Environmental Technology 280: Green Building Design Principles

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Sustainability Definition

Sustainability has been defined as “meeting the needs of the present without compromising the ability of future generations to meet their needs” (Brundtland Report, 1987).

Above is a Conceptual Model of Sustainability, also referred to as the Triple Bottom Line: “People, Planet, and Profit”
MISSION
To transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy and prosperous environment that improves the quality of life.

VISION
Buildings and communities will regenerate and sustain the health and vitality of all life within a generation.
Leadership in Energy & Environmental Design
Leadership in Energy and Environmental Design

A leading-edge system for certifying the greenest performing buildings in the world
LEED address the complete lifecycle of buildings:

- **Homes**
- **Neighborhood Development**
- **Commercial Interiors**
- **Core and Shell**
- **New Construction & Major Renovations**
- **Existing Buildings**
- **Operations & Maintenance**

**Building Life Cycle**
- **Design**
- **Construction**
- **Operations**
Cross-Functional Team

ENGINEERS OPERATIONS AND MAINTENANCE TEAMS
BUILDING OCCUPANTS BUILDING MANAGERS
FACULTY ENVIRONMENTAL HEALTH AND SAFETY STAFF
GROUNDSKEEPERS CAPITAL PLANNING STAFF
UTILITY MANAGERS INTERIOR DESIGNERS
CUSTODIAL TEAM PROPERTY MANAGERS
HUMAN RESOURCES BUILDING OWNERS
PURCHASING STAFF ENVIRONMENTAL GROUPS
ENGINEERS OPERATIONS AND MAINTENANCE TEAMS
LEED Is Consensus-Based

STAKEHOLDERS

VOLUNTEER COMMITTEES

FULL MEMBERSHIP

LEED

USGBC has four levels of LEED:
Commercial LEED Registered Projects
Total Currently Registered

33,265*
Commercial LEED Certified Projects
(Cumulative)

11,961*

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*As of February 2012
Square Footage of Commercial LEED Certified Projects (Cumulative)

2 billion

*As of February 2012
Bronx Library Center
New York, NY

90% of demolition debris recycled
20% energy cost savings
80% of wood is FSC certified
Boulder Associates, Inc. Office
Boulder, CO

39% of materials and furniture have recycled content

43% less water use

55% of demolition/construction waste diverted from landfill
Sidwell Friends Middle School
Washington, DC

90% reduced municipal water use
60% less energy demand than a conventional school
80% native plant species planted on site
Tepeyac Haven
Pasco, WA

15 units per acre

29% improvement of attic insulation heat resistance over state code energy

44 homes available for low-income families

Orchard Garden Hotel
San Francisco, CA

22% of building materials manufactured within 500 miles

77% of construction waste diverted from the landfill

100% of interior spaces designated tobacco-free
Steps to LEED Certification

1. Register Your Project
2. Track Progress & Document Achievement
3. Apply for Certification

Getting Started: Tools

- Rating systems
- Reference guide
- Project checklist
- Credit Interpretation Requests (CIRs)
- LEED Online
- Educational workshops
- Project case studies
- www.usgbc.org
USGBC’s national members are organizations, corporations and institutions that make up a vibrant and diverse community.

13,531

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*As of February 2012
USGBC CHAPTERS

One community of individuals taking LOCAL action to deliver GLOBAL results through education, advocacy and outreach.

NETWORK
79 Chapters
30,000+ Individual Members

As of February 2012
177,452 building professionals across all areas of practice have become LEED credentialed professionals.
USGBC EDUCATION
YOUR SOURCE FOR LEED AND GREEN BUILDING EDUCATION

USGBC’S EDUCATIONAL OFFERINGS:

- Online courses
- Live webinars
- Instructor-led workshops
- Reference, Study and Implementation Guides
- Podcasts & webcasts
- LEED project-based learning

HELPING YOU

GROW your career
DIFFERENTIATE yourself
COMPETE in the marketplace
DEVELOP best practices and knowledge
LEAD your industry
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“Recommend an automated grey water systems expert?”

“Let’s rethink our approach to water management.”

“Urban agriculture workshop!”

“Best Renewable Energy Workshop Ever.”

“Let’s design a passive house.”

GREENBUILD INTERNATIONAL CONFERENCE AND EXPO
GREENBUILDEXPO.ORG
Get Involved: As an Individual

- Learn (www.usgbc.org/education)
- Join a chapter (www.usgbc.org/chapters)
- Attend Greenbuild (www.greenbuildexpo.org)
- Become an advocate
- Become a LEED AP (www.gbci.org)
- Pursue LEED certification in your building projects (www.usgbc.org/leed)
- Purchase a LEED Reference Guide (www.usgbc.org/leed)
Get Involved: As an Organization

- Join USGBC National (www.usgbc.org/membership)
- Pursue LEED certification in your building projects (www.usgbc.org/leed)
- Become an Education Provider (www.usgbc.org/epp)
- Encourage your employees to become LEED APs (www.gbcic.org)