

By Michael Meteyer, P.E.

Navigating the Path

{ To Sustainable Design }

It's no surprise that healthcare administrators are asking their building project leaders to tell them more about sustainable or green building practices. It's the hottest topic in the building industry, and healthcare construction is one of the largest building sectors.

The first questions are always, "What is a green building, what are the benefits, and how much does it cost?" Green building practices are those methods and products that result in beneficial economic, community and environmental (indoor and outdoor) outcomes. Those outcomes for a hospital might include:

- Lower energy and operating costs, reducing long-term healthcare costs
- Effective recruitment/retention tool—people want to work in healthy indoor environments
- An environment that supports a healing mission
- Sustaining the integrity of local and regional ecosystems and their natural resources
- Recognition of an organization's leadership and commitment to wellness through its contribution to healthy indoor and outdoor environments

What organization would say no to any of those outcomes? None, of course, provided there were no other demands for capital and resources.

It's not free, but the overall effect on a project bud-



get is not as significant as many organizations anticipate. A community hospital project, for example, typically can anticipate a 1 to 3 percent increase in the construction budget for a certified green hospital. However, the benefits in energy savings, recruitment, productivity and public relations will more than repay the initial investment.

Measuring Sustainable Design Using LEED

It's not that sustainable or green practices and benefits are necessarily new. But as a result of the heightened interest in sustainability, there is a new language, new products and practices, as well as new benchmarking tools to better quantify the process and the results.

This new green language, along with the accompanying methods and product growth, has been accelerated thanks to the success



of the Leadership in Energy and Environmental Design program, established by the U.S. Green Building Council. This program, which uses third-party, multi-level certification, essentially benchmarks a building's level of sustainability.

LEED has five categories—Sustainable Sites, Water Efficiency, Energy & Atmosphere, Material Resources, Indoor Environmental Quality and Innovation. Divided among these categories, there are a total of seven prerequisites and 69 credits. Each credit relates to an area of sustainable design or construction and has a set of requirements that must be met to earn the point.

There are four levels of recognition based on a total score achieved through credits earned:

- Certified (26-32 points)
- Silver (33-38)
- Gold (39-51)
- Platinum (52-69)

All seven prerequisites must be achieved, and then the project team selects any combination of credits to implement. Once achieved and validated by a third party, the project is certified.

The healthcare building industry has been slow to move toward LEED certification. Some feel it's partially due to the fact that the credit requirements are more difficult to implement in a healthcare facility than a non-medical facility.

Using GGHC's Alternative Benchmark for Sustainable Measures

USGBC and others recognized this hurdle, resulting in the development of the Green Guide for Health Care (GGHC) in 2003. This alternative to LEED provides the healthcare sector with a voluntary, self-certifying toolkit of sustainable-design best practices for creating high-performance healing environments.

GGHC standards also allow owners to have a more significant effect on the environmental impacts of their facilities by providing strategies tailored to healthcare's complex regulatory and operational environment. GGHC credits cover a wider range of features than LEED, and each GGHC credit has a health-intent statement linking the design objective with the expected health benefits.

GGHC provides a maximum of 96 possible credits for construction and 72 credits for operational performance. The emphasis on operations in the GGHC system underscores the critical relationship between construction and operations for maintaining a healthy environmental profile in the healthcare field.

"The big difference between LEED and GGHC is that LEED is a third-party certification tool designed for office buildings, and GGHC is a best-practices manual for healthcare organizations," said Steven Guttman, principal with Guttman & Blaevoet, a consulting firm that is nationally recognized for its engineering work in sustainable design. Guttman has been a steering committee member for GGHC since 2003 and a core committee member for LEED for Health Care since 2004.

"That's really a huge difference between the two models," he emphasized. Guttman indicated that both groups are working toward incorporating most, if not all, of the GGHC credit system into a new LEED product called LEED for Health Care, which could be available as early as 2007. For more information visit www.gghc.org.

Sustaining Your Mission

It's critical for an organization to align its mission with its sustainable design goals. It's helpful to begin with a few baseline questions: "What do you want your facility to represent to the community; how do you want your staff and patients to react to the indoor environment; what are your resource limitations?" Answering these questions is the first step on the path to greening your building.

Articulating your most critical economic, environmental, and community objectives will become the cornerstone of pursuing a successful green project.

"We did not pursue our LEED certification with any particular outcome in mind, like saving x amount of dollars on energy costs or gaining more market share," explained Kai Abelkis, environmental coordinator for Boulder Community Hospital in Colorado, the first LEED-certified hospital in the country. "Our intent was to reflect our core values and our commitment to the city of Boulder. We firmly believe that quality of health equals quality of environment. When you are a hospital, you're part of a community. The more you can connect with that community and show that you are working to protect it and the environment, the more you benefit. We wanted to do everything we could to achieve that, simply because it was the right thing to do. It's part of our mission."

Optimizing Outcomes Through Integrated Teamwork

To increase and optimize the green outcomes for your capital investment, your building team must really perform like a team. It's imperative that during the planning stage, prior to design, the healthcare organization and building team all come to an understanding about the project's sustainable goals. That requires representation from the project's stakeholders, architects, engi-



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neers and construction managers.

In addition, the design and construction experts on your project need to interact like a unified team—not just be listed together on the proposal or contract. Green practice requires a higher level of integration of the various building elements, as each sustainable strategy typically has multi-disciplinary impacts that need to be considered. Proof of integrated team performance is recommended before the design phase starts.

The Value of the Process

It's important to keep in mind that the sustainable outcomes are what are important—LEED and GGHC are only benchmarking tools that will help an organization describe and evaluate its sustainability commitment. Regardless of whether certification is pursued, following a process similar to this would be an effective way of prioritizing your resources and efforts and quantifying the outcomes.

"People have come from around the world to see Boulder Community Hospital," noted Abelkis.

"Even retail developers in Boulder have toured our facility to see what LEED certification is all about. We don't attempt to track the ROI our LEED status brings. What really counts is that our employees love working in a green-certified hospital, and the patients embrace and support this environment.

"Going green is simply the right thing to do, especially in healthcare. Hospitals consume tremendous amounts of energy and water and generate toxic materials. The bottom line is this: Do you want to be part of the solution, or part of the pollution?" ■