their size and speed to provide a higher level of service. To this end, the Restoration Team proposed to place one high speed elevator in each of the current openings on the south side of the Capitol. This decision will move more people and will offset the stacking of people in the basement or elsewhere in the building waiting to use the elevator. The third elevator will be located in a new location in the northwest quadrant alongside a proposed new stairwell (see Exit Stairs and Restrooms). This new elevator will be a 4500 traction elevator and will be used as a passenger, service and emergency service elevator. It will have direct access to the tunnel and new loading dock. These three larger faster elevators should greatly improve service.

It is important to note that the two south elevators were at one time enclosed with glass and provided a great amount of natural light into the Capitol. With the decision several years ago to close off the glass by adding an additional elevator, lighting became a much needed element in and around the internal spaces of the building by the elevators. During the workshop, an elevator inspector participated and indicated that reestablishing the glass around the elevators was acceptable per code. The architects, as per the Design Guidelines and Imperatives, are preparing plans to restore the glass around the elevators. This will also provide for more natural light and should allow for the reduction of secondary light sources

All remaining workshops were held in 2013.

Design Scoping Workshop #5 – Committee Room/Chambers and Meeting Rooms Workshop
Hearing Rooms

The discussion on Hearing rooms focused on three elements; size, configuration and technology. During the workshop, MOCA presented benchmark information that addressed how other state capitols had handled the size, configuration and technology of their committee rooms. MOCA also presented information on use of the hearing rooms. .

Hearing Rooms	Committee Size	Staff Size	Audience Size
Small	8 to 10 Members	6 to 8 Staff	75 to 100 Public
Medium	16 to 18 Members	6 to 8 Staff	100 to 125 Public
Large	30 Members	12 to 14 Staff	200 Public
Extra Large	30 to 45 Members	16 to 20 Staff	250 Public

The focus of the workshop was to place the hearing rooms within the Capitol. It was noted that not all of the desired hearing rooms could be accommodated in the Capitol. The workshop explored ways to accommodate all of the hearing rooms. Despite the ability to place such hearing rooms within the Terrace level of the Capitol building, it was determined to be cost prohibitive. The final decision was to build four small hearing rooms (similar to Capitol Building Room 123) and one medium size hearing rooms (G-15) for use by the Senate and one hearing room small hearing room for the House. In addition, a classroom space for Minnesota Historical Society in the Capitol will also be available for use by the legislature for conference committees. All other hearing rooms would need to be located in another location outside of the Capitol’s footprint.

Caucus Rooms

The caucus rooms were reviewed and the workshop discussed how these rooms were used and where they should be located. The House caucus rooms will be located on the first floor of the north wing. The Senate indicated they would use hearing rooms as needed for this function.

Technology

During the discussion on hearing room technology, the following items were considered:

- Wireless networks – increased capacity, public access was identified as critical. It was also determined that MN.IT will not provide services for public access
- Cellular Telephone – currently a single carrier the decision was to move towards a more robust multi carrier systems (Distributed Antenna System)
- Electrical Power – clean power for equipment and servers was a required service along with UPS backup systems
- Telecom – phones should continue to use VOIP with some analog phones for emergency service.
- Sound Systems – Recording, reinforcement and distribution were the three critical elements of the system. It was also determined that there would not be a PA system.
- Lighting – current lighting was discussed and it was decided that new lighting would need to be a balance between lighting the space and providing adequate lighting for Cameras. Direct Sunlight was discouraged.
- Room Acoustics – it was noted that due to the existing shape of the hearing rooms and the location of the table with in the room amplification will be needed to provide adequate acoustics since modifying the rooms shape will not be possible. House Media – was discussed as moving from the Capitol to the State Office Building.
- Senate Media – was discussed as moving to the new legislative office building.

Design Scoping Workshop #6 – Office/Swing and Space Allocation Workshop

Space Planning

The space planning design scoping workshop was the initial kick off of space allocation for the various tenants in the Capitol Building. All of the tenants of the building were contacted to discuss the use and quality of the space. From this workshop the framework was determined for the ongoing discussion with the various tenants that would continue throughout the rest of the design development phase of the project.

Design Scoping Workshop #7 – Grounds Workshop

Grounds

The first item that was discussed in the workshop was that of entry to the Capitol. The workshop team identified three primary points of entry; the ground level south and the first floor south. These two entries are presently the two primary entry points to the building. The ground floor also serves as the entry for person with disabilities and is compliant with the Americans with Disabilities Act (ADA). The team did not see any reason to change that entry design.

