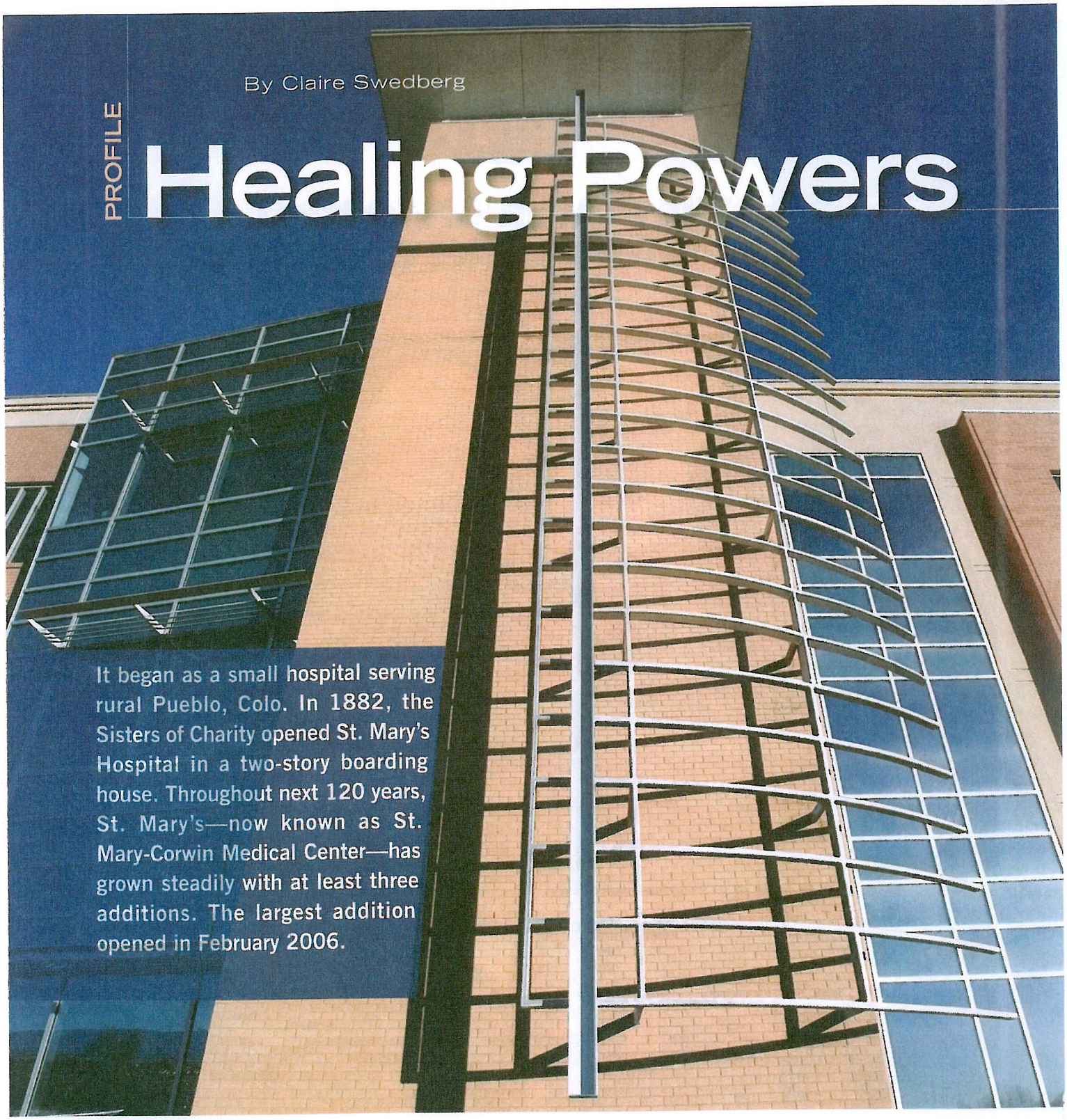
PROFILE

By Claire Swedberg

Healing Powers



It began as a small hospital serving rural Pueblo, Colo. In 1882, the Sisters of Charity opened St. Mary's Hospital in a two-story boarding house. Throughout next 120 years, St. Mary's—now known as St. Mary-Corwin Medical Center—has grown steadily with at least three additions. The largest addition opened in February 2006.

