up Question of the Month

Does private green development make sense? And what are the benefits?

th Timothy Hughes

C&S Engineers, Inc.

Today's commercial real estate market is very competitive. Many building owners and managers find themselves caught in the squeeze between rising costs and an inability to command higher rents. As developers build new facilities, they can struggle for a competitive advantage to attract and retain tenants. The green building movement holds many opportunities to offer prospective and existing tenants beneficial features that pay off in the long run for them, the building owner, and the environment.

Most of you have probably at least heard the terms "green building," "high performance buildings," "sustainable design," or "LEED." These terms all refer to the emerging design philosophies that are revolutionizing the building design and construction industry. The underlying premise is to design buildings that reduce the negative impacts on our environment, reduce energy consumption, reduce waste of natural resources, and create healthier indoor environments. The Leadership in Energy and Environmental Design (LEED) green building rating system measures and ranks a building's environmental performance in terms of six general categories:

- Sustainable sites
- Water efficiency
- Energy & atmosphere
- Materials & resources
- Indoor environmental quality
- Innovation & design

While the government and municipal sectors have embraced these design concepts and many have mandated that all future construction must be designed and constructed to achieve these standards, the private development sector has lagged behind.

The reasons that the private sector has been slow to change are:

- The perception that green buildings necessarily cost more.
- Lack of information on the actual performance and impact of these buildings.
- Perception of risk.
- Uncertainty regarding the benefit to building owners of constructing green buildings.
- Lack of familiarity with the economic business case.

With the costs of energy continually climbing, there has been a lot of focus on the energy saving aspect of green buildings. Many developers question the economic sense of spending more money on construction of high performance buildings when the tenants bear the cost of the energy efficiencies. While this is a substantial benefit to the occupant, or owner, depending on the lease structure, to focus on this alone falls well short of the actual value of designing green.

The reason for the rapidly spreading adoption of these concepts is that this movement has successfully demonstrated the *economic* benefits in addition to the societal benefits. Energy is 30% of a building's operating costs, yet operating costs comprise approximately 39% of an occupant's real estate cost, which in turn is only 10-15% of the business's total costs. Therefore, energy reductions of 20% result in a 6% savings of the building's operating costs, but less than 1% of the occupant's total business costs.

The larger benefit is that high performance buildings result in greater value. Value in this context refers to increased asset value and is the result of several components. Many studies have been conducted to evaluate the impact of green buildings on the private development marketplace. One such study conducted by the Royal Institution of Chartered Surveyors (RICS) identified the following links:

- Increased absorption rates
- Higher tenant retention and occupancy rates
- Lower operating costs
- Higher rents
- Reduced fit-out costs and lower reconfiguration costs
- Increased productivity and attendance

These outcomes should not be surprising. Green buildings incorporate natural daylighting and exterior views, making them more inspiring space for the occupants. Daylighting has been linked to improved performance, positive moods and creative problem solving. Daylighting also contributes to greater energy efficiency. Improved indoor environmental quality provides a healthier environment and increases well being, personal energy, and attendance. Healthier indoor environments also reduce potential litigation issues resulting from contaminants in the workplace. Green buildings are commonly designed with a greater capacity for individual comfort controllability. Facilities that have lower energy costs can be marketed at higher rental rates on the basis of lowest combined energy and rent costs, when properly communicated.

As the market becomes more aware of the benefits of high performance buildings, demand for this type of space will increase, retention will remain strong and reconfiguration costs will shrink. There are many benefits, public goodwill and visibility that gained from these types of projects. A facility that operates less expensively, draws and retains tenants at higher than market rates and boasts of enabling occupants to achieve increased productivity, may find the market favorable.

Businesses have long recognized that the key to their own success lies in finding ways to enable their customers to be successful. The greatest opportunities are there for the first to market. That is where the differentiation has its greatest impact. It is becoming clear that in the not-so-distant future, this will be common practice and likely code required.

Timothy Hughes, PE, GBE, LEED, CEM, is a managing engineer at C&S Engineers, Inc., Buffalo, N.Y.