

2013

Report from the Capitol



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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 authored under 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 the Department of Public Safety;
- Historical Society Director and the Executive Secretary of the Capitol Area Architectural and Planning Board; and
- Appointment of four public members.

The 2012 State Capitol Preservation Commission Members:

- Governor Mark Dayton
- Lieutenant Governor Yvonne Prettner Solon
- Attorney General Lori Swanson
- Chief Justice Lorie Skjerven Gilda – Designee Justice Paul Anderson
- Senate Majority Leader David Senjem
- Speaker Kurt Zellers – Designee Representative Dean Urdahl
- Senator Carla Nelson
- Senator Ann Rest
- Senator Keith Langseth
- Representative Matt Dean
- Representative Mary Murphy
- Representative Larry Howes
- Representative Alice Hausman
- 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
- Larry Gleason – 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 pre-design 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 pre-design 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 second annual Capitol Preservation Commission Report highlighting the progress of the Capitol Restoration in 2012.

Approval of the Master Plan and Preliminary Pre-Design

January of 2012 the Capitol Preservation Commission approved the Comprehensive Master Plan and the Preliminary Pre-Design prepared by MOCA. The Master Plan as approved provided a conceptual approach to the restoration as well as recommended budget of a \$241 Million dollars and a substantial completion date of December of 2016. On top of the \$241M, there was a \$6.6M in funding needed to build the University Avenue tunnel to the Capitol, which needed to be done prior to light rail construction.

Initial Appropriation

Following the approval of the Master Plan and the Preliminary Pre-design, \$44M was appropriated in the 2012 bonding bill for Capitol Restoration and the tunnel construction. The \$44M appropriated in the 2012 bonding bill provides initial funding for the following portions of the project:

- 1) to design, construct and equip a new tunnel extending from the Capitol Building and passing under University Avenue (currently under construction) at a cost of \$6.6M;
- 2) for predesign and design of the renovation and restoration (now underway);
- 3) for repairs to exterior stone, window replacement and preparation of mechanical space in the attic of the State Capitol Building (construction phase will start in 2013);
- 4) for construction to restore and improve the Capitol building and grounds
- 5) up to \$5,000,000 of this appropriation may be used to predesign, design, construct and equip certain state-owned buildings to meet temporary and permanent office and other space needs in furtherance of an efficient restoration of the Capitol building and for the effective and efficient function of the tenants currently located in the Capitol Building

These funds may not be spent for work under paragraphs 4 and 5 unless and until the conditions in Minnesota Statutes 15B.15, have been met. See attached Exhibit A.

Assembly of the Capitol Restoration Management, Design and Construction Team

July of 2012 the Department of Administration began the process of selecting the Management, Design and Construction Teams for the Restoration of the Capitol. These activities resulted in the following:

- | | |
|--------------------------------------|--------------------|
| • Owner Program Manager (OPM) | MOCA Systems, Inc. |
| • Owner Representative (OPR) | CPMI |
| • Architect and Engineer (AE) | HGA Architects |
| • Construction Manager at Risk (CMr) | J. E. Dunn |

Design Guidelines and Imperatives

In September 2012 MOCA the Owner Program Manager met with the Capitol Preservation Commission to begin the process of developing the Design Guidelines and Imperatives that would guide and inform the architect. MOCA met with the Capitol Preservation Commission in a two hour, high-level discussion of Capitol restoration issues that formulated the overall restoration approach. MOCA held three additional workshops focused on specific restoration elements including function, technology and building systems. Guidelines may be reviewed at <http://www.mn.gov/capitol/preservation>

Design Scoping Workshops

MOCA was requested to develop a Design Scoping Workshop (DSW) process similar to the one used on the Utah State Capitol Restoration. MOCA and the Department of Administration identified 11 specific workshops, which incorporated all of the design guidelines and imperatives. By the end of 2012 MOCA had conducted the following four workshops with the Restoration Project Team and stakeholders:

- DSW #1 – Building Information Modeling Workshop
- DSW #2 – Historic Preservation Workshop
- DSW #3 – Mechanical, Electrical, Plumbing and Communication Workshop
- DSW #4 – Security, Life Safety, Accessibility and Vertical Transportation Workshop.

Following each of the workshops a summary was developed describing the findings from the workshop (Summary documents may be reviewed at <http://www.mn.gov/capitol/preservation>).

2012 ANNUAL CAPITOL RESTORATION REPORT

With the appropriation of \$44 Million dollars as the initial funding of the Capitol Restoration the team of consultants was assembled and work of providing clear project definition to the design began. The following is a brief discussion of the project activities and accomplishments during the 2012 annual year.

