

THE CAPITOL SOWER

THE NEWSLETTER OF THE CAPITOL COMMISSION | VOLUME THIRTEEN | NUMBER ONE | FEB 2021

HVAC Phase II Update

As the second phase of the Heating, Ventilation and Air Conditioning Upgrade Project progresses toward its completion in the end of June 2021, contractors have been moving tons of new air handling equipment into the Capitol. Staff in the southwest quadrant offices are using the new geothermal system to heat and cool their individual offices. Phase 2 of the project includes several larger spaces which will rely on air handling equipment for heating and cooling rather than individual units. The original HV, no AC, system in the Capitol used air handlers to move air through the building. The new system will use state of the art air handlers to send conditioned air into spaces such as the Warner Chamber, Supreme Court and the Nebraska State Law Library which are too large to be heated or cooled with individual units.

Through the large units housed in the basement recycled and fresh air are combined and passed over coils filled with heated or cooled refrigerant. This conditioned air moves through a series of ducts hidden inside walls. The enclosed ducts lead from the basement to the second and third floors carrying and returning air. The ventilation system associated with the HVAC project is a well planned maze of vents winding their way through the Capitol.



Above and left, contractors unload and move air handling units weighing up to 2000 lbs. into basement machine rooms for integration into the ventilation system.



Right, the units are joined and ducts attached to move the conditioned air throughout the Capitol.



Left, new galvanized ducts leave a machine room to join up with older painted ducts in the extensive ventilation system leading from the basement to the tower.



Above, looking down from the second floor chase opened in the project, above right, ducts originating in the basement come up through the first floor to enter the chase and then extend on up to the third floor where light shines, right, in the center of the image.



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Chief Justice Supreme Court
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OCC
 Office of the Capitol
 Commission

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 Construction Coordinator
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 Dan Kratky, Mason
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OCC AT WORK

Experience and Service

Years of Service Recognized

Capitol Commission staff were recognized in 2020 for their service to Nebraskans. Capitol Administrator Bob Ripley appreciates the dedication of his team and congratulates staff as they care for and preserve the Nebraska State Capitol. This year's awardees represent varied areas of the Office of the Capitol Commission's mission. Gabel and Mallam represent the visible day to day care of the Capitol which touches occupants directly through the furniture they use and the floors they walk upon each day. DeVries oversees the HVAC Upgrade Project and Hansen works behind the scenes to preserve the Capitol for future generations. It is the dedication of the entire staff that allows team members to share knowledge and build a great preservation team. 



Lana Gabel
 5 years



Matt Hansen
 10 years



Richard Mallam
 20 years



Clark DeVries
 25 years

Commission's 2020 Schedule

The Nebraska Capitol Commission will hold their quarterly meetings in Hearing Room #1507 on ground floor of the Capitol. The Commission uses these meetings to oversee and review Capitol maintenance and preservation projects; discuss and approve projects and the upcoming budget for the Office of the Capitol Commission, and set administrative rules for the use of the Capitol. The last meeting of the year

includes a joint Capitol Commission/ Capitol Environs Commission meeting. The meetings are open to the public. 

- February 18, 2021 at 10:00 a.m.
- June 17, 2021 at 10:00 a.m.
- August 18, 2021 at 10:00 a.m.
- November 18, 2021
 Joint Meeting at 10:00 a.m.
 Capitol Commission at 11:00 a.m.


CONSERVATION PROJECTS

COVID19 Protection Added

Office of the Capitol Commission staff responded to requests from the Legislative and Judicial branches to adapt their chambers and meeting rooms in response to safety concerns surrounding the corona virus pandemic. The modification of the existing room layout and additions made to original desks and furniture has enabled state government to continue to function during this difficult time.

Following Center for Disease Control guidelines for social distancing Plexiglas partitions were fabricated and installed in the Norris Legislative Chamber and the Nebraska Court of Appeals Chamber. The existing seating arrangement in the Legislative Chamber provided adequate side-to-side social distance between Senators, but the space between the rows of Senator’s desks lacked the recommended

distance. Therefore, Plexiglas dividers were installed on the front of the desks to help minimize virus spread between rows of senators.

