



Julie Buffenbarger, FACI, LEED™ AP BD+C, serves as Construction Building Sales Specialist for Lafarge. Her role is to promote cement and supplementary cementitious materials and sustainable design and building practice initiatives through technical education, promotion and specification with owners,

architects, engineers and design agencies. She is an active member of ACI, serving as chairman of the Sustainable Concrete Committee, and voting member on the Fly Ash, Silica Fume and Responsibility in Concrete Construction committees. Julie also serves on the Concrete Joint Sustainability Committee and the NRMCA and PCA technical committees relating to sustainability. She has over 18 years experience in concrete construction marketing and research and has authored over 20 publications on supplementary cementitious materials, concrete sustainability and durability, and admixtures in mining backfill. She holds Bachelors and Masters of Science degrees in Synthetic Organic Chemistry from Bowling Green State University, Bowling Green, Ohio.

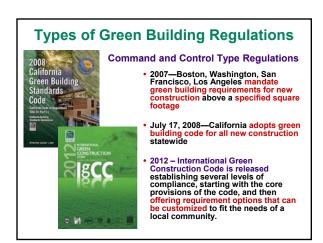
WEB SESSIONS



# **Green Building Regulation**

- Green Design is quickly being integrated into the building marketplace.
  - · Various green initiatives including legislation, executive orders, resolutions, ordinances, policies, and incentives are found across the U.S. in
    - 45 states
    - 442 Localities,
    - 35 state governments,
    - 15 federal agencies or departments,
    - · 20 public school jurisdictions, and • 45 institutions of higher educatior





## **Types of Green Building Incentives**

- Financial Incentives
- 2008—Portland enacts "feebate" structure
- Tax credits
- Zoning Allowances
- Density Bonuses
- Grants & Green Bonds
- Non-Financial Incentives
  - Expedited permitting; increased Floor to Area Ratios, building height or density for green buildings





#### What is LEED®?

LEED is a family of <u>building rating</u>
<u>systems</u> which measures certain
aspects of green design and awards a
rating according to a point structure.

LEED is the "de facto" certification standard for green buildings in North America is managed by the USGBC and CaGBC.

- Multiple versions of LEED
  - LEED New Construction
  - Core and Shell
  - Existing Buildings
     Schools
  - Retail
  - And more...



**LEED®** 

CONSTRUCTION

MAJOR RENOVATIONS

•

# **LEED® - Project Certification**

Leed Certification	
and Points	
Certification	Points
Level	Required
Certified	40-49
Silver	50-59
Gold	60-79
Platinum	≥ 80 points

- Projects must meet all mandatory LEED prerequisites
- They achieve a certain number of LEED credits to achieve a level of Certified, Silver, Gold or Platinum based on the number of points achieved.
- USGBC reviews project documentation – no inspections.

- The Rating system recognizes leading edge design that incorporates all facets of green building
- Design Guideline Compliance
- Performance Requirements
- Installation Requirements
- Construction Management
- Application Documentation
  - Product Data Submittals
  - Testing Reports Submittals
  - Construction Management
- Set of criteria that evaluates project performance and awards points for meeting specific performance criteria.

# **The LEED Documentation Process**

- Typically a LEED AP (Accredited Professional) is employed on the project to manage documentation.
- Documentation is needed from several different parties.
- The amount of documentation varies between credits: some have considerable paperwork, some just need a signature.
- A responsible party needs to sign off on each credit on a form called a LEED letter template.

#### **LEED Letter Templates**

- Typically requires a signature and a declaration.
- Sometimes LEED will ask for a signature from "the general contractor or responsible party", or the "architect or responsible party": the main individual overseeing the execution of the credit should be signing.
- May involve a spreadsheet or other information to be included.
- May ask that extra documentation be submitted alongside the template.



# Steps to LEED Certification Construction Completed Project Track Progress & Document Achievement Apply For Certification

# Potential Risks for Failure to Achieve LEED Certification

- Forfeiture of Tax Benefits, and public Grants and Loans. May lead to additional penalties.
- Inability to benefit from Special Regulations.
- Loss of Expedited Permitting opportunities.
- Failure to comply with mandatory LEED Certification (where required).
- Loss of increased density and other zoning incentives.
- Detrimental impact on Project Financing.
- Damage to Building Branding opportunities.

