

THE CAPITOL SOWER



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


Meeting Agency Needs

Once the Nebraska Capitol Commission chose Bertram Grosvenor Goodhue to design the third Nebraska State Capitol on June 26, 1920, the Commission's work changed focus. By the summer of 1921, the Commission was working with the architect to finalize plans, hire contractors and plan for construction. One of the first contractors hired was an engineering firm to report on the soil conditions of the Capitol site, including borings and tests of the soil and substrata and recommendations for the proper sizing and construction of the foundations. This was very important work because the second Capitol's foundations had failed. As the architect was receiving proposals for preliminary foundation work, the Capitol Commission was meeting with state agencies and reviewing space needs in the new building.

One of the first changes to Goodhue's original scheme discussed in 1921 was the orientation of the building within the city. While arguments were presented for the new Capitol to maintain a western orientation, ultimately it was decided the new Capitol would face north. Rather than having street traffic pass by the main entrance, the street would lead to the entrance. The City of Lincoln agreed to open 15th Street beyond 'O' Street to the University campus, and the University's Regents discussed placing a significant building at the end of new street

to emphasize the link between government and education.

The Nebraska Capitol Commission continued to interview elected officials, and agency heads about their preferred room arrangements and office needs. The location of the Hearing Room within the Governor's Suite required much discussion, as did the arrangement of the Law Library and associated book stacks. The location and size vaults in the Treasurer's Office and location of Legislative Staff Offices generally followed the original layout. Heating was added to basement vaults for more protective storage of agency materials.

While the agencies expressed their needs to the Commission, Goodhue continued to finalize his plans, requesting information on the number of different departments and the number of men and women employed in each department and the need for individual wash basins in certain rooms. Additional areas of concern to be addressed before ground could be broken and construction begun included the size and location of the Capitol Dining Room and kitchen, the location of public drinking fountains, and the location of the water and sewer lines. Decisions about the grounds, such as sidewalk material and placement of irrigation lines had to be considered. The selection of the architect was only the beginning of the Nebraska Capitol Commission's work. 

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A Firm Foundation

After New York architect Bertram G. Goodhue and the Nebraska Capitol Commissioners finalized the initial contract hiring Goodhue to design the new Capitol, Goodhue began contacting firms with experience in substructure and superstructure design to act as consulting engineers. Once proposals were received and discussed at their September 8, 1921 meeting the Capitol Commission moved to employ the engineering firm of Jarrett-Chambers Co. Inc. as foundation engineers.

On October 10, 1921 Edwin S. Jarrett, President of Jarrett-Chambers Co. consulted with George Johnson, State Engineers and Commission Secretary and Professor C. E. Mickey of the University of Nebraska about the results of their investigations of the subsoil conditions on the Capitol site. These borings to a depth of one hundred and twenty

feet provided information on the general character of the strata underlying the site. In addition to the test borings, Johnson had a test pit dug to a depth of 26 feet six inches and Professor Mickey carried out extensive tests on the bearing capacity of the Dakota Sandstone stratum and the clay and sand underlying the sandstone.

After studying the preliminary test information, and understanding the very heavy concentrated loads of the Capitol tower, the engineers deemed it necessary to make additional tests of the bearing capacity and behavior under load of the sandstone stratum and the clay overlying the sandstone. The tests were carried out in November and December of 1921 and the engineering report submitted in January 1922. 



Digging the test pit on the east lawn of the 2nd Capitol took a combination of man, steam and horse power. Stacks of rails were stored on site for the test.



A square pit was dug to allow room for rails to be added. In the bottom of the pit a circular hole was dug to reach the Dakota Sandstone bedrock.



Once the sandstone bedrock was exposed, the punch was lowered into the hole and placed within the cribbing to await the addition of the rails.



The punch rests on the sandstone at the start of the load test. The punch was used to focus weight and simulate the load of the building on the footings.



The 30 foot long steel rails weighing 560 pounds each were stacked one at a time and balanced on the punch until the stone fractured.




Recording the weight of the load at the point the sandstone failed provided information used by engineers to design proper footings and foundations for Goodhue's monumental Capitol.