Sustainable Design

Minnesota has embraced high performance energy goals for state buildings with the adoption of the B3 energy code. This code requires that sustainable design elements for both the building and the grounds be analyzed. A baseline for analysis was identified through which to gauge the feasibility of geothermal, solar hot water, fuel cells, natural light opportunities and solar energy. Due to the size of the geothermal field and the impact to the south lawn of the capitol, that idea was determined to not be feasible. Similar issues arose for solar energy proposals (hot water and electrical). The quantity of panels and roof location proved problematic. Finally, fuel cell technology was the most reasonable from a physical constraint but its availability within Minnesota and the Midwest is limited.

Lots N, O and Aurora

The focus of the workshop was on how to move parking (safety related issue) away from the Capitol. The current proximity poses a significant risk to those who work and visit the Capitol. Relocation of vehicles in the parking lots to the north of the Capitol (Lot N and Lot O) would also for a landscaping design around the building consistent with the original designs proposed by Cass Gilbert.

It was recommended that Aurora Avenue have all parking removed (including accessible parking) and be reconfigured to enhance the connection between the Mall and the south steps. Areas of Aurora east and west of the Porte-Cochere should be enhanced with landscaping.

Design Scoping Workshop #8 – Public Spaces Workshop

Exhibit Spaces

Exhibit spaces will be incorporated in the terrace level. The space under G-15 will provide premium exhibit opportunities. The space between the columns in the terrace level corridor will also provide excellent exhibit opportunities. Other temporary exhibit spaces in the building should remain and the content considered and updated as needed.

Visitor Services

Numerous options exist for the location of Visitor Services. These include a gathering space for school groups and places to store coats and lunches, etc. The Minnesota Historical Society facilitates and guides tours. The plan calls for a small presence at the south entrance to sell gifts and provide information. On the ground floor visitor services will have a small presentation space/classroom. MHS will also have office space in the building. The Great Hall on the east side will be restored to allow for some of these original functions.

School Bus drop off was discussed in two locations, Lot O and along Aurora Avenue. Lot O was initially considered to be the preferred option. Access would be through the existing ramp to accommodate persons with disabilities. The second option is Aurora Avenue with accommodations for individuals with disabilities at the Porte Cochere. After further study, it was determined that Lot O would not work due to access issues for the bus turnaround and that difficulty Visitor Services could have in coordinating and managing arrivals. Aurora Avenue will continue to be the bus and school bus drop off.

Gift Shop

The gift shop will no longer exist as an element in historic circulation space. The historic door opening on the first floor to the east of the entry should be restored and the space beyond the door would be a logical location for the gift shop.

Signage

Signage is to incorporate both building code signage and also directional/wayfinding. This should be of a style compatible with the historic nature of the Capitol and at the same time accessible to individuals with disabilities. Further discussion with regards to design, placement, and communication processes were held during the Design Development phase of the project.

Food Service

Rathskeller

Additional seating for the Rathskellar should be added to the space plan. In addition, the former Supreme Court and Governor's dining rooms should be restored and available for dining. The restoration project would not include any modifications to the Rathskeller kitchen. Finishes in this area should be compatible, but treated as zone 4 type spaces.

Vending

Vending will continue to be located in the terrace level. The design should be sympathetic to the new dining seating areas and Rathskeller.

Food Counter

Historically, there was a food counter on the second floor that was removed in the past. Food services then expanded to the entire south side of the second floor during session. The food counter will be located in the east wing, outside of the historical circulation space.

Design Scoping Workshop #9 – FF&E Workshop

Furniture and Zones

Zone 1 spaces should be furnished with historic furniture. Historic furniture located primarily in Chambers, Retiring Rooms, Governor's Reception Room, Historic Chief Justice's Office and Deliberation Rooms is the highest priority and the most attention will be given to these areas.

Historic furniture also belongs in Zone 2 spaces. Zone 2 may also use refurbished period furniture that is new to the Capitol but true to the period.

Zone 3 spaces will be furnished with a combination of new furniture that is custom designed to meet the functional needs of the capitol as well as with found or refurbished period furniture

Zone 4 may be quality "off the shelf" furniture.

While the corner rooms may change function in the new space plan, it is important that these rooms be designed and furnished consistent with Cass Gilbert's vision. These rooms will be furnished using historic pieces to the greatest extent possible. If additional furniture is required, it will be matching period furniture.