# **Green Building Risk**

- Standard of Care
- Contractual Liability
- New Green Laws
- Climate Change Risk
- Product Liability
- False Advertising



#### **Risk to All Parties?**

- Outdated Construction Contracts
  - Green building participants must be particularly diligent when using standard industry contracts, because revisions have not kept pace with the green revolution.
  - Imprecise contractual language could cause additional problems on green projects. For example, language that requires a contractor to comply with federal, state, and local laws could impose green performance obligations depending on the jurisdiction.

#### **Potential Risks for Design Professionals**

- The American Institute of Architects changed its code of ethics and standard contract in 2008, to commit "the Institute and its members to become experts in sustainability."
- It released six new documents in May 2012 to assist with sustainable projects.

B214™-2012 "Standard Form of Architects Service: LEED® Certification

It is a scope of services document that establishes duties and responsibilities when the owner seeks LEED certification. It <u>must</u> be incorporated into the Owner-Architect agreement to become effective.

**Services include:** Conducting a LEED workshop, Preparing a LEED certification plan, **registering the project**, and submitting the documentation to the Green Building Certification Institute (GBCI).

Addresses specific issues related to achievement of LEED certification, such as waiver of guarantees and warranties related to award of certification and a waiver of consequential damages that may be encountered on a LEED project

#### **Potential Risks for Design Professionals**

- A101-2007 SP, Standard Form of Agreement between Owner and Contractor, for use on a Sustainable Project
- A201-2007 SP, General Conditions of the Contract for Construction, for use on a Sustainable Project
- A401-2007 SP, Standard Form of Agreement between Contractor and Subcontractor, for use on a Sustainable Project
- B101-2007 SP, Standard Form of Agreement Between Owner and Architect for use on a Sustainable Project
- C401-2007 SP, Standard Form of **Agreement between Architect and Consultant** for use on a Sustainable Project
- Although these documents do seem to assist the parties in the process of successfully completing a LEED-certified project, it is risky for the architect to rely solely upon them.

#### **International Green Construction Code - IgCC**

- Standard of care will increase for architects. In most jurisdictions, an architect must perform his or her services to the degree of knowledge, skill, and judgment ordinarily possessed by members of that profession.

  Now they must understand SUSTAINABILITY.
- Local and state governments have the option of adopting the code.

Each state, city, and municipality can and will select different provisions of the IgCC as mandatory. Therefore, it will be critical for architects, contractors, and developers to read and understand the unique requirements applicable to a particular customer's jurisdiction.

• Research "Green Building Products"

#### **Perils for LEED Contractors**

- Although design changes, LEED-related guarantees, and potential liability for consequential damages are all risks that the contractor should be aware of, a number of additional contractor-specific issues may manifest themselves when building green.
  - Confusion between Performance and Design Specification
  - · Guaranteeing LEED Certification
  - Potential Delays
  - Green Performance Bonds



DELAYS

## What is LEEDigation?

#### Several types (thus far):

- 1. LEED Certification Challenge
- 2. Failure to Obtain Certification
- 3. Green Building Material Product Defects
- 4. Misrepresentation/Fraud from LEED certified buildings not meeting increased energy efficiency or reduced costs
- 5. LEED Costs
- 6. LEED Bonds



# **Wisconsin Schools - Certification Challenge**

#### Citizens challenge Green designation for Pines' school

"Persons concerned with possible inaccurately granted LEED certification are encouraged to contact the GBCI...."

By Ken Anderson News Correspondent

The designation of Northland Pines High School as a Leadership in Energy and Environmental Design (LEED) gold-certified facility has been challenged by a group of area residents.

According to District Administrator Mike Richie, five persons filed a complaint with the U.S. Green Building Council (USGBC) claiming the \$28.5 million high school, which opened in the fall of 2006, failed to meet the gold standard requirements.

