



Build it Green



Buildings, both commercial and residential, use enormous amounts of resources in construction and operation. However, new green technologies are becoming commonplace for the construction of residential and commercial structures. Many practices and techniques are simple enough for the at-home handy person to complete. Whether you're an experienced contractor or a new do-it-yourselfer, these tips can help you green your buildings.

BEST PRACTICE AREA: SUSTAINABLE BUILDING PRACTICES

DID YOU KNOW?

An estimated 20 to 30 percent of building-related construction & demolition debris is recovered for processing and recycling. The materials most frequently recovered and recycled were concrete, asphalt, metals, and wood.

BENEFITS OF GREEN BUILDING:

Environmental Benefits:

- Enhance & protect ecosystems.
- Improve air and water quality.
- Conserve natural resources.

Economic Benefits:

- Reduce operating costs.
- Improve occupant productivity.
- Optimize life-cycle economic performance.

Social Benefits:

- Enhance occupant comfort & health.
- Heighten aesthetic qualities.
- Improve overall quality of life.

WHAT IS LEED?

LEED, or Leadership in Energy and Environmental Design, is an internationally-recognized green building certification system. Developed by the U.S. Green Building Council (USGBC) in March 2000, LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. LEED promotes sustainable building and development practices through a suite of rating systems that recognize projects that implement strategies for better environmental and health performance. LEED points are awarded on a 100-point scale, and credits are weighted to reflect their potential environmental impacts. Additionally, 10 bonus credits are available, four of which address regionally specific environmental issues. Focus areas address sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation in design and a regional priority. Certification levels are: Certified—40+ points; Silver—50+ points; Gold—60+ points, and; Platinum—80+ points.

ELEMENTS OF GREEN BUILDING:

SITING:

- Select a site well suited to take advantage of public and mass transit opportunities as well as walking and biking access and trails.
- Protect, retain and utilize existing landscaping and natural features including the sun.
- In utilizing an in-fill site, recycle paving materials, furnishings, and other building materials for salvage or reuse on site.

MATERIALS EFFICIENCY:

- Use sustainable construction materials including locally produced, durable, recyclable, and non-toxic materials.
- Use dimensional design planning to minimize cutting and waste. For example, design rooms on 4-foot multiples to conform to standard-sized wallboard and plywood sheets.
- Reuse and recycle construction and demolition materials.
- Require a recycling plan that manages materials and provides space to facilitate recycling collection on the site.

ENERGY EFFICIENCY:

- Use Passive design strategies including building shape and orientation to improve energy performance.
- Utilize natural light where possible.
- Install efficient lighting systems including motion activated, dimmers and track lighting.
- Install proper sized heating and cooling units for the building size.
- Install alternative energy sources including wind turbines and solar panels.
- Install a geo-thermal heating system.

WATER EFFICIENCY:

- Design for dual plumbing to use recycled gray water for site irrigation.
- Install low-flush toilets, low-flow showerheads and other water conserving fixtures.
- Install point-of-use water heating systems for distant locations.
- Install native plants and utilize mulch in landscaping to save water.
- Use drip and micro-irrigation systems rather than high-powered sprinklers and sprayers.
- Install rain barrels for watering.
- Install a dishwasher to save water while doing the dishes.