Selected prominent offices in the Capitol building should be entirely furnished with historic or matching furniture. Other offices should be furnished as appropriate with period or new furniture. Every effort should be made to provide a full complement of historic furniture in an office. This is preferable to mixing historic and new furniture in offices.

Original furniture in the Governor's Reception Room, to the greatest extent possible, should be restored and lost furniture recreated. If original configuration is not restored, added pieces should be original to the building or replicas of original furniture.

Technology in Furniture

Accommodations should be made in fixed furniture pieces for current and projected technology including microphones, data ports, and electronic connections where appropriate.

Design Scoping Workshop #10 – Decorative Paint & Art Workshop

Capitol Art consists of three categories of art:

- Decorative Art – this category includes all the art that is painted directly on the ceiling and walls of the capitol.
- Attached Art – includes murals that were commissioned separately by Cass Gilbert for the capitol and are on canvas applied directly to the wall and/or ceilings of the Capitol.
- Framed Art – all art that is hung and framed that reside in the public corridors or public spaces of the Capitol.

Each of these categories was explored and discussed in the workshop with the areas of focus were as follows:

- Cleaning & Stabilization
- High value on existing historic materials
- Honor Artistic Intent & Architectural Integrity
- Enhance the Visitor/User Experience
- Respect historically significant changes

Attached Art was found to be one of two categories:

- Commissioned by Cass Gilbert (Not currently funded). An RFP is to be developed for a conservator that will inform the restoration process.
- Original work by Elmer Garnsey. This will be part of the Decorative Art/Painting Scope.

Framed Art

Cleaning and restoration of framed art and Governor's Portraits are not part of the current budget.

Decorative Painting includes the following elements that were discussed and considered for restoration

- Ornamental
- Repetitive
- Patterns, shadows, lines, etc.
- Faux Finishes – Graining

- Stencils and highlights
- Gold leaf and bronzing powders
- Glazes
- Legends and lettering

In reviewing the decorative paint in the Capitol there were several painting campaigns over the years. Recently the 3rd floor was complete, previous campaigns took place on the other floors at different times. There are several areas within the Capitol where the decorative painting has deteriorated and needs to be repaired and or repainted. There is also an area where decorative paint has been concealed by a layer of white paint that has been over painted. The workshop focused on all these areas and prioritized the repair and restoration with the budget.

During the investigation leading up to the workshop it was found that decorative paint was found in Supreme Court Deliberation Room, previously it was thought to have none. This find will need further study and recommendation from the architects and the decorative painters.

During the workshop treatment options for decorative paint were discussed. Because number of campaigns and the variation in quality and age the decorative painters and the design team will use each of the various treatment options to address the existing conditions. The treatment options available to the restoration team are:

Conservation

- Preserve as much historic fabric as possible
- Highest level of authenticity

Restoration

- Return to period of significance using historic fabric and evidence as much as possible (repair)

Replication

- Recreate historic appearance, without regard to historic fabric (overpainting)

New, Sympathetic Decoration

- Create appropriate building inspired decoration in area where there is a change of use where such decoration is appropriate.

Sculpture

Niches exist throughout the interior of the building that were originally intended for art and sculpture, but currently remain empty or contain trash receptacles and non-historical lighting. These areas should be populated with sculptural elements, but this is not part of the restoration budget.

Budget

The budget for decorative paint was established by the CMr in consultation with MOCA. The budget breakdown established a series of options that can be selected from in order to maintain the overall budget. The decorative painting company, CMr, Architect and MOCA collaborated on the development of a hierarchy of spaces that would receive the decorative painting in order to maintain the overall budget.

Design Scoping Workshop #11 – Historic Lighting in Historic Spaces

During the lighting workshop several areas of investigation were discussed these included:

- Replacing historic fixtures back to their original locations
- Creation of new lights from Historic lighting family
- Lights in office space should be centered on windows for the exterior view
- Appropriate foot-candles levels should be studied
- Historic lighting should be sensitively modified to achieve appropriate lighting levels without changing the appearance of the fixture

Lighting was also investigated in the various restoration zones that have been identified for the restoration. Lighting would be as associated with each zone as follows:

- Zone 1: Restored light fixtures and historic fixtures should be used
- Zone 2: Use of reconstructed and historic fixtures as available
- Zone 3: Use of replicated and “off the shelf” fixtures
- Zone 4: Use of “off the shelf” lighting fixtures

Schematic Design

On May 15, 2013 the architects (HGA/SCA) delivered the schematic design documents based on the design scoping workshops. The schematic design described in one package the complete scope of the project that was discussed during the workshops and represented the first major deliverable from the architects.

