

## MISSION IN A MONUMENT

### Rehabilitating the Washington State Legislative Building in the Wake of the Nisqually Earthquake

*By Ruth M. Anderson*

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New York architects Walter Robb Wilder and Harry Keith White commenced the detailed design work for the Washington State Legislative Building in 1920. In September 1922 they witnessed the emplacement of the cornerstone for a project that would occupy them for the next eight years. As though in awe of their own masterpiece, the two architects often referred to the building as "monumental."

Larger than life, the majestic building slowly rose on the southern shore of Puget Sound—a grand meetinghouse for a young state poised to assume the position of Northwest gateway to the nation. From the beginning the building has served as a monument to the vision and fortitude of the State Capitol Commission and the Washington State Legislature, which planned and authorized the construction, and to the architects and builders who labored to create, repair, and maintain the classic edifice.

When Wilder and White searched for available stone for the capital campus, their eyes fell on the light colored, high-quality sandstone available in the Northern Pacific Railway town of Wilkeson, 50 miles from Olympia. Early coal miners in the region looked for heavy sandstone outcroppings, knowing that rich coal veins probably lay below. In Wilkeson's case, the stone and coal were deposited about 40 million years ago. Geologist David Knoblach points out that the region was then a broad, low-lying plain with a climate like that of Louisiana long before the Cascade Mountains arose.

In 1883 Charles B. Wright, a past president of the Northern Pacific Railway, was the first to use the stone when he built Saint Luke's Memorial Episcopal Church in Tacoma. Other buildings followed. When Walter Wilder examined the stone, he knew it would be perfect for the state house. Not only did the color fit his vision; the stone's composition resisted water, making it ideal for Olympia's damp climate.

The Vermont Marble Company, from offices in Tacoma, provided the original marble for the interior, locating interesting color strata envisioned by the architects. In the halls and on the main stairs, the gray marble came from Token, Alaska. For the legislative chambers and state reception room, the classic colors were excavated from European quarries. The Walker Stone Company of Tacoma cut and polished all of the exterior stone and the interior marble.

By 1925 the building was sufficiently completed to start contemplating furnishings. The requests for proposals (RFPs) were quite detailed. Wilder and White divided the furniture by class, according to where the pieces would reside. Furniture was to be Italian Renaissance in style, handsome, and substantial. Included were desks, tables, armchairs, side chairs, davenports,

"costumers" or clothes trees, umbrella stands, wastebaskets, carpets, and wall hangings. Oak bookcases, 16 oak telephone booths and 327 cuspidors, or spittoons, completed the exhaustive list for bidders.

About the time the RFPs came out, telegrams and letters from mayors of cities from Aberdeen to Spokane urged the Capitol Commission to give furnishings from the Northwest first consideration. When the selections were made, the furniture in fact reflected some of the nation's best manufacturers. The W. J. Sloane Company of New York received the bid for the Class A-1 furnishings. Seattle firms and one Tacoma company made most of the desks. Seattle's Frederick & Nelson received the bid for carpeting and draperies, except for the carpet in the state reception room, which was loomed by the Mohawk Company of New York. An unpretentious but sturdy weave, this is the only original carpeting still extant.

Originally there were few individual offices in the building. Rather, Wilder and White provided for large committee rooms with long tables where legislators could conduct their work. Lounging rooms were also available.

The *Tacoma Ledger* of October 14, 1926, featured a picture of state officials observing the flag-draped capstone of the building being swung into place the day prior. Even Governor Roland Hartley, who soundly condemned the costs involved in constructing and furnishing the building, helped apply the mortar to set the cap in place. John MacIver, a native Scotsman who had supervised the placement of every stone, wielded the main trowel to finish the task. The immense scaffolding that covered the dome was then torn down, and the reporter noted, "Never again, as long as the structure lasts, will human hands be laid upon the capstone set into place on this occasion."

Unfortunately, no one contemplated the ensuing three earthquakes that have altered the appearance of the building, though never its purpose or viability. Earthquake repairs in 1949, 1965, and 1979 (see *COLUMBIA*, Summer 2003) modified the lantern and strengthened the interior. The most significant alteration of interior space occurred when additional legislative offices were created in 1966-67.

The venerable Legislative Building provides a visible continuum of its history. When the building was posted on the National Register of Historic Places in 1974, this American Renaissance "people's house," inspired by Greek and Italian architecture, rightfully assumed its standing as a national treasure.