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 document organizational or special statements. These guidelines capture the essential elements that make up the Capitol. These 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 about the Capitol in general and about the building element in specific. To view this set of Design Guidelines and Imperatives as they are being developed, go to

<http://www.mn.gov/capitol/preservation>

Design Guidelines and Imperatives Workshop - Big Picture (Capitol Preservation Commission)

On September 13, 2012 MOCA facilitated the kickoff of the Design Guideline development with a two-hour meeting with the Capitol Preservation Commission. During this meeting the discussion focused on the big picture or high level objectives that the commission felt necessary to include in the project. The issues that were raised focused on the repair, and the restoration of the Capitol, its architecture, and its systems. There was discussion about the elements of the architecture that defines the Minnesota State Capitol from other Capitols such as the configuration of the volume, the organization of spaces and decorative arts that are on display on the Capitol walls. The conversation also defined the scope of the restoration to that of dealing with repair, replacement and restoration of systems, organizational elements and historic quality.

Design Guidelines and Imperatives Workshop - Functions

Following the workshop with the Commission, on September 27, 2012 MOCA facilitated a two day workshop focused on Functions with approximately 50 Tenants and stakeholders of the Capitol. This workshop was broken in to two sessions. The first session was a general discussion about how the building functioned and how the building systems met or did not meet the needs of the occupants. The second session focused on each of the various offices and/or departments that were in attendance. These discussions focused on the functional aspects of their specific spaces, and the layout and building systems within those spaces. The results of the workshop identified several new issues and concepts that were incorporated into the guidelines.

Design Guidelines and Imperatives Workshop – Systems

On October 17, 2012 MOCA held a number of meetings with several different groups to discuss the building systems and how things were currently set up and how things could be improved. These meetings included:

- Meeting with Plant Management to discuss the guidelines that were needed for the MEP systems.
- Security and the Capitol Security related issues that would need to be incorporated into the guidelines.
- IT Systems where all of the different organizations that provide IT support to the occupants in the Capitol provided extensive information on the way the current systems are organized and provided a concept of how they may want to be organized in the future. These were added to the Guidelines.
- Media and Press provided insight into how their spaces functioned and what needs were for them in providing service the elected officials and the public.

In addition to these meetings, MOCA met separately with

- CAAPB Executive Director and discussed the CAAPB concerns and issues
- The Minnesota Historical Society
- All of the Tenants of the Capitol to discuss concerns and to dispel rumors.

Design Guidelines and Imperatives Workshop – Details

The final and follow up session was held on October 31, 2012 and November 1, 2012. These meeting followed up on some of the initial issues that were addressed at the first three workshops. These included additional information on Mechanical and Electrical systems. MOCA also focused on the existing condition of the building, studying the various details that Cass Gilbert had designed from the decorative ornaments to the door knobs. The detailed investigation provided several important elements for discussion and created additional guidelines.

MOCA met with Members of the Minnesota Disability Council where access and accessibility goals for the project were discussed. The conversation focused on several different areas where access for the disabled was in question. Restrooms, Chambers, Galleries and Parking were among the items discussed. These discussions resulted in two important conclusions. The first focused on exceeding the minimum standards set forth in the code and standards for the disabled. The second resulted in a specific set of guidelines that were focused on the modifications that would need to be made the Capitol in order to accommodate the needs of the disabled.

Design Scoping Workshops, Summaries and Imperatives

Following the development of the Design Guidelines and Imperatives, MOCA 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 that were incorporated into the design guidelines and imperatives to the Design and Construction team.
2. To develop collaboration between the owner (Department of Admin. RECS), OPM (MOCA), Architects (HGA Architects) and 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 and other stakeholders as well as members of the Capitol Preservation Commission to receive an update on the progress and the recommendations that were under consideration.

At the conclusion of each workshop, a summary session was held with the team and included RECS, OPM, A/E and CMr. 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 into the working cost model that was to be updated and presented at the next workshop to help everyone stay focused on the 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 is the same process that was used on the Utah State Capitol Restoration which resulted in a high quality project, on budget and ahead of schedule.

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

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 to what level of information is critical to establish at the beginning of the project. Unlike the other workshops, this workshop was held for one day only. Follow up meetings were scheduled and the Architect was identified as the responsible party to make sure that each month, throughout the design portion of the project, that a regular BIM meeting is held to discuss the current issues around the use of the tool and the quality of the documentation.

Please note that because of the unique nature of this workshop there is no information (Summary Statement or imperative) included on the website regarding the outcome of the BIM Workshop.

Design Scoping Workshop #2 – Historic Preservation

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 of the Capitol and what the Commission and tenants felt was important to consider. Following the presentation and discussion of the guidelines, the team divided into two working groups to address the issues of Capitol quality and quality of the restored work as well as zones of use. In general, the guidelines call for “Zones that are designated to give hierarchy to the spaces within the Capitol and to guide repairs and restoration.” The Zone Summary Recommendations are as follows:

- 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

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.

