

# Trends in Green Building

By Matthew Hancock

“Green Building” is a broad term that is used to describe the design and construction of sustainable and environmentally conscious buildings. The driving force behind this is to lower our negative impact on the environment and, at the same time, make the buildings we live and work in healthier for us.

According to some of the United States Green Building Council (USGBC) statistics, buildings are responsible for 39% of US carbon dioxide (CO<sub>2</sub>) emissions, 70% of US electricity consumption, and 15 trillion gallons of water consumption. Even though there is still some controversy over the effect of greenhouse gasses on the environment, the last 2 statistics are very important for those of us who live in North Texas. With our population expansion, aging water and electrical infrastructure, and shrinking landfills, designing and constructing “green” just makes sense. USGBC data shows that green buildings use 36% less energy, require fewer raw materials, and divert less waste to our landfills. With the cost of green buildings down to only 1 or 2% more than a conventional building, we can start seeing the tangible benefits of sustainable design.

Another push towards the ‘green’ build movement is by local governments. More and more municipalities are adopting the USGBC LEED<sup>®</sup> (Leadership in Energy and Environmental Design) guidelines for new and renovated buildings. In 2006, at the USGBC Greenbuild expo, the Mayor of Denver challenged other major cities to see who can have the most LEED<sup>®</sup> certified buildings. They are accomplishing this by offering tax breaks to private corporations and mandating it for city-financed projects.

This has led to a dramatic increase in both LEED<sup>®</sup> Certified and sustainable projects being built. However, this growth has come with some challenges: Increased demand for “green” products has led to long lead times; new and unspecified materials are labeled “green” products which are not necessarily certified; and, building officials have a learning curve on how to evaluate these new products and building techniques.

The USGBC and green building advocates are meeting to overcome these challenges though. The LEED<sup>®</sup> process is constantly under review and continues to adopt the latest codes and products. This includes Standard 189, a new minimum standard for green building. The USGBC is currently developing LEED<sup>®</sup> 3.0 and working with national code writers to include the new products and techniques. The American Institute of Architects (AIA) has even rolled out a new initiative called sustainability 2030, which at its roots, is looking to design all buildings by the year 2030 as carbon neutral. The USGBC has even initiated the Green Advantage Builders Certification for contractors to certify their knowledge in green building techniques.

What does green building mean at the end of the day? It is simple, do the right thing for you, the environment, and the next generation. While most companies are concerned with their bottom line, they ought to embrace the idea that energy and water conservation, green building, and the use of “green materials” as a whole, stands to increase their savings eventually.

According to the USGBC, human beings spend 90% of their time indoors, and there is an increase in allergies, asthma, and absenteeism from school, and even work. There have been numerous studies done on post occupancy productivity levels, which have increased within “green”-built facilities. Not only does “green” adaptation result in less sick days taken, but also shows an increase in productivity, job satisfaction, and in the case of schools, better grades. So as we positively affect the environment around us, we eventually create better health for ourselves.

For people interested in green building trend, a couple of good resources are the USGBC and AIA websites. Also of particular help in keeping up with the current trends is the Environmental Design and Construction publication [www.EDCmag.com](http://www.EDCmag.com).

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Adolfson & Peterson Construction is a 61-year-old company with offices in Minneapolis, Minnesota; Denver, Colorado; Phoenix, Arizona; and Dallas, Texas (AIA Dallas Chapter 2007 Contractor of the Year). With sales in excess of \$670 million, Adolfson & Peterson is currently ranked 72 on the Engineering News-Record Top 400 General Contractors list. Services provided are construction management, design/build, general contracting, LEED® construction capability, Green Advantage® certified personnel, facilities maintenance, Building Information Modeling, and long-term care to various public and private clients. Please visit our website at <http://www.a-p.com>.