Following the receipt of the schematic design package, the program Manager (MOCA), the architect (HGA/SCA) and the construction manager (JE Dunn) developed three independent cost estimates. These estimates were reconciled to match the budget

The Capitol Preservation Commission met in July and reviewed the schematic design document and provided comment. These comments were reviewed and followed up on July 22, 2013. With the incorporated comments, the Capitol Preservation Commission approved the schematic design.

Design Development Presentations

Following the design scoping workshops and the approval of the schematic design, the architects were released to move into design development (DD). During design development phase there were 6 design development presentations that the architects presented to the stakeholders and member of the Capitol Preservation Commission.

Design Development Presentation #1 – Kick Off Meeting

The Kick-off meeting was held on July 10, 2013, and was a general discussion related to progress and planning.

Design Development Presentation #2 – Design Character

The second DD meeting was held on July 31 and August 1. This discussion covered basement level public spaces, new restrooms, new dining areas, new stairs, elevators, materials and finishes. The group also discussed the scope of work in Zone 1 spaces.

In the basement, it was discussed that paint will be removed from original stone walls and they will be left natural in office areas and public spaces. New walls were to be painted brick with use of Concrete Masonry Unit or brick for walls enclosing mechanical spaces. Original structural vaulted ceilings will be exposed and painted a light color. The Design Team will continue to research porcelain tile and slate tile for flooring. Doors will be painted wood panel doors with hollow metal frames encased in wood trim.

The new dining areas will include carpet floor, painted gyp board or painted brick walls, and ADA compliant ramps. The Governor's Dining area includes repairing existing plaster walls and crown molding and the current floor will be removed down to the original level. The Supreme Court Dining area floor should be returned to the original checkerboard floor tile.

There will be a new access stair from the basement to third floor. The elliptical stair will receive plaster repair with no modification of railing heights. There are plans to extend secondary corridor stairs to exit level. There are also plans for a new service elevator, and returning the rotunda elevators to the original function. Proposed cab design includes beveled glass front, cork floor, glass back, wood and glass sides, cork floor, and painted tin ceiling. Men's, women's, and unisex restrooms are planned at typical location on each floor. New restrooms will meet State ADA requirements.

The general scope of work in Zone 1 spaces was thought to include the following:

1. Plaster repair.
2. Painting.
3. Stone repair.
4. Woodwork.
5. Hardware.
6. Signage and wayfinding.
7. Furniture restoration.
8. Artwork.
9. Fire protection.
10. Lighting.
11. HVAC.
12. Communications.

Design Development Presentation #3 – Systems

The third DD meeting occurred on August 21 and August 22 and covered systems. This included mechanical, electrical, plumbing, structural, and roofing systems.

Mechanical systems included pumps, heat exchangers, radiant heat, chilled water, hot water, AHU's, smoke exhaust and DDC controls. This also included a scope of reduction of underfloor ductwork and corresponding reduction in underpinning scope.

Electrical discussion included a summary of the electrical systems as planned; including generator, current switchboard status, ATS, power monitoring, OCPD coordination, device locations, and power distribution.

The plumbing system progress included domestic cold water, domestic hot water, sanitary, and storm. The current storm volume exceeds the existing piping capacity so there is a need for additional storm piping. The existing building does not have overflow roof drains and will need to accommodate such in the new work. The overflow drains will combine inside the building and exit at the four corners to daylight.

For structural systems, the group reviewed the geotechnical evaluation and testing that has occurred following schematic design. Tested soils consist of fine-grained sands and silts, and are generally dense. Recommended soil bearing pressure of 6000 psf appears consistent with the original foundation design. The geotechnical evaluation indicated that soil solidification methods would not likely be feasible for underpinning foundations.

At the roof, there are portions that are a steeper slope than is recommended for the paver-protected membrane roof system. These areas are believed to have originally used an adhered tile system. This system is no longer used due to its inferior performance. The Design Team is proposing to utilize a metal roof system in these areas, but will also research options that may have an appearance closer to that of the adhered tile.

Design Development Presentation #4 – Meeting Rooms

The fourth series of DD meetings occurred on September 11 and September 12 and covered meeting rooms. This included Hearing Rooms/Conference Rooms and Caucus Rooms.

General feedback on hearing rooms included the need for flexibility for testimony and facilitating conference committees. There was a consensus that the group did not want a tiered or raised area. The need for adequate space behind the dais for staff was recommended but staff should also be seated within close proximity. Telecom and A/V issues were discussed for these spaces as well.

