

AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
Quality People. Quality Projects.

Facilitating Green Construction Education
~ An Overview ~

Presented to:
AGC's 2009 HR Professionals and Training Development

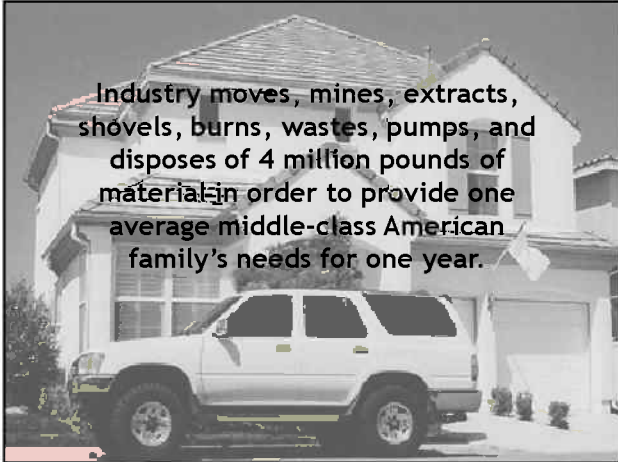
Presented by:
Thomas A. Taylor
LEED Accredited Professional
Vertegy, an Alberici Enterprise

October 29, 2009





- Global Climate Changes
- Global Water Shortages
- Disappearing Landfill Space
- Diminishing Supply of Raw Materials



Industry moves, mines, extracts, shovels, burns, wastes, pumps, and disposes of 4 million pounds of material in order to provide one average middle-class American family's needs for one year.



Every year, 3 billion tons of the world's raw material is used to construct buildings in the U.S. At the same time, 136 million tons of construction and demolition waste are sent to local landfills.



The development community in the U.S. has continually pushed to develop land further and further into the suburbs.



State & Local Incentives

56 cities and 16 states across the United States and Canada offer financial incentives for green buildings.

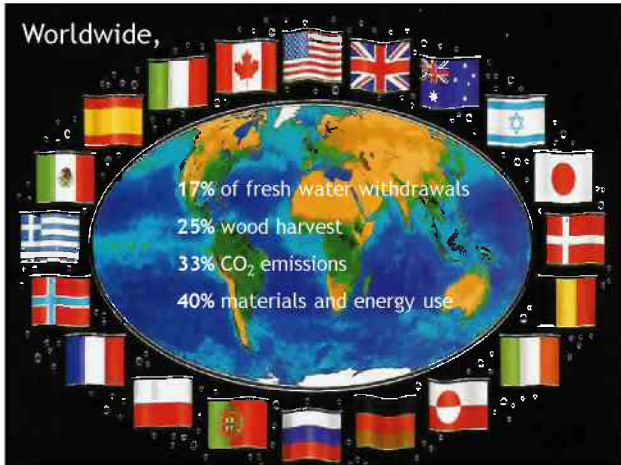


The Energy Policy Act of 2005 \$14B tax title includes several significant tax incentives for conservation and energy efficiency programs.

In the U.S., buildings account for...

- 12% of fresh water withdrawals
- 65% waste output
- 39% CO₂ emissions
- 71% electricity consumption








AGC of America
THE ASSOCIATION OF GREEN CONTRACTORS OF AMERICA
Quality People. Quality Projects.

Sustainability: Meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.

World Commission on Environment and Development



AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.

What is a Green building?

A **green building**, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. **Green buildings** are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact to the environment.


California Integrated Waste Management Board

A **sustainable building**, or **green building** is an outcome of a design which focuses on increasing the efficiency of resource use while reducing building impacts on human health and the environment during the building's lifecycle.

Wikipedia

Most people would agree that a **green** building must be an energy efficient building.

EnergyStar




AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.

What is a Sustainable Building?

High performance and ecologically intelligent building designs have proven that they can deliver tremendously profitable top line and bottom line performances.

William McDonough, FAIA



AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.

Sustainable Buildings: High performance buildings that through their siting, orientation, design, construction and operation are highly energy efficient, have lower operating costs, are better for the environment in broad and specific terms, and promote whole health for their users and occupants with **measurable** results.

Standards for Sustainability... 

Green Guide for Health Care, USA

Green Building Initiative's Green Globes, USA & Canada

Leadership in Energy & Environmental Design (LEED), USA & Canada

Building Research Environmental Assessment Method (BREEAM), UK

Comprehensive Assessment System for Building Environmental Efficiency, Japan

Green Building Challenge Assessment (GBTool), Canada

Sustainable Project Rating System (SPiRT), US Army

EnergyStar, USA

Green Star, Australia

Practical Recommendations for Sustainable Construction (PRACTICAL) Europe

Your Client wants a sustainable building. Now what?

- Understand the importance of setting goals for the project
 - Just because the specification calls for LEED or other certification does not mean the Owner knows what they are asking for.
 - Every team member needs to dig to find out the motivation behind the request for certification.
 - Knowing the project goals can help you bring value to a client.

What makes a Sustainable project different?