In 1985 the legislature approved over \$2 million for beautification in recognition of the building's grandeur and increasing tourism in the state. Barnett Schorr Architects from Seattle undertook the two-year interior face-lift, which included cleaning and painting all decorative surfaces, cleaning and resealing bronze objects, glazing decorative panels and rosettes, and replacing glass in wall sconces and chandeliers. Dozens of artisans, perched atop 168-foot scaffolds, painted the white rotunda ceiling in a palette of rose and blue-gray. The 32 plaster columns were painted in a faux pattern to resemble marble. The second phase of the project enlivened the surfaces of the legislative chambers, state reception room, vestibules, and corridors.

Dee Hooper, manager of Legislative Facilities and a 40-year veteran of the building, recalls, "I couldn't believe the detail in the plaster rosettes that became visible only after they were painted in colors that revealed their intricacy."

More functional repairs followed. From 1998 to 2000 the state spent nearly \$4 million waterproofing roofs and leeching salt out of the lustrous sandstone. A waterproof membrane was installed beneath the 42 stone steps leading to the stately carved bronze doors at the north portico. Workers also constructed a handrail and installed an ice-melting coil in the stairs along the rail to enhance safety. By 2000 it was time to engage construction crews in the most ambitious project since the building opened—seismic upgrades and major utility work.

When the governor and legislature had moved into their new building in 1928, plumbing and wiring accommodated 155 people. Seventy-two years later, over 455 people occupied offices replete with telephones, fax machines, computers, and copiers. Moreover, thousands of daily visitors poured through the portals. In its January 20, 2000, report to the legislature, the state's Preservation and Renovation Commission advocated correcting "basic problems resulting from corroded water and sewer pipes, undersized heating and air conditioning systems, inadequate telecommunication and electrical systems, and water infiltration from failed caulking and drains."

Recognizing the historic significance of the building and its status on the National Register of Historic Places, the Washington State Department of General Administration (GA) is conducting the project in accordance with the United States Department of the Interior's guidelines for rehabilitating historic buildings. Marygrace Jennings, Cultural Resources manager for GA, explained the role of preservation in the process. "We made the decision early to consider the project 'rehabilitation' under the Department of Interior's standards. We knew funding would never support restoration, nor was that feasible given the functionality of the building. However, we did incorporate elements of restoration and preservation in the planning." For example, to the extent possible, old light fixtures and clocks will be restored and returned to their rightful places. The bronze doors will be cleaned and a preservative applied.

NBBJ of Seattle was selected to design and engineer the work. NBBJ's principal architect, Ralph Belton, whose impressive credentials include SAFECO Field, the Mariners' baseball stadium, is the lead architect.

Because of the building's historic nature, NBBJ called on the expertise of one of the nation's preeminent historic architecture firms, Einhorn, Yaffee, Prescott (EYP) of Albany, New York. The firm has helped preserve hundreds of high-visibility structures, including the nation's capitol, the Lincoln and Jefferson memorials, and Valley Forge National Historical Park.

Armed with blueprints, the architects and engineers conducted actual measurements to check and verify the original plans. Belton said they had located no major discrepancies between the many blueprints and the actual measurements. He finds the original design and construction nothing short of excellent. "The building is light and airy with windows that open, which you don't find in modern buildings," he says. "The use of the stone keeps the building from enduring huge temperature swings. It's a strong building. We pushed as hard as we could on an interior wall and it held."

Belton summed up his mission in four charged words: "To do no harm." Unfortunately for the building, "no harm" means some programmed demolition. But the care being taken to implement Belton's mission is most impressive.

M. A. Mortenson, an international construction company with offices in Seattle, won the bid to act as general contractor/construction manager. On the morning of February 28, 2001, Mortenson representatives signed the contract documents. Virtually minutes later, the buildings

on the campus began shaking. Patricia McLain, GA project director, laughs, "In the morning Mortenson had signed on to do preconstruction investigations and planning. By late afternoon they were into full construction mode. We were all impressed with how quickly they responded."

Immediately following the earthquake, the building was evacuated for several weeks while engineers dealt with the most basic safety hazards. It soon became obvious that the work to extend the life of the building and enhance livability would proceed much more quickly were the building completely empty. When the occupants realized they could perform their duties from other locations while escaping the hammering and banging, and that their absence would hasten completion of the work, they agreed to vacate for a 28-month period.