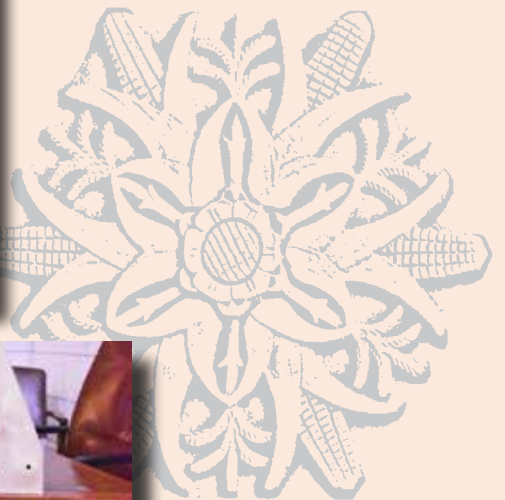
Because the Supreme Court is in Phase 2 of the HVAC Project, the seven Supreme Court judges are sharing the Court of Appeals Chamber with three Appellate Court judges. With the existing bench arrangement the three judges could adequately distance. Adding four more required additional furniture and Plexiglas partitions. In both cases, the Plexiglas partitions were added to Capitol original furniture. Staff creatively developed methods to add the protection without damaging the original historic fabric of the benches and desks. 



Above, the addition of tables and Plexiglas partitions in the Court of Appeals Chamber during the pandemic make the room functional for the three members of the Court of Appeals who meet in the room and the seven Supreme Court judges temporarily using the Chamber. Right, the partitions were extended back into the seating area to separate the judges.



Below, the partitions are supported by one leg which provides the spacing needed for the structure to fit over the existing workspace dividers on the bench. Right, the structure is clamped onto the molding for stability.



The Norris Legislative Chamber with the finished plywood and Plexiglas divider in place, above. Right, the dividers were designed by OCC staff to rest on the Senator’s desks without damaging the original walnut and leather surfaces.



Above, the buttress supports for the Plexiglas dividers were designed and cut to fit the angle of the desk top for stability since the only structural connection was a clamp holding the frame onto the desk front, left.

Opportunity Taken

HVAC Project Augments OCC's work

The Heating Ventilation and Air Conditioning Replacement Project has presented the Office of the Capitol Commission the opportunity to make improvements in the Supreme Court that would have been too disruptive to the daily operation of government to do at any other time. When completed in 1932, the Capitol had state of the art technology for the time, electricity and telephones. Beginning in 1989 and through several renovations, the original floor trench system which carried the electric and telephone wires was adapted and expanded to meet the needs of fiber optics and computers. Additional floor ports were added to the trench system bringing access for new technology to interior desk locations in offices throughout the Capitol.

During this time the Supreme Court moved to computer use in the court. Projection technology was added with a large screen monitor for the display of exhibits during oral arguments. OCC staff worked to

accommodate this added technology by pulling wires through existing conduit located in the outer walls of the Chamber. Cables and wires were routed along benches and railings in the court room.

Phase II of the HVAC Project moved Supreme Court sessions into the Court of Appeals Chamber so that the new heating and cooling system can be installed and windows in the Court Room repaired. With the room cleared it was possible for staff to drill through the marble finish floor and concrete sub-floor to install floor ports housing electrical and data outlets. When the Supreme Court returns to the Chamber there will be better access to the tools of modern technology and fewer cables strewn across the floor. This opportunity to bring the Court up to the standard of the rest of the Capitol came as a result of the opportunity the HVAC Project presented OCC staff. 



Above, it took OCC's mason Dan Kratky 20 minutes to drill the hole that houses the floor port, left, which will allow easy access to electricity and data beneath the bailiff's desk.

Right, the removal of the lowered lay-in ceiling in the south corridor opened access to the structural floor below the Supreme Court Chamber allowing access to install floor ports in the chamber. Below, the conduit carrying the electric and data wires, and the junction box in the center of the photo were installed by OCC staff before the contractors installed the ventilation ducts in the ceiling covering the box.



Left, the core drill shows the floor layers the mason drilled through to open the hole for new floor port access. The port insert will be secured with epoxy.


Core layers above from left to right, Napoleon Gray marble finish floor, setting bed, dark cinder fill for original conduit placement above five inches of concrete structural floor.

