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The Grass is *Not Always Greener* on a Sustainable Roof

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As Kermit the Frog famously remarked, "It's not easy being green." Ignoring his warning, every developer, designer and contractor in the construction industry is rushing to become "Green." While environmentally advantageous as "green" design and construction is in increasing demand, there are risks as well as rewards in the process. This article explores how to avoid the former and maximize the latter.

The Problem of Defining "Green"

Before too much energy and cost is spent on delivering a green project, it is beneficial for all participants to define what they mean by or want from a green or sustainable project. Just like the label "organic," the word "green" can have many meanings. For instance, a designer may emphasize an element or facet of green through use of recycled materials with a low environmental impact. The contractor may emphasize another side of green by careful management of project waste. The owner, on the other hand, may expect cost savings in building performance from a green project that will produce operational profit and improve or create user-healthy features which it can market for financial gain. These different definitions of a green or sustainable project can lead to different expectations and disputes.

To avoid having a disappointed client, it is important for the designer and contractor to determine what the building owner or developer expects from its green building. In a surprisingly broad proclamation, the American Institute of Architects is promoting a 50 percent reduction from the current use of fossil fuels used to construct and operate buildings by 2010. While this is an admirable social goal, the cost of this design philosophy should be presented to and approved by the project's owner. If the owner's desire is to decrease operational costs, then the designer should first assure the owner that its green design will achieve operational savings that exceed the potential increased costs of the green

construction components. Unless the designer has presented these costs and benefits to his client and literally received the owner's "buy in," the designer's design philosophy may be at odds with the owner's stated need for low operational costs.

This problem is not necessarily solved by reference or incorporation of LEED's point system as part of the project's specifications. The LEED rating system measures a building's performance and capability in six areas:

1. sustainable sites (i.e., issues relating to transportation, stormwater management, construction pollution, etc.);
2. water efficiency;
3. energy and atmosphere;
4. materials and resources;