Pre-Construction Phase Tasks

Understand what Sustainability is all about:
Learn - Practice - Teach

Use your product knowledge for Green V.E. - value Enhancements not Value Engineering

Look to your vendors to venture "outside their box." Ask for green products... recycled content, locally manufactured/harvested/extracted, FSC certified wood, rapidly renewable.

Highlight sustainable aspects of specs in bld packages and at pre-bid conferences. Know what you are being asked to provide and perform.

Understand and account for possible schedule implications.



AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.

What makes a sustainable project different?

Construction Phase Tasks


Educate your work force about Sustainability and the rating system you may use.

Your submittal process must include special required information.

Document the use of materials and process.

- Erosion and sedimentation measures
- Construction & demolition waste & salvage
- Recycled content
- Locally manufactured and extracted materials
- Indoor Air Quality compliance
- Low-emitting product compliance

Participate in the commissioning process.



AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.

How do you get started?

- If you are an owner, know what to put in your contracts
- If you are a designer or a contractor - RTC
 - Many contractors overlook the significance of LEED or sustainable references in the bid documents
 - Projects registered with a formal rating organization can impose contractual performance standards to designers and contractors
 - Who is responsible for coordination and assembly of documents required for final submission?
 - Who will be responsible for engineering calculations?
 - What happens if the building does not perform?
 - What happens if the building does not get certified?



AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.

What you don't know will probably hurt you!

- Understand the credit point criteria and prerequisites
- Points can be lost by the disregard of an unsuspecting team member
 - Lack of thought during design
 - Value engineering exercises
 - Misunderstanding of analysts
 - "Vision of the building" blinds innovation

Educate your work force about Sustainability and the rating system you may use!

AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
Quality People. Quality Projects.




LEED Professional Credentials

The U.S. Green Building Council has created the Green building Certification Institute (GBCI) to manage the LEED process and the credentialing of all professionals




The Green Building Certification Institute (GBCI) now coordinates the professional accreditation program for the USGBC.

Three levels of accreditation:

- Green Associate (GA)
- LEED Accredited Professional
- LEED Fellow

All credentialed professionals must pay a maintenance fee and complete the required amount of continuing education classes

AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
Quality People. Quality Projects.




LEED Professional Accreditation

Green Associate

- Must have experience in the form of involvement on a LEED registered project
- Or
- Be employed (or previous employed) in a sustainable field of work
- Or
- Engagement in (or completion of) an education program that addresses green building principles.
- Your experience must be documented in the form of a letter of attestation from a supervisor, client, project manager, or teacher
- And
- Must describe your involvement on the job or in the classroom.
- Must complete 15 hours of continuing education every two years


AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
Quality People. Quality Projects.



LEED Professional Eligibility

LEED Accredited Professional

- Must have previous experience with a LEED Registered Project within three years of your application submittal date
- Work experience must be documented in the form of a letter of attestation from a supervisor, client, or project manager
- And
- Must describe your involvement on the LEED Project as a consultant, contracted worker, member of the LEED Project team
- Must complete 30 hours of continuing education every other year



AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.


LEED Professional Accreditation

LEED Fellow


The GBCI has not yet defined the requirements for this level of credential.

However, the GBCI provides a description of the designation:

"LEED Fellows would become part of an extraordinary class of leading professionals distinguished by their years of experience and contributions to the standards of practice and body of knowledge for achieving continuous improvement in the green building field. This credential is still under development."




AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.



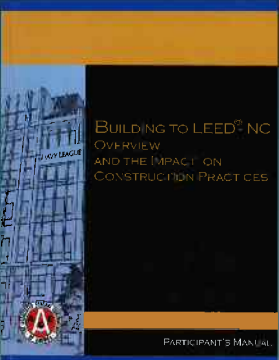
The AGC of America has endorsed publications like this to assist their membership understand the issues surrounding Green Building.

At this time, the AGC is working with Wiley Publishing to bring other books on associated topics to their membership.

The AGC is constantly looking for volunteers who would like to help provide content for and input on these publications.




AGC of America
THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA
 Quality People. Quality Projects.



In 2005, the AGC developed a curriculum to assist their membership understand the impact that Green and specifically, LEED, has on the construction process.

This first edition of this class was based on research performed by Michigan State University. This 8-hour class, sanctioned by the GBCI, is currently being updated for the new LEED NCv3.0.

The AGC is constantly looking for volunteers who would like to help provide content for and input on these classes.




AGC of America

THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA

Quality People. Quality Projects.

Notable Dates and Information:

- **November 10, 2009**
 - AGC of America presentation of Building to LEED at the Greenbuild Conference.
- **December 15, 2009**
 - Webinar on LEED v3: Save the date
- **March 16, 2010**
 - Presentation of the updated Building to LEED course material at the AGC Annual Convention in Orlando, FL.
- **AGC's Environmental Network**
 - Consists of:
 - Newsletter
 - E-Forum
 - Online Resources
 - Available to AGC members and chapter staff by visiting www.agc.org/environment or emailing yatesc@agc.org.



AGC of America

THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA

Quality People. Quality Projects.

Thank you!

Contact Information:

Thomas A. Taylor
 LEED Accredited Professional
 Vertegy, an Alberici Enterprise
tomt@alberici.com