This was a very intense and involved workshop. The workshop began with a discussion about the Design Guidelines that included a presentation by Wold Architects and Engineers who had developed concepts that had been outlined in the Master Plan documents. Following this presentation the teams were divided into several working groups to investigate the various elements of the building systems. The conclusions that were reached can be viewed on the Minnesota State Capitol Preservation Commission website (<http://mn.gov/capitol/preservation>) under the heading of “Design Scoping Workshops” and then by following the menu on the left hand side to the desired workshop.

The major recommendation that came from the 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” and that it should be done in accordance to the following 5 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 vs. 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 five principles and information provided by the comprehensive master plan, the design team began investigating solutions. Further research resulted in the design team proposing two systems:

- 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.

Additionally, there was a concern raised from a security standpoint, that air intake should not be at ground level but should either be a minimum of 10 to 12 feet above the ground or from the roof. This then created four options that needed to be further investigated prior to a final recommendation. 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 Mechanical, Electrical and Plumbing Building systems, the design team also investigated as part of the workshop 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 proceed forward, 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

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. See below for the workshop topics and process. For Design Guidelines and for summary statements please refer to the Capitol Preservation Commission Website for the Minnesota State Capitol Restoration at.

<http://mn.gov/capitol/preservation>

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

Many of these items will need to be discussed further in a non-public setting.

Life Safety

Life Safety followed the security discussion. The first and most important element that was reviewed had to do with the determination of Occupancy and the Load Factors. These are set by code and include exit width requirements based on the number of the occupants in the building. The Load Factors then help determine the quantity of toilets and restroom fixtures throughout the building that are accessible to the general public.

Exit Stairs and Restrooms

The Occupancy numbers indicated that in the worst case (which is what the code assumes) we would be required to provide 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 using one of the west Senate stairs, the two stairs on the east, and the original elliptical stair, two additional stairs 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 north west quadrant of the building that will connect to the new tunnel which will serve as an exit, and will also go from the basement to the roof. It was recommended that this be a utility stair, one that is not a highly finished stair. This solution resulted in a possible loss of space for the one stair and the three extensions 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 alternated by floor and sex. Therefore, the men's restrooms were located on floors 1 and 3 while the womens were located on ground and 2. The total number of restrooms scattered throughout the building in small or individual sized restrooms is not enough to make up the difference between what is required and what is existing. Using the concept of "Gender Equity" the design team developed a layout for a mens and womens restroom to be located on each floor, that are accessible through an existing opening, thereby not damaging the historic fabric of the Zone 1 space. These new restrooms would be fully accessible to the disabled and the general public. The associated space loss would be minimal due to the reduction of small or individual restroom scattered throughout the Capitol.

The design team also identified locations for "Family Restrooms" that will be located in the main corridor close to the stacked restrooms. These rooms are used to facilitate assistance to those who are disabled or physically challenged.

Accessibility

The access and accessibility to 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 to committee rooms, restrooms and the Capitol itself are the scope that the Capitol Restoration is able to focus upon at this time. With that said, there are several accessibility issues that were identified that could be addressed in separate projects, beyond the Capitol Restoration.

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 the disabled should be through the south and that the south entry as it is currently configured, without modification, while not perfect is adequate for the disabled to enter the building. However, there are two issues that must be addressed with the south entry staying as the main entry point for the physically challenged. First, a parking redistribution plan and a new walk would be required in the south drive of the Capitol. Additionally the walkway will need to be heated to keep it clear of ice and snow. Second, the drive, while it has too steep of a cross slope needs to be wide enough to allow for drop off and pick up, and for ambulance service.

Additionally, it was discussed that it would be preferable to have a second accessible entry through the east doors. This would require the relocation of the existing office space on the east side of the ground floor. It would also require the addition of a heated surface to avoid the accumulation of ice and snow in the winter months. While no decision has been reached, the Restoration Team is investigating this as a possible entry point for the disabled.

The Restoration Team also studied and visited both the Chamber and Gallery in the House of Representatives and the Senate. It was determined that access to the chamber in both the House of Representatives and in the Senate for members is acceptable, and both bodies have made and are currently making accommodations to support those members that are physically challenged. Likewise, both the House and Senate galleries are accessible and with some minor modification to the seating, accessibility would be greatly improved. 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 – the solution is to provide a portable lift that could be brought out to the hallway behind the bench for access when needed.
- Access to the Well for a disabled attorney – 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 that is 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
- Way finding in a variety of forms

Vertical Transportation

Vertical transportation within a facility like the Capitol is critical to how well it functions. Currently there are three elevators that service all 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 good size elevator and can carry an adequate number of people as 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 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 North West quadrant alongside the new stair mentioned previously. This new elevator will be a 4500 traction elevator and will be used as a passenger, a service and an emergency service elevator. It will have direct access to the tunnel and new loading dock to the north and across University. It is believed that these three larger faster elevators will greatly improve service.