BEHIND THE SCENES

Under Cover of Darkness

Much of the snow removal done at the Nebraska State Capitol is done under the cover of darkness. It's not that the Office of the Capitol Commission and State Building Division grounds staff doing the work want to evade notice, it's that sidewalks need to be cleared by the time Capitol Campus staff start arriving at 6:30 a.m. The area to be cleared by the 6 grounds staff and the 3 or 4 OCC shop staff they can recruit to help includes the sidewalks and entrances around the Capitol, the State Office Building, the 1526 K Street office building, Governor's Residence, state parking lots and garages. Snow removal in the parking lots is privately contracted and also occurs at night when the lots are clear of cars.

Keeping an eye on the weather forecast means the group removing snow often arrives at 3:00 a.m. The early start means their workday is over by 2:00 p.m. This schedule works well with a quick moving storm dropping a few inches. But the late January 2021 record setting snow didn't follow the schedule. The snow continued to fall and fall, even after staff had been out three and four times to remove the accumulating snow. The unusually heavy snowfall and overnight drifting made it difficult to clear sidewalks and keep them cleared. After four days of early arrivals the crew could finally arrive for work in the daylight.

The combined crew faces many challenges as they work at the numerous locations. Snow removal at the historic landmark Capitol requires a special effort to get the job done and protect the surfaces and finishes in the building. Plastic rather than metal snow shovels are used. The potential for the metal to scratch the granite walks and damage the Indiana limestone walls is great. Likewise, the usual salt or sand mixtures spread over snow and ice will damage interior stone and marble floors when tracked into the building. Each winter, with every snowfall, Capitol Commission and Building Division staff strive to do their best to keep occupants and visitors safe. 



On surfaces like the West Plaza sandstone, left, a less corrosive snow melt is used. Right, even with the long walk-off mats snow melt and water are tracked onto the marble floors.



Tools for snow removal above left and right. Power equipment is used for sidewalks and large expanses of concrete. Plastic snow shovels are used on stairs and Capitol entrances.



Left, after the snow thrower and brushes clear away accumulated snow, shovels are used to remove packed snow and clear sidewalks refilled with snow by passing snow plows clearing city streets.

Right, during the snow storm narrow paths are cleared for access in and out of the Capitol. Once snow has stopped and the initial clearing is done, staff can take the time to clear away all the accumulated snow.



WHAT'S OLD IS NEW

The Office of the Capitol Commission's Preservation Architect and Capitol Archivist routinely browse internet auctions looking for items related to our Bertram G. Goodhue State Capitol. The pair is seeking to supplement the existing photography collection with photographs taken by those living in or visiting Lincoln. Recently, a photo album created by a University of Nebraska Civil Engineering student named George DeFord appeared on Ebay. DeFord was from Colorado and studying in Nebraska in the early 1920's. The album contained photos of various engineering projects across the United States, including the installation of the railroad tracks around Nebraska's second Capitol in preparation for the construction of Goodhue's building. A dealer in Indiana had acquired the album and was selling off pages and photographs. The Office of the Capitol Commission was able to purchase some of the Nebraska State Capitol related photos for the Nebraska Capitol Collection. These photos provide a window into the early preparation of the second Capitol site for the upcoming construction project.



Above, a photo album page newly acquired for the Nebraska Capitol Collection shows railroad construction around the second Capitol. Enlargements of boxed areas below.



As part of the accessioning process, the Capitol Archivist scanned the 2" by 4" photos at a very high resolution for reference. With magnification these scans reveal incredible detail. The two images above focus in on the power plant on the grounds of the second Capitol. The building was heated with steam generated by a coal burning plant. Goodhue and Capitol Commission did not want another power plant and smoke stack on site which lead to the State and University of Nebraska sharing in the 1929 construction of a plant at 14th and U Street on campus. A tunnel under 14th Street carried the steam pipes to the Capitol and still carries chilled water to cool the building in summer. Once the HVAC Project is completed the one mile long tunnel will no longer serve the Capitol.

CAPITOL EVENTS

Unmasking Brain Injury

March 1 - 7, 2021

The Brain Injury Alliance of Nebraska will have a display in the 1st floor rotunda.