"GBCI may revoke previously granted LEED certification or take other action regarding LEED certification such as determine to reduce points or category of LEED certification previously granted, if GBCI determines that credits/prerequisites for LEED certification were granted based on erroneous determinations or inaccurately or falsely submitted documentation."

#### Shaw Development v. Southern Builders

"Failure to Receive LEED Certification"

Construction of a \$7.5 million, 23-unit condominium project in Crisfield, Maryland.

Problem: Contract required building to meet Silver Certification. It did not.

Whose Fault?: Developer sued builder, but there was no clear allocation in contract of who was responsible for certification.

**Damages:** \$635k+ in lost tax credits from Maryland Green Building Tax Incentives

Result: Unknown - Settled.

# **LEED Responsibilities**

- The contract documents should expressly assign LEED certification responsibilities to the appropriate party or parties.
- At a minimum, specific contractual terms should address responsibility for:
  - Registering the project,
  - Compiling and maintaining documentation to obtain LEED credits,
  - Applying for certification,
  - Responding to USGBC requests for additional information or clarification, and
  - Prosecuting the appeal process in the event that the initial request for certification is denied.

#### Real Life Example - Materials

- Architect made decision to use green product from new manufacturer with impressive promotional information.
- Architect did no research on product availability and did not warn owner of any possible problems.
- Owner, based on architect's opinion, agreed to its use.
- Product was not readily available.
- Project completion was delayed and construction schedule distorted.
- Contractor demanded increased payments for overhead, lost profits and out-of-sequence construction.
- Owner brought claim against architect since architect never informed owner that product was subject to delayed deliver

Source: Schinnerer/CNA Professional Liability program for design firms

#### **Product Choices**

- The responsible participant should confirm product availability and production capacity with the manufacturer in order to avoid project delays.
- The expected level of performance should also be verified.

# **Product Liability**



- New products have new risks
- Delay may be caused by lack of availability, rejection or questioning by building officials, etc.
- Failure to perform as promised

#### Chesapeake Bay Foundation v. Weyerhaeuser

"Green Building Material Product Defects"

<u>Problem</u>: Rapidly renewable wood materials used in the manufacture of the roof truss system, beams and columns. Wood materials were pressure-treated with preservative sealer. Building experiencing extensive rot and jeopardizing integrity of structure after 9 years. Litigation for "defective, inferior and or unsuitable building products"

<u>Damages</u>: Breach of contract, Common law indemnity, Contribution, Negligent Misrepresentation; and Negligence.

Result: \$ 6 Million dollar settlement. Specific products chosen because of their environmental appeal. But these products allegedly failed when exposed to the elements. The introduction of new green materials can result in unanticipated results and lawsuits.

## **Product Fraud and Misrepresentation**

- Greenwashing
- Federal Trade Commission Guides for the Use of Environmental Marketing Claims (the "Green Guides")
- Greenwashing (green whitewash) is the practice of companies disingenuously spinning their products and policies as environmentally friendly, such as by presenting cost cuts as reductions in use of resources.
- It is a deceptive use of green PR or green marketing. The term "green sheen" has similarly been used to describe organizations that attempt to show that they are adopting practices beneficial to the environment
- GOOD NEWS....Environmental Product Declarations!

# Other Fraud and Misrepresentation Risks in Green Building?

- Unfulfilled Expectations
  - "Overall construction costs will be less than 2% more for a LEED project than a conventional project..."
  - "Increased costs of LEED will be recouped in energy savings over the life of the building..."
  - "LEED buildings will have a higher market value and garner higher rental rates..."
  - "Workers in a LEED building will be healthier and have increased productivity..."

#### **Real Life Example - Misrepresentation**

- Lured by the promise of "healthier and more productive occupants" basic to LEED® publicity, tenant rents space in Silver-certified building.
- At end of year, tenant's records indicated greater use of sick leave, increased complaints by employees about eye strain and drafts, and reduced output by clerical staff.
- Tenant demands rent rebate from project owner based on false promise of a healthful workplace and increased productivity.
- Owner sues architect for not designing healthful workplace.
- Tenant sues architect for bodily injury based on poor indoor air quality.