PHOTO COURTESY OF ST. MARY-CORWIN

ONE OF THE LARGEST construction projects in the city of Pueblo, Colo., the four-story tower and cancer unit measures 220,000 square feet. Connecting them is the Healing Garden for use by cancer patients. The electrical contract was approximately $7 million, but the overall cost was $59 million.

Construction began in 2003 with St. Mary-Corwin's bed tower. The new tower includes an emergency department and emergency care; a comprehensive, one-stop cancer center; 112 new private patient rooms; a radiology department; space for enhanced diagnostic services; a new main lobby; and a central registration component designed to minimize patient delays caused by administration. All this came on the heels of the opening of a new medical and technology pavilion in 2003. And plans to renovate the vacated areas of the existing building are now in progress.

Chuck Demanche, St. Mary-Corwin director of imaging who served as liaison to the construction team, said the need for more modern spaces led the hospital to expand its facility.

Adams, Berwick Join for Hospital Addition

Left: The front of the St. Mary-Corwin addition; Above: Construction on the four-story tower began in 2003 and was completed in 2005.

A joint venture formed

Pueblo, a city of 110,000, is home to several small electrical contractors, but no large ones. For a project of this size, a cooperative effort was needed. For the electrical work, the general contractor and hospital interviewed several electrical contractors, one of which was Adams Electric Inc., Pueblo, a local business who has spent more than 20 years servicing the hospital facility. Even before Adams Electric was established, its owners—Marty Adams and Kerry Frazier—were working on the hospital as well.

With the addition project, the hospital needed mechanical and electric budgets early to maintain their own budget. It would require putting together a pricing structure as quickly and as accurately as possible. Therefore, Adams Electric needed to find a partner quickly. Marty Adams, president of Adams Electric, said Berwick Electric Co., Colorado Springs, Colo., was a natural choice.

"One of the criteria was we had to be up and running in a very short time period," Adams said. "Knowing Jim [Peterson, president, Berwick Electric], we felt that would be a good match, with their preconstruction services."

Adams Electric and Berwick Electric have worked in the same arena for decades, and Marty Adams and Jim Peterson consider themselves old friends.

"Through NECA [the National Electrical Contractors Association] we've been friends and sometimes competitors, but had it not been for our affiliation with NECA, this joint venture may not have happened," Peterson said.

The budget matters

As partners in the St. Mary-Corwin project, Adams Electric and Berwick Electric had about two weeks to put together a budget. They were able to do this through cooperation with engineering firm Cator, Ruma & Associates, Lakewood, Colo.

"It was quite an exercise," Peterson recalled. "For two weeks, we had eight people working on it."

Their goal was not only to have a budget, but one that did not only rely on square foot pricing. It needed to include material takeoff and labor costs, but there were no specific drawings to work with.

That was where the engineer stepped in. Associate Jerry O'Brien of Cator Ruma said the firm was able to prepare enough information for the contractors based on its own experience in healthcare.

"We had drawings of spaces," O'Brien said, and they had descriptions of what would be in each space, e.g., clinical labs, MRIs, or examining rooms. These items are generic.

"Every hospital has them," O'Brien said.

Cator Ruma drew on its previous experience with the healthcare industry to provide the contractors with enough information to prepare the budget.

By knowing how the spaces would be used, they were able to map out the electric. O'Brien said he was impressed by the experience Adams Electric had with healthcare.

Cator Ruma knew what was needed, and Adams Electric and Berwick Electric knew how to get it installed. The budget that was prepared represented the first two floors of the addition, with the second two to follow further into the construction.

Building commences

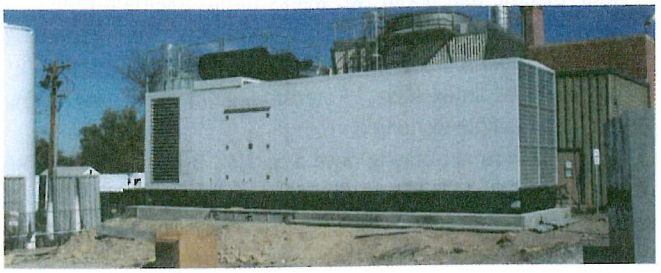
Once the budget was completed, work commenced in fall 2003. Adams Electric's co-owner and project manager Kerry Frazier came to the scene with about 13 Adams Electric workers. Berwick Electric assisted with the low-voltage, security and telecom connections.