During caucus room discussions, the group felt that the room should have open, audience style seating focused on a table for the speaker. The room should be located in proximity to the access points. Voice amplification is not required, but A/V capabilities are desired. Sound isolation from corridors is critical.

Design Development Presentation #5 – Chambers, Lighting & Restrooms

The fifth installment of DD meetings took place on October 9 and October 10 and centered around the House, Senate and Supreme Court chambers. Lighting and restrooms were also discussed.

In the Chambers, it is anticipated that the work will include HVAC upgrades, carpet repair or replacement, scaffolding to accommodate lighting and decorative paint repair, sprinkler work, the resolution of member chair issues, and finish work in the retiring rooms. Also discussed was improved storage at the dais, repaired hardware at the sliding doors.

The lighting goal in the chambers is to light architecture, accommodate television, provide more even lighting, and utilize energy/maintenance efficient fixtures/bulbs.

The design team presented several layouts for restrooms. All restrooms will be code compliant with ADA. Historical character of the original restrooms will be maintained to the best extent possible, including Tennessee Marble, nickel fittings, lighting fixtures, mirror frames, and oak panel doors. The Department of Administration's maintenance engineers prefer manual faucets and flushes.

Design Development Presentation #6 – Public Space

The sixth DD meeting occurred on October 30 and October 31 and included a discussion on public spaces. Most public spaces are considered "Zone 1" spaces. As discussed in DD#2, the general scope of work in Zone 1 spaces was thought to include plaster repair, painting, stone repair, woodwork, hardware, signage and wayfinding, furniture restoration, artwork, fire protection, lighting, HVAC, and communications.

Additional public spaces include a larger, more inviting circulation space at the basement level, additional dining areas in close proximity to the Rathskeller, a new visitor's information space located within the room just east of its current location, and a snack/lunch counter space located on the second floor to be operated by the Services for the Blind.

2013 CONSTRUCTION ACTIVITIES

Tenant Relocation

The Department of Administration worked closely with all the tenants in the building to identify appropriate space for relocation during restoration. The following organizations moved from space in the basement:

- Senate Office Staff - Temporary space in Capitol
- House Office Staff Temporary space in Capitol
- Capitol Press Corps – Centennial Office Building
- Capitol Security – Administration Building

Upcoming 2014 Relocations

- Senate Staff – Centennial Office Building
- Senators and Staff – East Wing to West and North Wings of Capitol
- House Public Information – State Office Building
- House IT and Electrician – Temporary Trailers
- Governor’s Office – Veteran’s Services Building
- Office of the Attorney General –Leased space (tentative)
- Senate Media – Under evaluation

Work Package #1 – Demolition, Abatement and Parking Lots

Work Package #1 included demolition, abatement and the construction of two new parking lots located on the south west lawn in front of the capitol. These parking lots are temporary and will be removed and the landscaping restored at the conclusion of the restoration project in 2017.

Demolition and Abatement

Work Package #1 consists of terrace level demolition of non-structural partitions as well as terrace level infrastructure demolition including mechanical, electrical, plumbing, telecommunication, and fire protection. The contractor was required to protect and to maintain the existing systems that are serving all other levels of the Capitol in order to keep the Capitol open for the people’s business.

Temporary Parking Lots

Work Package #1 also included the temporary parking lots on the Capitol Mall. The lots were required to be completed and available for use by September 1, 2013. The Upper Mall Temporary Parking Lot was to provide 112 Stalls and the Lower Mall Temporary Parking Lot provides 91 Stalls. These lots will provide the parking for legislative staff and other employees that parked in Lots N and O which were closed during this work package to accommodate the construction. These temporary parking lots will also accommodate the parkers on Aurora Avenue, which will be used for construction staging following the 2014 session.

It is essential that full Owner's services and functions were maintained throughout construction period, with minimum disturbance and disruption to Capitol operations. Contractor and subcontractors were to perform the work around a detailed schedule to meet the needs of the tenants and government functions.

Where work was to be performed in occupied spaces, the contractors were to perform work during non-work hours unless specifically approved by Owner.

Stone Repairs, Window Replacement, and French Doors Restoration

Stone Repairs

Repair to the exterior stone began in May of 2013, the first phase is scheduled to be complete this spring with preparations to start the second phase beginning in March of 2014. Phase one includes 900 custom carved replacement marble Dutchman. In addition, redressing, tuck pointing, cleaning and other repairs are on-going. This work generally falls into one of three categories, each with a specific goal in mind: 1) Life Safety – Maintain Public Safety; 2) Water Management – Restore Building Integrity; and, 3) Building Stewardship – Preserve Historic Character.

