Benefit from “Green” Construction Methods

WHITE PAPER

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Benefits from "Green" Construction Methods

Real estate is caught up in the Green movement. This appears to be a permanent change in the U.S. construction business.

Those construction companies who do not adjust their business practices may not survive in today's challenging economic environment. America, at both the federal and state/local political level, now expects all new construction to be "green" or at least "greener" than in the "old-days." The federal governments and most major U.S. cities now require all new construction above a certain cost or size to be LEED.

The amount and type of energy and water a building uses, and how much waste and water runoff the site will generate are all factors in the decision to build or not build. Those contractors who can address these issues to the satisfaction of their client will be the contractors who not only survive, but thrive in a difficult construction marketplace.

Because of this, understanding the contractor's role in compliance with programs such as the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Rating System represents an opportunity to bid on more projects, as well as a higher potential for bid acceptance.

Even if not expected to be fully LEED certified, more and more existing property owners find themselves forced to retro-fit their properties for energy efficiency and water savings measures in order to cut operating costs and survive through the economic down turn. In addition, existing building owners are finding that tenants and purchasers are choosing green buildings versus so-called "brown" buildings, making being "green" necessary to attract quality tenants and buyers in more and more real estate markets.

This is why, construction companies, construction contractors and their sub-contractors cannot be top-tier companies in today's business environment if they are not responding to the market's demand for green buildings and energy efficiency improvements. Fortunately, those who are capable of understanding and capitalizing on this permanent shift in the construction marketplace will be among those companies that not only survive the current construction depression, but who could actually thrive in it.

On new construction, LEED or green building techniques and planning must begin in direct, active cooperation with the project developer and architects. This is not only because special construction techniques might be required, but also because there are many federal, state, local and public utility financial incentives for green, energy efficient, and renewable energy costs that could impact construction costs, and that might be financed by the available public incentives, but which typically require special tax and legal structuring of the project in order to realized the financial benefits.

Therefore, those construction companies with the ability to apply and leverage such knowledge, distinguish themselves amongst competitors and advise their developer clients and project owners will win more bids, have higher client satisfaction and remain at the forefront of their trade.

Moreover, some green building practices are only capable of being performed by construction companies, such as green and environmentally responsible construction site management, soil and run-off management, waste management handling and practices, etc. Thus, in many case, intelligent conduct by the construction company can establish that company as a “green” construction company.

Contractors that have a "green" advantage can gain a valuable foothold in the architectural marketplace, especially as more and more designers and building owners seek environmentally-friendly materials and construction practices for their projects. For most contractors, their role in implementing sustainable practices can at first appear intimidating. But it boils down to understanding the four main areas covered within most green building rating systems. These include: construction waste management, indoor air quality management, materials selection and use and reporting protocols.

The Contractor's Role

In addition to LEED, there are other commercial building initiatives such as GreenGlobes, from The Green Building Initiative (which is very similar in its intention to the LEED program) and the GoGreen Program developed by Building Owners and Managers Association (BOMA) International.

On the residential side, the National Association of Home Builders (NAHB) has a sustainable homes checklist. There are also building-type specific programs such as the Collaborative for High Performance Schools, which has been adopted by many of the school districts in California.

Documentation Is Key

Since most of these programs embrace the same general concepts, such as energy efficiency, recycling and air quality standards, a contractor with general “green” knowledge can assemble and maintain the documentation necessary for compliance with any of these established standards, as well as any municipally mandated derivations.

The most important first step for contractors looking for a competitive advantage is to understand what these rating systems expect in terms of verification and compliance. Understanding the purpose of the various credits can lead to the development of a project plan that fits within a reasonable time frame and cost to the owner.

A green contractor needs to have thorough knowledge of materials, especially building products that are rapidly renewable, contain recycled content (post-consumer and pre-consumer) and are

low VOC emitting. With such a skill set, the contractor can then truly participate in the integrated-design approach needed to build green facilities and even contribute by identifying ways to reach LEED certification of a building. During integrated design charettes, a green contractor can target the LEED credits that they believe are achievable from the beginning and then help to define the project team's responsibilities.

The Contractor on LEED Projects

Within the popular LEED-NC (New Construction and Major Renovations) program, a contractor could potentially have decision-making responsibilities for up to twenty-three required prerequisite credits, plus an additional sixty-nine available credits within the six established LEED categories—Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation & Design Process.

It takes a minimum of twenty-six points for a project to gain a LEED certification, with silver, gold and platinum levels available for achieving higher point levels.

On LEED projects, the contractor is required to maintain spreadsheets in various categories such as itemizing the costs of materials used in specific building systems. Often, the subcontractors are responsible for providing the general contractor with some of the information such as how far certain products traveled from the point of manufacture to the jobsite. This is necessary for calculating the Regional Materials credits.

Another part of the compliance process can involve contacting manufacturers or their suppliers in order to obtain information such as where the raw materials were harvested, the amount of recycled content used in their products, as well as the content of any cleaners and polishes required to maintain the product both during and after installation.

In all, the general contractor is potentially responsible for up to thirty submittals, leaving much of the burden on their subcontractor for reliable recordkeeping and accurate data in order for the project team to eventually submit its report to the USGBC (or other third-party verifying organization) for determining the building's sustainable performance.

Expect Green Building Certification to Grow

Because more and more government and municipal regulators are requiring LEED certifications for projects funded with tax dollars, it is prudent for contractors to allocate funds for education programs as well as for developing in-house databases of green product manufacturers, salvage vendors and qualified demolition contractors.

Be able to identify green language in bid packages and be familiar with third-party green product labels of relevance to the construction segment served. For example, the GreenSeal paint label signifies an independent verification of low- or no-VOC products, and the National Science Foundation (NSF) Chain-of-

Custody label means that the attached wood products qualify for the LEED MR 7 Credit (Certified Wood). Also, understand that some sustainable materials take longer to arrive on site and must be stored under roof because they utilize minimal packaging protection.

While many of the green building rating systems began as voluntary options, a growing number of governments are adopting measures requiring green compliance. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is working on Standard 189, which will translate the requirements of LEED into building code enabling that standard to be adopted by local, state and federal government entities. The initiative, which started in 2007, means that eventually everyone will be made to comply with green building standards.

It is not too late to embark on the green path now while it remains a competitive advantage—as these voluntary standards become mandates, those contractors with green knowledge and experience will have a considerable advantage over their counterparts still struggling to understand sustainable construction methods.