

“Green Building” Is Best Practice

By Bill Holland, AIA LEED AP

How would you like to reduce turnover of employees and/or tenants, increase productivity, reduce costs and, as an added bonus, do something good for the world at large? That's what green design is all about.

Happier, healthier people stay longer and are more productive. There have been many studies of the effects of improved indoor environments published in the last few years documenting such aspects as reduced absenteeism, lower rates of illness, greater worker satisfaction, and higher productivity. As personnel costs are commonly at least ten times facility costs, even a 1% increase in productivity is equivalent to a 10% decrease in facility costs.

According to the U.S. Department of Energy, high quality green buildings can be built within conventional budgets. Early incorporation of green building strategies can lead to improved design at reduced costs.

Our experience at Margulies & Associates is that the costs of implementing green design in large office building projects is minimal. However, the building industry is still adjusting to the extra demands of green construction, including such issues as job site cleanliness, documenting environmental qualities of construction materials, and timing a flush-out of building air in order to reduce contaminants encountered by the building occupants. Extra effort is required of the design team, as well as the general contractor, to ensure that all appropriate measures are taken.

Some green building strategies are no-cost for construction in Massachusetts as they are mandated by the state. These include energy and water conservation measures, storm water control, and most recently, solid waste recycling. Asphalt pavement, brick, concrete, metal and wood are banned from the state's landfills. As it becomes economically feasible to recycle additional materials, they will be added to the ban.

The use of low-emitting materials is not mandated in Massachusetts, but is highly desirable for occupant comfort and health. These materials include paints, sealants and carpets with low levels of volatile organic compounds (VOC's). It is also desirable to avoid urea-formaldehyde resins, commonly found in plywood, wood doors, and other wood products. VOC's and urea-formaldehyde have been implicated in many complaints by people with chemical sensitivities.

Design professionals are proud of LEED-certified buildings, and rightly so -- yet we should recognize that in a sense we did nothing more than best practice. We saved the owner operating costs and provided a healthy interior environment for the employees. The owner is rightfully proud of having a USGBC-rated building, but they would have done most of the same things even if they hadn't submitted the building for a rating.

In fact, green design and the USGBC LEED rating system are increasingly being accepted by city, state and federal agencies and major corporations throughout the United States. Owners of existing properties will need to assess the greenness of their buildings and plan improvements to bring them in line with the emerging green standards.

Meanwhile, like any best practice, the standards continue to evolve. In the interest of avoiding increases in the level of carbon dioxide in the atmosphere, resulting in global warming and the expected rise of sea levels, the American Institute of Architects (AIA) has called for the reduction of fossil fuel requirements for buildings. The goal is to achieve carbon neutral buildings by 2030. These buildings will use no fossil fuels emitting greenhouse gases.

The U.S. Conference of Mayors has endorsed the AIA standard with a resolution promoting carbon neutral buildings for all new and renovated city buildings. Many local governments have also adopted this standard. It will soon be the new green standard and “best practice.”

About the Author

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