Additional information on the exterior stone repair project, including a short video, is available under Projects at: <http://mn.gov/capitol/preservation>

The stone repair work will take place in 2013, 2014, 2015 and 2016.

The marble on the façade of the Minnesota State Capitol Building will continue to age, weather, and deteriorate over time. The efforts to preserve this historic material will be an ongoing process. No repair can be considered permanent, and future restoration work – repair as well as replacement – will be required as conditions change and the marble continues to age. Understanding the mechanisms behind the resulting deterioration, and tracking the progression of marble decay over time is critical for developing the predictive modeling necessary to create effective maintenance schedules and to lay the groundwork for future restoration work.

Window Replacement

The Capitol has 242 exterior windows (excluding drum windows, skylights, French Doors and interior windows). All but four (4) of the original windows were replaced with aluminum windows in 1973/1974. The aluminum windows are at the end of their expected lifespan. The replacement of the aluminum windows with wood windows will take place in 2013, 2014 and 2015 in coordination with the exterior stone repairs.

French Doors Restoration

The restoration of the French doors proceeded throughout 2013 and will be completed in early 2014.

West Plaza and Stair Repairs

Work began in June 2012 on the west plaza and stairs and associated areas to halt and prevent further water leakage and repair deterioration. The plaza and stairway re-opened in early January 2013.

Summary

As discussed in the 2012 Annual Report, the “Minnesota Capitol has reached a tipping point. There is such significant deterioration of stone, risk of leaking piping, lack of ventilation in some areas, and disorganization of offices that it is time now to act to preserve this national architectural treasure or face the consequences of large annual expenses born by the taxpayer to address these problems without fixing or solving the root cause. The replacement of the mechanical and electrical systems will have the benefit of reducing operating costs through improved energy efficiency and simplified maintenance”.

The preservation and restoration of the Minnesota State Capitol has been carried out under the details described in the Comprehensive Master Plan and according to the Capitol Preservation Commission Guiding Principles of:

- Architectural Integrity
 - The restoration of the Capitol architecture is one of the most important aspects of the restoration.
 - When considering new space in the Capitol, it should be done with great care and respect as 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 continue to serve as the seat of State Government for the next 100 years.
- Life Safety and Security
 - The public and those who work and visit the Capitol deserve to have a building that is safe from threats, fire and deterioration of building systems.
 - It must provide for accessibility of all Minnesotans and other visitors.
 - The Capitol be upgraded to current life safety codes.

The Comprehensive Master Plan and the Guiding Principles developed by the Capitol Preservation Commission have continued to inform and guide the work and activities of the Project Team throughout 2013. The team’s work is proceeding forward in accordance with the schedule and budget that was presented within that document.

The Design Scoping Workshops have produced the desired result of bringing together the stakeholders and the design and construction team in a collaborative manner while solving problems prior to the start of schematic design. With the culmination of the Design Scoping Workshops and the approval by the Capitol Preservation Commission of the schematic design documents, the architects and contractors moved into the design development phase of the project.

The Design Development documents began the process of addressing the remaining detailed questions of how best to organize space and use of the Capitol over the next 50 to 100 years in order to accomplish the guiding principle of “Building Function”. Questions have been raised regarding the final space planning of the building, the way the public will use the building when coming to the Capitol, and who should occupy the Capitol going forward. During the design development meetings the tenants and

the users of the building provided valuable insight and input to assist in answering these questions. There were of course areas of intense study and conversation that ultimately resulted in a collaborative decision on Committee Rooms, Space Planning and Public Space.

100% Design Development Documents were submitted to the State on Friday, Jan. 10, 2014. The next step will be to complete cost estimating on the DD documents and any budget reconciliation that is needed. Future changes to the design will likely have cost and schedule impacts.

Schedule

The Capitol Building will be occupied by tenants throughout the first half of the Restoration Project. A primary goal of the phasing plan is to ensure the State can conduct its business during annual Legislative Sessions. Construction phasing details and tenant swing space plans continue to be developed with input from the Department of Administration. The following (and attached) is the phasing plan as it stands today.

