

# Sage Construction and Real Estate Solutions

A Green Future



## Products to assist you:

- **Sage Timberline Office:**  
Document management
- **Sage Timberline Office Estimating Solutions:**  
RSMean Green Cost Item database

## Introduction

As the U.S. moves toward a more informed position on global climate change issues, experts agree that the future of the construction industry will depend on its ability to become more eco-friendly. What began as a response to the OPEC oil embargo in the 1970s has grown into a commercially viable movement after years of research spent developing green technologies<sup>11</sup>. Over the past decade, the U.S. market for green building has experienced exponential growth—increasing from \$10 billion in 2005 to \$42 billion in 2008. McGraw-Hill Construction predicts that by the end of 2010 it will reach \$55 to \$71 billion, a figure that will represent 28 to 35 percent by value of the nonresidential building industry. Green building will continue to expand and is expected to constitute almost half of the nonresidential construction industry by 2015, according to McGraw-Hill Construction's estimation. This would result in a \$120 to \$145 billion opportunity for construction companies<sup>7</sup>.

In order to take advantage of this sector, companies need to be prepared to meet LEED requirements, equip themselves with the latest green technology and materials and be ready to plan green projects in the most cost-efficient way possible.

## The Power of LEED

LEED is a guide for designing, constructing and certifying green buildings, which allows buildings to acquire points that contribute to Certified, Silver, Gold or Platinum classifications. LEED focuses on six building components: siting, water conservation, energy and atmosphere, materials and indoor environmental quality.

Property owners are increasingly committed to boosting their LEED ratings as LEED certification boosts property values<sup>11</sup>. LEED certification is structured to represent the practices of the top 25 percent of new buildings, so owners of certified buildings can in theory boast superiority over 75 percent of new construction. The competitive metric of LEED allows Silver, Gold and Platinum buildings to attain even more prestige<sup>6</sup>. Most large building projects aim for LEED certification, with more than 70 percent of projects over \$450 million including LEED in their specifications<sup>7</sup>.

In 2003, the USGBC unveiled LEED in its current form to facilitate the construction of buildings that are designed to lower operating costs, increase asset value, reduce waste, conserve energy and qualify for tax rebates<sup>3,11</sup>. Legislation and initiatives have been established to encourage green building, and as of September 2010, they are offered by 12 federal agencies, 33 states and 384 local government programs<sup>7</sup>.

## Technology Advantage

Construction firms can leverage technology such as building information modeling and cost estimating software in order to build green efficiently and minimize costs. Green building can be executed in a way that brings in substantial profit.

BIM has recently entered the green building sector and is already beginning to add value to the construction process. The technology allows all members of the construction process, from designers to engineers to builders, to refine performance and capture design intent, facilitating wise use of capital. Its energy performance simulation function is particularly helpful for use in green building. It can help builders select the most appropriate windows or building orientation at the outset, saving costs down the line by preventing multiple orders or design changes<sup>7</sup>.

Building green tends to be more expensive than non-green building, so in order to ensure profitability of green projects, it is particularly important to estimate costs accurately. Estimating the costs of new projects is essential to the survival of construction businesses. Business owners and managers can utilize cost estimating software, such as Sage Timberline Office Estimating, to save time, curb risk, and maximize profits by automating the entire estimating procedure. Sage Timberline Office Estimating software gets extra muscle from a full range of pre-built, industry-specific databases including a RSMean Green database which contains thousands of green building items which can be updated with your own prices and productivity factors. Automating the estimation process ensures more accurate estimates in comparison to using Excel or manually calculating the estimate. The added accuracy puts businesses in a better position to win more jobs at a higher profit margin.

## Green Materials

Green builders have no shortage of materials, as the market for green products is booming. Determining the quality level of the new products has been facilitated by a growing number of independent standards and product certification organizations.

When faced with assessing the sustainability of materials, construction companies can look to resources including EnergyStar US EPA, Greenguard Environmental Institute, Green Seal and Environmentally Preferable Products and Services Scientific Certification Systems. It is important to designate time to research material and technologies, as new products hit the markets every week. The more time a business allots to this project, the easier it will be for building teams to shop cost-effectively. Gregory Kats, a founding principal of green intelligence provider Capital E, notes that the cost of green products and materials has come down significantly—and as project teams become more experienced in green building, they can save even more<sup>6</sup>. There are several materials that have high specification rates and combine strong energy efficiency with low cost, including fluorescent lights with electronic ballasts and LED lighting<sup>7</sup>.

## Planning

Effective cost management strategies can minimize first-cost premiums. First, construction companies should determine if the project is right for sustainable design. The decision to plan a green project should be made before design proposals are solicited, so that the contract language can include the specifics of sustainability goals and the level of LEED certification expected. In order to increase sustainability, the planning process itself should be green.

Paperless document management is one way in which construction firms can minimize excess waste. Eliminating paper documents is not only good for the environment, it's good for a company's bottom line. Businesses can save money by avoiding the costs associated with purchasing paper, printing documents and storing physical files. The implementation of paperless document management software minimizes the likelihood of misplaced files and keeps information organized in a way that is easily accessible. The Sage Timberline Office suite is one software package that features this technology.

Additionally, when hiring a team, it is best to look for people who have experience in sustainable development, as green experience can lead to a 10 percent savings in construction costs. It is also beneficial to encourage further training.

Integrated design can also contribute to savings. If the building team invests three percent of total project costs during design, up to 10 percent of savings can be attained during the construction phase as a result of design simplifications and fewer change orders. Building teams should also keep an eye out for rebates and incentives that are applicable to the project.

Finally, time management is key. Carefully designate tasks and always assign deadlines.

## Green Edge

Government policies, legislation and programs have been driving green building over the past few years. Now, the corporate sector has joined the growing green building market for the competitive advantage it offers: Corporate leaders list the profit potential of green construction as a main reason they support the developing trend.

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