

[FROM THE COVER]

And then there were 10

Introducing Burns & McDonnell's newest global practice:
The Healthcare & Research Facilities Group



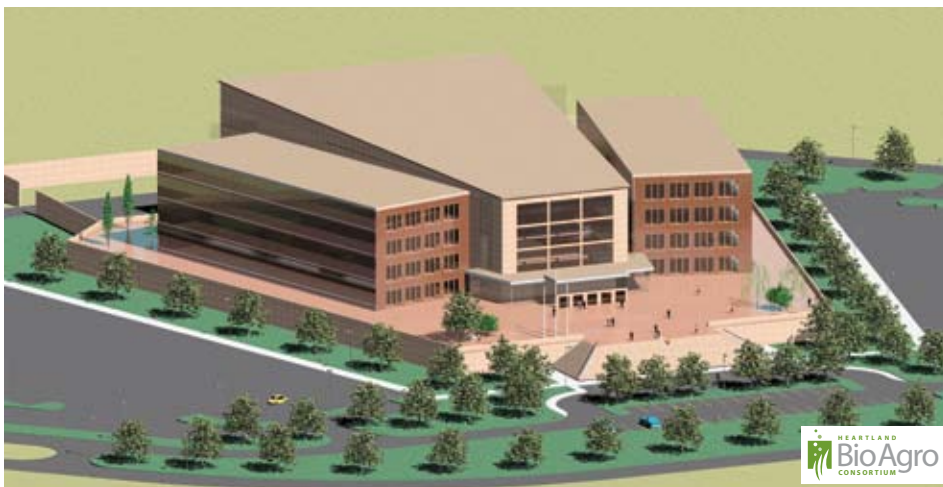
Let it be said for the record: Burns & McDonnell President & CEO Greg Graves has nothing against the number nine.

For years, in fact, nine had been a good number for the firm, representing the number of specialized practice groups. But Graves had been itching to make it an even 10. He got his wish in January when the firm launched its newest global practice: the Healthcare & Research Facilities Group.

“The firm was looking for an opportunity to grow and further diversify its capabilities,” explains Rick Keeler, who joined Burns & McDonnell last October to lead the new practice.
(See profile, page 5).

Why healthcare? Market research shows that healthcare is a sector poised for continued dramatic growth for many years to come, given the impending retirement of the “baby boom” generation and other demographic factors.

Burns & McDonnell provided site design and layout and conceptual building design for the National Bio & Agro-Defense Facility.



The new group, which is based in Kansas City, is targeting clients and projects in three business areas: hospitals and clinical facilities, research facilities, and facilities for the aging. “These aren’t new businesses for us,” explains Keeler. “It’s just that now they are receiving more focused attention.”

Hospitals and Clinical Facilities

Burns & McDonnell has worked on hospital and university medical campuses for years, designing central utility plants and energy-efficient on-site power generation.

The new group will continue to serve those engineering needs while venturing further into the “other side” of the campus with architectural design and other services, says 10-year Burns & McDonnell veteran Rich McKown, who helps direct engineering in the new group. “We are now also targeting large hospitals and healthcare systems with a variety of needs that could benefit from our single-source capabilities,” he says.

The group’s first official project, in fact, is design of a \$5.5 million multi-specialty clinic for Brownsville Community Health Center in Brownsville, Texas. Burns & McDonnell is also serving as a consultant on two hospital projects in San Antonio, including a new hospital campus in Boerne, Texas, for the Methodist Healthcare System.

Research Facilities

Also falling under the responsibility of the new Healthcare & Research Facilities Group

are the company’s laboratory and research center projects.

University medical centers, pharmaceutical companies and life sciences companies are candidates for the group’s laboratory design services, according to McKown.

“Our St. Louis office, in particular, has extensive experience leading these kinds of projects,” he says.

In recent years, Burns & McDonnell projects have ranged from a major cancer research expansion at the Harry S. Truman Memorial Veterans Hospital in Columbia, Mo., to a Biosafety Level 3-Plus laboratory for San Diego County, to a new forensics laboratory for the St. Louis Police Department. Keeler recently completed site selection and master planning in support of an effort by the Kansas Bioscience Authority to lure a \$451 million bioterrorism lab to a site in Manhattan, Kan. Other states in the running for the lab are Texas, Georgia, Tennessee and Kentucky.

Facilities for the Aging

The group’s third focus is facilities for the aging: retirement homes, assisted living centers and retirement communities.

“The trend is toward continuing care retirement communities that provide a full range of care for seniors, from independent living to assisted living, to specialized nursing care for persons with Alzheimer’s and other forms of dementia,” Keeler says. “The idea is to create a community that individuals can enter when they’re healthy, and move within as their needs change.”