There are four main phases of construction. Each phase represents areas in the building that will be under construction. The phases are additive in nature, meaning that Phase 1 includes only Phase 1 area. Phase 2 includes both Phase 1 and Phase 2 areas. Phase 3 includes the areas of Phases 1, 2 & 3. During Phase 4 the entire building will be vacant and under construction:

The following chart highlights the four phases and their individual start and completion dates:

Phase	Area	Start	Completion
1	Basement Demolition and abatement	Sept 2013	August 2015
2	Under Slab Construction and Roof Replacement	January 2014	December 2016
3	Basement, East Wing, West Wing (Ground and 1 st floors except G-15)	June 2014	December 2016
4	Entire Building	June 2015	December 2016

The following is a description of each of the four phases of work.

Phase 1 - Basement Demolition and Abatement - September 2013 to August 2015.

Most of the tenant spaces in the basement were relocated in the fall of 2013. A select few tenant spaces such as Senate Media and Senate Duplicating will continue to operate in their current locations. The Rathskeller will also stay operational during legislative sessions. A pedestrian corridor linking the East/West tunnels and exit pathways will be maintained during construction. Life safety systems will be maintained for all occupied basement spaces during construction. The pedestrian corridor route will be modified when necessary to accommodate construction. Existing building systems within the Basement serve the upper (occupied) floors and must remain operational.

Non-structural partitions and ceilings will be removed. Any equipment and systems that do not serve occupied spaces will be removed. Previously abandoned equipment and systems will also be removed. Abatement work in the basement will also be done during this phase.

To compensate for the lost parking spaces due to construction staging, temporary parking lots have been built on the west portions of the upper and lower lawns. These lots will be removed and the areas restored when construction is completed.

Phase 2 – Under Slab Construction in the Basement and Roof Replacement – January 2014 to December 2016.

Work package 2 and 2A for the MN State Capitol project includes the following major work components.

- Underground mechanical, electrical & plumbing infrastructure work, which includes:
 - Removal of the existing concrete slab on grade.
 - 6'-8' deep excavation trenches, haul soil off-site.
 - Underpinning of existing footings to avoid settlement
 - Installation of new underground ductwork, plumbing and electrical conduit
 - Backfill and compact trenches with new soil and/or flow-able fill
 - Installation of new concrete slab on grade and concrete curbs
- Removal of existing roofing and installation of new roofing
- Assessment of skylights for future repairs
- Procurement of new mechanical air handlers and electrical switch gear (WP 2A) for installation at a later date (these items have long lead times).

Underground Mechanical, Electrical and Plumbing Work

WP-2 and 2A represents the first major steps in providing the Capitol with new mechanical and electrical systems, while providing more usable square footage in the basement. Existing mechanical ductwork and piping systems in the basement that have been installed overhead will be removed and new systems reinstalled underground. This opens up a considerable amount of additional usable square footage in the basement for offices or other functions.

The process of installing mechanical, electrical & plumbing infrastructure underneath the existing Capitol is painstakingly slow in nature, and quite complicated. JE Dunn will be working closely with geotechnical and structural engineers to provide excavation trenches that do not undermine the structural integrity of the 100+ year old structural foundations. The excavation and underpinning work must be phased and balanced in order to spread out the disturbance impact to the existing structure in any given area. Soil borings have been taken and we can expect soil conditions to be quite consistent, however it is unknown how the soils will react to the work as we get started. It is estimated that it will take more than a year to accomplish this work.

There will be on average 40-50 construction workers in the basement on any given day. Despite extraordinary efforts to minimize impacts to building occupants, it is important to understand the magnitude and complexity of this work. The work will generally progress during normal business hours, and basement will look, feel, and sound like a major jobsite. Monitoring of air quality and vibration will be ongoing throughout the project.

Work will start in early February beginning with concrete slab cutting and removal. This work will be phased just ahead of the actual trench excavation and underpinning. Equipment used in this work will include:

- Concrete saws

- Small backhoes and excavators
- Jackhammers
- Buggies and conveyers to transport soils

In addition to the East stairway leading to the basement, a temporary ramp/opening will be used at the southeast corner of the building to feed materials in and out. Bobcats will be used to transport material from this temporary ramp/opening to waiting dump trucks along Cedar Ave near the East entrance. The sidewalk on the Capitol side of Cedar will be closed for this purpose.

Corridor access through the basement will remain through our temporary wall system. The route of this corridor will change as the work progresses. Signage will clearly direct occupants and the walls will separate occupants from the construction. Circulation to and from the basement to upper floors will be limited to the stairs near the Rathskeller.