Following the Nisqually earthquake, which registered 6.8 on the Richter scale, the legislature authorized funding for earthquake remediation and the planned rehabilitation. GA was charged with completing the multiyear, \$101 million endeavor in time for the 2005 legislative session. Beginning May 2, 2002, when the legislative session ended, the governor and all other officials, legislators, and staffers began the yearlong process of vacating the building. Only the desks in the house and senate chambers remain. Marvin Doster, senior project manager for M. A. Mortenson, assumed operational ownership of the building on June 3, 2002. "The earthquake helped us decide what to do first," Doster says. "We began by concentrating on tying the top of the dome to each element all the way down."

But first they had to ready the building. In preparation for the dome and interior work, Mortenson's workers covered the main stairs, public hallways, and much of the remaining interior in thousands of feet of chipboard to protect the beautiful marble, carpets and decorative pieces that could not be removed. When the project is over, Mortenson will donate the particleboard to Habitat for Humanity. The GA oversight team has arranged for all other construction materials taken out of the building to be recycled to the extent possible.

The workers also built an interior walkway and affixed a conveyor belt to lift materials up to the dome area. Doster led a tour of these preparations that evoked an *Alice in Wonderland* experience of covered passageways with occasional glimpses of gigantic columns seemingly suspended in midair. The clean, pungent aroma of the fresh wood contributed to the sensation of being lost in a plywood labyrinth.

Reaching the dome area required stepping into a narrow elevator to be transported to the eighth floor or "tabletop"—that is, the flat surface that supports the dome. From there, access to the inner dome was via a series of staircases. While it was difficult enough to negotiate these stairs empty-handed, Doster pointed out that over 60,000 pounds of concrete reinforcing bars (rebar) had been conveyed up to the eighth floor and then hand-carried up the narrow, winding metal staircase. The rebar was used to join the outside walls of the dome to the inside in order to prevent sway. The rebar forms were then filled with concrete, some of which also had to be hand-carried.

Above the tabletop Doster and the tour participants stepped out onto the metal scaffolding surrounding the dome. A splendid view of the capital campus, city, and lake proved ample reward for this heart-thumping activity. At ease on the narrow perch, Doster said with some awe in his voice, "It's amazing what the original builders accomplished in terms of placing these huge columns with the simple cranes they had at the time."

Doster echoed Belton's respect for the original architects, builders, and engineers, as well as for those who intervened after the 1949 and 1965 earthquakes. "Each effort taken has extended the life of this building," Doster says. "My duty is to ensure that we earn the respect of future construction managers for having done the right thing this time as well."

The 2001 earthquake moved several of the dozen freestanding stone columns that surround the base of the dome off kilter by as much as six inches. To strengthen these pillars and anchor them to their base, Doster's team drilled holes through the 46 feet of stone, fitted each hole with a metal shaft, anchored that to the tabletop, and filled the shaft with grout to strengthen its resilience to sway. Doster first tested this concept by drilling through stacks of stone from the original quarry in Wilkeson. The hardy stone easily withstood the coring.

Following the 1949 quake, engineers designed a metal form and covered it with stones to replace the original masonry lantern at the top. Some of the original stones, used after the 1949 seismic event, cracked in the 2001 earthquake. In February 2003, Master Carver Keith Phillips of Tenino carved replacement stone from the Wilkeson quarry. He also carved new decorative stones to replace those that had broken or lost definition. John MacIver and his associates would find Keith Phillips a worthy colleague.

The building's interior walls are primarily composed of terra-cotta bricks that were plastered over and painted or affixed with marble. The marble was applied to the walls with a series of copper wires and a plaster containing horsehair. The construction has proved remarkably robust, but some damage has occurred as a result of the earthquakes and general wear.

In a process called delamination, plaster has loosened from the brick. Repairing this damage was included in an allocation from the Federal Emergency Management Agency (FEMA). Master carpenters, ears tuned for a hollow sound, tapped all the interior walls to determine where delamination had occurred. In some areas, the bricks themselves have broken and will be repaired, but overall the terra-cotta brick construction remains intact. Skilled plasterers will replace the broken plaster areas and fill the cracks in the plaster columns and walls.

As of the spring of 2003, workers have been swarming above, about, and under the building, plying their many trades to return a modernized but well-preserved building to the state. Patricia McLain keeps a countdown clock on her worktable. It shows to the day and second how long they have to complete the project. "We must be done in time for the 2005 inauguration," she says. "We've got a great team and support from everyone, but it will be a challenge."

After this multiyear invasion from capstone to subterranean conduits, the building will long remain the state's most honored monument.

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