It is important to note that the two south elevators, one on the east and one on the west, were at one time enclosed with glass which 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 the elevator inspector participated and indicted 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

2012 CONSTRUCTION ACTIVITIES

University Avenue Tunnel

Tunnel construction work began in June 2012 and is on schedule to open in February 2013. The new tunnel greatly enhances the standoff distance of the loading dock serving the Capitol and allows increased access control in accordance with security recommendations.

Stone Repairs, Window Replacement, and French Doors Restoration

Stone Repairs

The exterior façade of the Capitol, with Minnesota Diamond Pink granite at its base and white Georgia marble above, is showing extensive deterioration and distress due to prolonged exposure to original stone carving techniques, natural weathering processes and other factors. Investigation has found long-term water infiltration that has saturated masonry behind the marble, stone and brick damage from the freeze/thaw weathering cycles, corrosion of the material used to anchor the stones to the building, and shifting of stonework. Experts have been conducting assessments and testing repair methods at select areas around the Capitol's façade since mid-October. Testing has focused on the techniques to repair these issues and the visual impacts of such repairs.

Repair work is set to begin in 2013 and will address the highest priority issues identified during the previous investigative phases. 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 and 2015, subject to funding. Past asset preservation appropriations and a part of the 2012 \$44M appropriation will be utilized for exterior stone repairs.

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.

Windows 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 thirty eight years old and 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 subcontractor for the restoration of the 28 pairs of French Doors has been selected. A pair of doors on the south side of the second floor is a mock-up to test repair procedures, before moving on to the other doors. The restoration of the French doors will proceed in 2013.

Dome Repairs

The reinstallation of the chandelier mid-January 2013 will mark the completion of the dome repairs made to minimize water intrusion, repair the finial, and replace the twelve dome drum windows.

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. Installation of the permanent handrails will occur in the spring. Repairs are about 50% complete in Capitol Security's area below the plaza where there was some water damage to finishes.

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”.

Throughout 2012, the Comprehensive Capitol Restoration Master Plan and the Capitol Preservation Commission Guiding Principles of:

- Architectural Integrity implies that
 - 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 implies that
 - The building must continue to serve as the seat of State Government for the next 100 years.
- Life Safety and Security implies that
 - 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.

were used to inform and guide the work and activities of the Project Team. The team’s work is proceeding forward in accordance with the schedule and budget that was presented within that document.

While there is still much to do, the Design Scoping Workshops are producing the desired result of bringing together the design and construction team in a collaborative manner while solving problems prior to the start of schematic design. There continues to be many open questions about the use of the Capitol over the next 50 to 100 years. Questions have been raised regarding the purpose of the building, the expectations of the public when coming to the Capitol, as well as who should occupy the Capitol going forward. During the first four months of 2013 these workshops will continue with an intense study on Committee Rooms, Space Planning and Public Space, and will develop solutions that will address these concerns and others.

Once the Design Scoping Workshops are complete, the architects will begin the process of documenting the decisions reached in the DSW's and will begin development of the work packages for construction. At the present time the construction manager is continuing to analyze the construction sequences to achieve substantial completion in December 2016. The project schedule will be finalized in the coming months.

Budget

In accordance with the Comprehensive Master Plan approved by the State Capitol Preservation Commission, the funding needed for the Capitol Restoration project, as of February 2012, is \$241M. Operating costs for non-bondable expenses and past asset preservation appropriations are not included in this amount.

Although the final determination on the sequence of work has not been made, for budgeting purposes the anticipated sequence of work continues to be as outlined in the Master Plan. The Master Plan contemplated the work to be sequenced over a 4 year construction period as follows: A) Mechanical Preparations; C) West/North Wings; B) East Wing; and, D) Public Space. Sequence A and C work would be contracted for in 2013 and the spring of 2014, including for the following:

- Asbestos abatement
- Mechanical, electrical & plumbing systems replacement
- General construction (i.e. life-safety, accessibility, security, telecommunications, etc.)
- Roof Replacement
- Preparation of swing space
- Finish work

In addition, exterior stone repairs and window replacement will also be occurring during this period.

On this basis, and in accordance with the approved Comprehensive Master Plan, \$109M is needed in order to keep the Capitol repair, restoration and preservation project on track through fiscal year 2014. FY14 and FY15 operating costs for non-bondable expenses are not included in this amount.