NMEA Capitol Concert Series

March 22 - 25, 2021

The Nebraska Music Education Association plans to hold their annual concert series in the Capitol 2nd floor rotunda from noon to 1:00 p.m. each day.

AFSP State Capitol Awareness

March 22 - 26, 2021

The American Federation for Suicide Prevention Nebraska Chapter will have a display in the 1st floor rotunda.

State Holocaust Commemoration

April 11, 2021

The Jewish Federation of Lincoln and the Institute for Holocaust Education will hold a 3:00 p.m. ceremony in the 2nd floor rotunda.

Worker's Memorial Day Vigil

April 28, 2021

The United Support Memorial for Workplace Fatalities will hold vigil on the North Plaza at 6:30 p.m.

Cornhusker Girls State

June 4, 2020

The Girls State Inauguration program will be in the 2nd floor rotunda at 2:00 p.m.

Mother of the Year Recognition Ceremony

May 6, 2021

The Nebraska Mothers Association Inc. will recognize the Nebraska Mother of the Year and the American Mothers Inc. state 5th grade essay winners at noon in the 2nd floor rotunda.

World Elder Abuse Awareness Day

June 15, 2021

The Nebraska Department of Health and Human Services will light the Capitol purple to educate about the importance of reporting elder abuse.


State Patrol Camp Graduation

June 18, 2021

The Nebraska State Patrol will hold a graduation ceremony in the second floor rotunda at 10:00 a.m.

Star City Pride Parade

June 19, 2021

Star City Pride parade will be held around the Capitol beginning at 10:00 a.m. with a gathering on the north plaza. 

All events at the Nebraska State Capitol are free and open to the public.

Guided Tours are offered Monday-Friday hourly from 9:00 am to 5:00 pm, except at noon. Saturday and Holidays from 10:00 am to 5:00 pm, except at noon and Sunday from 1:00 to 4:00 pm. Please call 402.471.0448 or visit www.capitol.org for more information. 

Youth Art Month March 1 - 31, 2021

Each year the Nebraska Art Teachers Association celebrates the visual arts with a display of student art in the Capitol during March. Teachers from across the state submit artwork created by their students for inclusion in the display. On the final day of the exhibition the students come to Lincoln and the Capitol to receive awards and collect their artwork. Due to the pandemic, this year NATA has chosen to have a virtual display of student art and a virtual awards ceremony. For more information about the Nebraska Art Teachers Association and to view the virtual display please go to their website:

www.nebraskaarteducators.org/youth-art-month.html



Above, a past YAM display in the 1st floor rotunda.



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Capitol Architect
Bertram Grosvenor Goodhue, 1869-1924

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The Capitol Sower, published by the Office of the Capitol Commission, is available online at www.capitol.org. Contact the Tourism Supervisor at <roxanne.smith@nebraska.gov> for more information.


Please contact us if you have any questions or comments about the content. All images are property of the Office of the Capitol Commission unless noted.

Air Handlers and Air Quality

The original heating and ventilation system in the Nebraska State Capitol brought in outside air and moved it through induction units containing a system of steam radiators which brought the air up to a moderate temperature. Then a series of huge fans and ducts sent the conditioned air throughout the Capitol. Once that air entered the major chambers and offices, steam radiators in each room warmed the air for occupants.

The new system being installed in the current HVAC project works in much the same way. The new system relies on a variable refrigerant flow circulating from 225 geothermal wells into a heat pump system within the induction units and then into individual units in each office. The new system includes technology to make occupants much more comfortable. Each room now has a thermostat occupants can adjust for themselves.

The new system also uses technology to improve air quality in the Capitol. The new air handling units mix and circulate inside and outside air for improved energy efficiency. Sensors in the Capitol

detect carbon dioxide levels and adjust the amount of outside air brought in to maintain proper oxygen levels. The air handlers contain a state of the art filtration system to remove dust and pollen particles from the air. Ultra violet lights inside the units purify the air and kill bacteria and viruses. These systems are monitored constantly to maintain air quality in the Capitol. 



Above, an air handler in operation to heat and cool the Capitol quadrant updated in Phase 1 of the HVAC Project. Inside the many doors of the combined units are compartments containing filters and ultraviolet lights. Right, an ultraviolet light chamber disinfects air in the system.