Keeler was the design principal for one such community that was constructed recently near a Texas hospital. “We even built a bridge over a creek separating the two properties so a golf cart could be used to transport residents to the hospital,” Keeler says.

“With the population aging, we project this to be a growth market for years to come — and an area where we can make a difference in quality of life.”



Keeler was principal-in-charge of architectural design for the Texas Center for Athletes (above) featuring a surgery center, physical therapy center and pharmacy.

What's Different Here

"One thing that makes our healthcare practice different from most is the sheer range of capabilities we offer," Keeler says. "We are one of very few firms where a client can solve virtually any challenge from architectural design through design-build."

Contrast that with traditional methods, where an architect serves as a hospital's primary consultant, subcontracting civil engineering services; mechanical, electrical and plumbing design; landscaping and other services. "Sometimes you'll have a team with 12 subconsultants working together," says Keeler.

Building a Practice from the Ground Up

One of the best things about developing the new healthcare practice, says Keeler, is the opportunity to build it from scratch. "We have the advantage of not having any baggage," he says. "We get to start fresh."

For one thing, that means taking state-of-the-art Building Information Management (BIM) computer software to a new level. "We'll soon be one of the few firms in the world where everyone is 100 percent integrated on a single BIM database," says Keeler.

What's the difference? A big one, according to Keeler.

"A team with a dozen subconsultants has to rely on the least common denominator in software," he explains.

Burns & McDonnell's BIM system, for example, has a 3-D modeling tool that enables designers to create a virtual hospital with diagrams that can be exploded to whatever level of detail is necessary. The accompanying database keeps track of every item in the facility — from the number and location of smoke detectors to the amount of concrete required for construction. This information is especially helpful during construction, when it can be used to support estimating, material purchases and scheduling — while minimizing errors and omissions.

"The more complex a project gets — and healthcare projects tend to be complex — the more there is to monitor and maintain," says Keeler.

When construction is finished, Burns & McDonnell can turn over the BIM system to the owner. "The software makes it possible to automate the maintenance system, the procurement system — everything in the physical plant," he says.

In fact, Keeler envisions working with clients to create databases of existing hospitals and health centers, which can then be used for maintenance and other purposes.

For now, however, Keeler is focusing on building the practice itself. "We're looking for the best mix of people and projects," he says. While he and his team put the pieces together, they are drawing on resources from around the company.

"We're lucky," he says. "We have the luxury of doing things the right way."

For more information, contact Rick Keeler, (816) 822-3244.



Among Burns & McDonnell's Healthcare & Research Facility Group's project experience are pharmaceutical and research and development labs.

Revolutionary Labs —

From crime scene investigations to high-tech manufacturing to cancer research, Burns & McDonnell designs facilities for the leading edge.



FORENSICS FOR THE 21ST CENTURY

St. Louis Police Department

Burns & McDonnell provided complete architectural, structural and civil design services for the new St. Louis Police Department forensic lab. The existing forensic lab was in a 1940s-era police building. To operate efficiently and maintain accreditation with the American Society of Crime Lab Directors (ASCLAD), the lab required additional space.

At 40,000 square feet, the new, \$7.5 million lab meets the physical criteria for ASCLAD accreditation. Labs and support spaces on the second and third floors are connected to the existing police building next door, with parking for ETV vans and a vehicle-processing bay below. In addition to meeting ASCLAD criteria, the new lab features updated facilities for a safer and more productive workplace.



SPACE FOR THE CURE

Harry S. Truman Memorial VA Hospital

Burns & McDonnell transformed the Harry S. Truman Memorial VA Hospital's unfinished basement into state-of-the-art laboratories for cancer and arthritis research. The basement space had to be attractive to researchers. Open, collaborative design, 9-foot ceilings, glass doors and windows, and pendant light fixtures created a bright and well-lit space. The area contains specialized laboratories for immunology research and for design of new radioactive drugs, support facilities and four levels of clean rooms — critical environments that require exacting design specifications. Mechanical systems include a specialized exhaust air system that blows air 40 to 60 feet high into the prevailing wind and away from the building.

The project received the Honor Award from the Consulting Engineers Council of Missouri for excellent engineering design.

TOP-SECRET SCIENCE

Tri-Service Research Laboratory & Veterinary Building

Burns & McDonnell provided programming, planning and preliminary architecture and engineering services for a 59,000-square-foot tri-service research facility and a 35,000-square-foot veterinary sciences building.

The research building includes animal surgery rooms, animal holding areas, research labs, BSL-3 laboratory and administrative space. The facilities' mission is to research the effects of radio frequency, laser and ionization radiation on people.

The facilities required special ventilation, cold rooms, autoclaves, deionized water, emergency generators, lighting in animal holding areas, special HEMP RF shielded rooms, class V SCIF security vaults. It follows Department of Defense antiterrorism standards and is designed for LEED Silver certification.