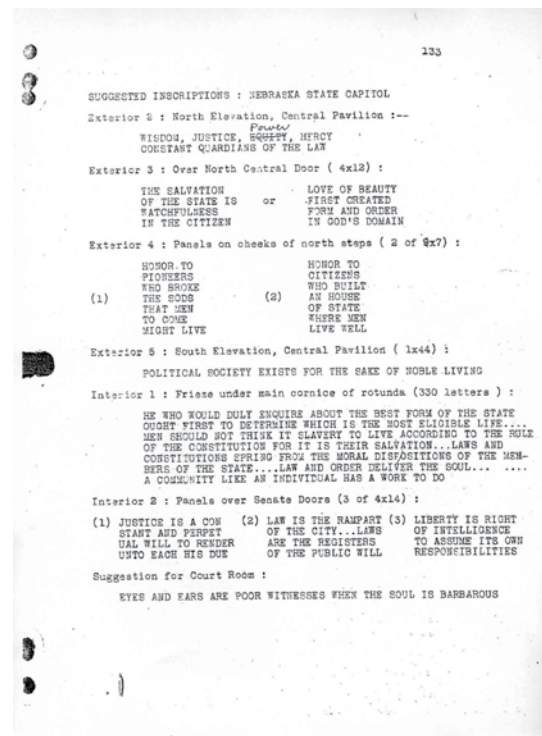
Design Team Forms

Nebraskans had indicated they wanted their new Capitol to incorporate art with architecture. In the competition documents Capitol architect Bertram Goodhue worked with sculptor associate Lee Lawrie as he created images demonstrating the way he planned to incorporate sculpture into the building. Historically, Gothic church builders used sculptural ornament to tell Bible stories; Goodhue and Lawrie planned to use sculpture to tell Nebraska's story. Architect Goodhue and sculptor Lawrie had twenty years of experience working together to bring the Gothic architectural characteristic of ornate decoration into the 20th century.

During contract negotiations with Goodhue, the Nebraska Capitol Commission expressed a desire to take bids for selected services performed under the architect's supervision to achieve the lowest possible cost while maintaining proper service. For the sculptural work, the Commission investigated the abilities of Lee O. Lawrie, Daniel C. French, Robert I. Aitkens, Frederick MacMonnies, Mahonri Young and A. Stirling Calder. Upon receiving news of their desire to bid out sculpture, Goodhue expressed his concern that using any sculptor other than Lawrie, who had helped create the competition drawings and understood Goodhue's artistic vision, would result in an inferior finished product. Ultimately on June 30, 2021, after discussion, the Commission unanimously decided Lee Lawrie would be hired to collaborate with Goodhue on the sculptural detail of the building.

By December of 2021, when the Capitol Commission meet with the architect at his office in New York, Goodhue and Lawrie had developed a preliminary list of subjects for Capitol sculpture. The Commission also considered the interior and exterior inscriptions Goodhue proposed to use, and agreed to address them within the next month. On January 22, 2022, the Nebraska Capitol Commission requested that Goodhue work with Professor Alexander to develop

the inscriptions to be used on the building, and submit the list to the Commission at a future date. Hartley Burr Alexander, Ph.D., soon to be the thematic consultant for the new Nebraska Capitol, joined the design team. Goodhue's artistic vision was two steps closer to being realized. 



Above, a page from the January 30, 1922 Nebraska Capitol Commission meeting minutes with University of Nebraska Philosophy Professor Hartley Burr Alexander's first contribution to the Capitol project—suggested inscriptions. Alexander included two choices for the main north door. Below, the chosen inscription as it appears below Lawrie's "Spirit of the Pioneer" panel at the main entrance. Goodhue would later ask Alexander to join the design team and guide mosaicist Hildreth Meiere and sculptor Lee Lawrie as they worked to tell Nebraska's story in the art work of the new Capitol.





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Nebraska Capitol Commission

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Capitol Architect
Bertram Grosvenor Goodhue, 1869-1924

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Gold Dome Maintenance

During design of the Nebraska State Capitol, Architect Bertram Goodhue and his staff investigated dome finish on other State Capitols. Because the exterior dome Goodhue planned for Nebraska's Capitol would be over 350 above the ground, they needed a durable gold finish not requiring frequent maintenance. The gold glazed tile ultimately chosen was superior to the traditional gold-leaf finish needing reapplication every few decades. Once installed the glazed tile would be affixed to a secure setting bed and grouted in place. Expansion joints allowing movement in response to temperature changes would be installed and covered with a waterproof caulk.

Goodhue and his Associates anticipated that future maintenance would involve replacing the caulk and maintaining grout. Since the Capitol's completion in 1932, maintenance of the dome has occurred 3 times, in

the early 1970's, in the early 2000's during the exterior masonry project and the current dome repair project. The current project is the result of the failure of joint sealant installed in 2002 to withstand harsh weather conditions and UV light degradation. This unanticipated material failure allowed water to infiltrate the surface and in freezing temperatures loosen tile and the grout seal.

The current project will remove any loose tile, replace the damaged setting bed beneath, re-mortar and return the tile to the dome substrate and reapply grout. A new flexible sealant will be applied in the expansion joints, and to prevent UV degradation, a lead T-channel cover will be installed over the sealant. With these repairs it is anticipated the Nebraska State Capitol's gold tile dome will once again live up to the Goodhue and the Associates expectations. 