

New hospital green from the ground up

CEO aims to be first gold-certified hospital in U.S.

By D. E. Smoot

Phoenix Staff Writer

When the construction of Muskogee Community Hospital is completed next year, it could become the first “green” hospital in the nation to earn “gold.”

Green symbolizes the facility’s environmentally friendly design and sustainable systems incorporated in its construction and future operations.

Gold represents the rating developers hope to achieve by adhering to standards advocated by the U.S. Green Building Council and its Leadership in Energy and Environmental Design rating system.

“Three years ago, when I started talking about building a green hospital, people would inevitably ask me, ‘What color of green,’” said Mark Roberts, president of Muskogee Community Hospital LLC.

Levity aside, Roberts said incorporating environmentally sound building techniques with an eye toward sustainability is something that takes much planning and work. In order to earn LEED certification, each step of the planning and construction phases is subject to scrutiny.



Mark Roberts, president of Muskogee Community Hospital LLC, says incorporating environmentally sound building techniques is something that takes much planning and work. Staff photo by Jennifer Lyles



Construction workers break for lunch at the building site for Muskogee Community Hospital on North Main Street. The hospital will be completed next year. Staff photo by Jennifer Lyles

“This is not a one-time deal,” Roberts said. “It’s deeper than that — it’s a lifestyle.”

Harry Knight, director of construction services for Golden, Colo.,-based Aardex LLC, said sustainable building design concepts and construction techniques recognize the fact that the world is a “finite place with a finite amount of resources.”

With that in mind, Knight said, architects and builders look for ways to incorporate recycled materials and materials easily recyclable into the construction phase. Mechanical systems are designed to increase the efficiency of heating, cooling and lighting the hospital. Keeping an eye toward conservation helps minimize water use and waste.

“We’re fairly proud of what we are doing out here,” Roberts said about the project’s focus on sustainability. “We think we are going to be the first gold-certified hospital in the nation.”

Green building technology is more than a way to make a statement about — or commitment to — environmentally sound practices, Roberts said.

Those environmentally sound design and building concepts are the same considered for LEED certification. According to the U.S. Green Building Council, its LEED rating system examines six major areas of focus:

- Sustainable sites.
- Water efficiency.

- Energy and atmosphere.
- Materials and resources.
- Indoor environmental quality.
- Innovation and design process.

Each area of focus contains subtopics, each of which are assigned value points. In order to earn certification, points are awarded, and the higher the point value, the higher the certification. Gold certification is the second highest LEED rating available next to platinum.

Muskogee Community Hospital and its investors, Roberts said, are committed to green philosophy not only because it seems like the right thing to do. It also has been proven beneficial for patients and other hospital occupants.

“Studies show patients heal faster, and secondary illnesses and infections occur with less frequency,” Knight said of facilities that offer healthier environments. “Employee productivity gains also have been recorded as a result of the healthier environments.”

Some of the environmentally sustainable features Roberts pointed out at the medical facility include the building’s natural lighting features in patients’ rooms, the hospital’s geothermal heat pumps and air filtering systems, and building components that use materials that are less toxic than some traditional materials.

Going green can be a costly venture.

Roberts, however, said higher up-front costs can be mitigated or recouped by the savings incurred over time by using higher efficiency heating, cooling and lighting systems along with energy efficient medical equipment.

According to the U.S. Green Building Council, studies indicate an initial up-front investment of an additional 2 percent can yield more than 10 times the initial investment during the life cycle of an LEED-certified building.

For example, Roberts said, the geothermal heat pump system that will be used to heat and cool Muskogee Community Hospital is expected to reduce the facility’s cooling costs by 40 percent to 55 percent. Heating costs, Roberts said, will be cut by an estimated 90 percent.

The ground source, geothermal heat pump system that will be used to heat and cool the hospital will incorporate 280 on-site wells drilled 300 feet deep beneath the earth and a number of air exchangers positioned throughout the building.

Roberts said the hospital’s lighting will consist of light-emitting diode systems, which require much less electricity than other illumination systems.

In addition to cost savings, Jen Burianek, a consultant with Denver-based Ambient Energy who is working on Muskogee Community Hospital project, said environmentally sustainable facilities can be used as a

marketing tool to attract clients and recruit employees.