Roof Replacement:

Work will also include removal and replacement of the existing flat/paver roof systems, restoration of existing copper roofs, and restoration of balconies, loggias and the Quadriga. This work will begin in July of 2014 and be completed in two phases. Phase one (starting July 2014) includes the East roof. Prior to this roof phase, asbestos must be abated from within the East roof crawl space. Phase two (starting in June 2015) include the West and North sections of the roof.

The work includes complete removal of all existing flat roofing layers down to the original concrete roof deck, and replacement with new. There are several existing roof layers that will be removed. Existing copper roofing and flashing systems will be repaired and replaced as needed. Balconies, loggias and the Quadriga will include new waterproofing and installation of new wear surfaces and drain repair.

The roofing and waterproofing systems are hot applied (tar) products. Although smaller tar-pots to minimize odors will be used, the wind will dictate odor migration. Air intakes at the roof will also be covered to minimize odor.

Phase 3 – Basement, East Wing (all floors), West Wing (ground & 1st floors) except G-15. Construction – June 2014 to December 2016

Work in the Basement described above will continue. JE Dunn will start demolition in these areas once the 2014 Legislative Session is over and occupants are relocated. Wall framing and the installation of mechanical, electrical, plumbing and sprinkler systems will follow demolition.

Temporary air handlers will be installed in the West wing to serve floors 3 and 4, allowing the removal of existing air handlers within the basement. The southeast elevator will be replaced with a new glass elevator.

Areas that remain occupied until June 2015 (including the House and Senate Chambers) will be kept fully operational and life safety systems will be maintained.

Phase 4 –Entire Building - June 2015 to December 2016

Tenants in the West and North wings will be relocated to either another building or to a temporary space.

Construction will continue meaning the Capitol will be closed for construction during this time. The House chamber will be made available during the legislative session in 2016. A majority of the construction is scheduled to be substantially complete prior to the 2017 Legislative Session.

Budget

In accordance with the Comprehensive Master Plan approved by the State Capitol Preservation Commission, along with the changes approved by the 2013 legislature, the funding needed for the Capitol Restoration project is \$272.7M. Laws 2012, Ch. 293, Sec. 13, Subd. 3 appropriated \$44M for Capitol Restoration and tunnel construction. Of this amount, \$37.4M was allocated to Capitol Restoration. Laws 2013, Ch. 136, Sec. 3, Subd. 2 appropriated \$109M for Capitol Restoration. On this basis, an additional \$126.3M is needed to complete the funding of the restoration project. Operating costs for non-bondable expenses are not included in this amount.

The substantial completion date for the restoration project is December 2016. The sequence of work for the restoration project continues to be developed with a number of goals in mind:

- Efficient construction sequencing
- Minimized phasing and temporary construction costs
- Reduced risk of delay
- Mitigation of inflation risk – ability to lock in guaranteed price (GMP) for interior finishes one year earlier than previous plan
- Interior finishes procured in one consistent package (continuity of subcontractors performing work in all wings of the building)
- Reduced construction impacts to occupants
- Increased safety of tenants and occupants
- Increased design efficiency and consistency for all wings

The abatement and demolition work began in the basement in September 2013. Current planning is focused on work beginning on all levels of the east wing in June 2014, along with ground and first floors in the west wing. The work will start in the north wing and remaining floors in the west wing in June 2015.

We are currently working with the tenants to finalize relocation plans, which include utilizing the new legislative office building as of July 1, 2015. In addition to cost impacts to the legislative office building, any delay in the completion of that project will impact the schedule and cost for restoration of the Capitol.

Currently, four major work packages are anticipated on the Capitol Restoration project, plus separate work packages for exterior stone repairs and window replacement. The four major work packages are:

1. WP#1 – Abatement and Demo at terrace level
2. WP#2/#2A – Underground systems, terrace IT infrastructure, roofing, and mechanical, electrical, plumbing (MEP) equipment procurement
3. WP#3 - Demo, Structural and MEP main building systems at all levels
4. WP#4 – All remaining work and finishes and MEP branch systems.

All remaining major work packages are scheduled to be contracted for in calendar year 2014. A portion of the exterior stone repairs will be contracted for in 2015, along with the remaining work that is outside of the major work packages. The funding for each work package will need to be in place prior to bidding that portion of the project. As such, the funding requested in 2014 will be for work to be bid in 2014 and

2015. In the event the funding needed is not appropriated, the construction schedule and cost will be impacted. Mobilization and demobilization costs for interrupting construction are a key cost driver in delayed funding scenarios as well as inflation.