Source: Schinnerer/CNA Professional Liability program for design firm

#### Steven Gidumal et al. v. Site 16/17 Development, Inc.

#### "Misrepresentation of Energy Reduction"

<u>Problem</u>: Promotion of a building's LEED certification, green features or performance expectations to prospective owners, tenants, or both.

<u>Damages</u>: Owner sued the building's developer and manager for \$1.5 million for breach of contract and fraud damages alleged from misrepresentation of "green features" in a condo plan. Cited green construction defects such as insufficient heat from the "energy efficient" HVAC system.

Result: Resolved outside or court

#### **Risk to All Parties?**

- Third Party Claims
  - All involved parties must be careful not to expressly or impliedly warrant the ultimate performance of a green building.
    - Promises of a healthier building, misleading or overstating claims, greenwashing, etc.



# Kyle Busch v. Multiple Parties "LEED Costs"

#### Kyle Busch dispute centers on green construction

"Nearly a dozen companies involved in building a new race shop for Kyle Busch say they have filed liens or intend to file liens because they are collectively owed about \$1 million for work done. . . .

Busch was supposed to buy the building but has delayed the purchase because the final price tag was more than expected. The subcontractors say that's because the young multimillionaire NASCAR driver wanted a top of-the-line, LEED-certified building and ordered upgrades during construction."

-CharlotteObserver.com, June 1, 2010

#### **Conclusions**

- With the possibility of such large economic damages for unfulfilled expectations, building owners can be expected to demand guaranteed LEED certification.
- This request can conflict with the design professional's and contractor's needs to manage their own risks; after all, owner changes, contractor actions, design decisions, and post-occupancy usage all affect various LEED credits and are not within the sole control of a single party.
- Although the interests of the owner, designer, and contractor are often harmonious, understanding the risks faced by all project participants is critical to success on a green project.

# What Does LEED Certification Mean for Specifiers?



A successful green specifier will set reasonable contract requirements, manage the client's expectations, and control project scope.

- Is this a "Green" project or a "LEED" project ?
- Understanding the owner's desired level of certification and costs associated in achieving.
- Develop list of specification sections that will have LEED Requirements and assemble list of specification sections
- Research Product and System Information
- Prepare Specifications and incorporate "green" requirements as appropriate

## **Successful LEED Projects**

- Contracts should include a scope of work that
  - Spells out requirements for certifications, performance-based standards and other goals, including the critical deadlines.
- Clear terms in subcontracts
- Responsibility for the certification process also should be assigned to the architect, the contractor or to an independent LEED consultant.
- Very specific specifications, making them as independent from specific certifications as possible
- Architects, engineers and contractors should be qualified to demonstrate their previous experience with successful green design and construction projects.

#### **Joint Responsibilities on LEED Projects**

#### Communication!!!! EARLY and OFTEN

- Meet regularly: pre-bid, pre-job, during job, after job completion (coming in LEED v.4)
- All parties should meet early in the process to ensure coordination between the design and construction phases of the project.
- Subsequent coordination meetings should be held on a regular basis to keep all aspects of the project on track and budget.
- No substitutions in materials or building components should be allowed without the written approval of the architect or the LEED consultant.

# **Tips For Contractors and Specifiers**

- Ask/Provide checklists
- Do not give/accept verbal change orders
  - Change orders should not be implemented until <u>a written</u> change order has been received!
- All material modifications and changes to plans/specifications need to documented and retained.
  - Ask/provide for product lists (3 selections, if possible) from specifiers (especially for sealers, paints, coatings, etc.)
- Understand how your actions on the job impact the project and how they may lead to "LEED"igation.



# **Questions?**

# References

USGBC www.usgbc.org

CaGBC www.cagbc.orgNRMCA www.nrmca.org

NRMCA www.nrmca.org
 ACI www.concrete.org

PCA www.concretethinker.org

NAHB www.nahb.org

WWW.nanb.org

Regreen www.regreenprogram.orgGreenDepot www.greendepot.com

Green Globes www.greenglobes.com

Concrete Joint Sustainability Initiative

www.sustainableconcrete.org