One of the unique demands of construction crews at hospitals is keeping a clean workplace, Frazier said. Because the bulk of Adams Electric's work is in healthcare facilities, working clean is routine for its crew. Ducts remain sealed until they are installed, food must be kept off site and dust must be limited to the barest minimum.

"The actual site has to be kept very, very clean," Frazier said. "It starts from the ground up."

Existing power for St. Mary-Corwin comes from a central plant with one 1,000 kilowatt and one 500 kilowatt generator. The plant, located near the original building, stands about 500 feet from the addition. Adams/Berwick Electric installed a 2 megawatt generator there for the addition's emergency backup power and ran parallel lines for an additional generator to be installed in the future.

PHOTO COURTESY OF ADAMS ELECTRIC



Adams Electric workers ran power conduits from the central plant to the new addition through an underground trench.

To connect the addition, the construction crew dug a 14-foot-deep, 500-foot-long trench, from the plant to the new construction for steam and cooling lines as well as for primary and emergency power conduits. This required close coordination with the hospital and utility company to avoid interruption of existing services. Adams Electric's 12 to 16 men on the site spent a total of 8,000 hours in the trench. Workers were relieved when the trench work was done.

"That was when I just said 'thank you, I'm glad it's done.'" Frazier said.

The cancer unit required special wiring to accommodate linear accelerators for the oncology center. Linear accelerators create high-energy radiation to treat cancers, using electricity to form a stream of fast-moving subatomic particles. These machines require their own underground conduits to feed the power needed for high-dose radiation treatment. In addition, the rooms need extra fortification to keep the radiation from leaking out.

For Adams Electric and Berwick Electric, it meant working with 30-inch steel reinforced concrete walls, ceilings and floors.

"It's a different installation, but once you're familiar with it, the construction is the same as anything else," Frazier commented.

Altogether, Adams Electric installed 400,000 feet of conduit and 28,000 feet of 600 MCM copper wire.

Berwick Electric is adding the expertise of its Voice/Data/Video Department to install a new fiber optic backbone and a new Category 6 horizontal cabling system. Other special systems being installed include CCTV, CATV, overhead paging, access control, nurse call and intrusion detection.

"Telemetry units—small heart information radio transmitters with wires that attach ECG patches to the chest—will be updated as well," said Demanche.

For Adams Electric, it is the largest hospital project the company has taken on, and Frazier said he spends about 80 percent of his time there.

"It's a big project for us," Frazier said, "That's one of the reasons we joint-ventured. Berwick brought to the table their preconstruction services. More importantly, they parallel our business practices and ethics. They do business the way we do."

The preliminary budget has proven to be accurate, which Peterson attributes to the good work of the men on the job site.

"A lot of that is due to Kerry Frazier and Joe Incitti, the project manager and general foreman [respectively]," Peterson said.

O'Brien said the budget process with Berwick Electric and Adams Electric has contributed a formula Cator Ruma can apply to future healthcare facility projects.

"We took all the hospitals we'd been working on and gelled that experience," O'Brien said.

The formula, he hopes, will make other projects come together the way the St. Mary-Corwin project did.

"Everyone did what they were supposed to do," he said. "Everything worked very smoothly. It was a nice project for us."

SWEDBERG is a freelance writer based in western Washington. She can be reached at claire_swedberg@msn.com.

PROJECT PARTNERS

ADAMS ELECTRIC; BERWICK ELECTRIC—Electrical contractors

RTA ARCHITECTS—Architect

H.W. HOUSTON—General contractor

CATOR, RUMA AND ASSOCIATES—Electrical engineer

CONTRACTOR FAST FACTS

- Adams Electric is one of the largest electrical contractors in Pueblo with about 40 employees.
- Berwick Electric is a large company with a long history. Established 85 years ago, today it employs between 100 and 200 employees and averages $16.5 million annually. Berwick specializes in commercial, industrial and service wiring and has a voice/data/video division for low-voltage installation with an AMP ND&I certification.