The Basics of LEED® Green Building Certification: What, Why and How

By Caroline A. Edwards, Esq.

I. Glossary

    a. LEED® – Leadership in Energy and Environmental Design – a system for rating and certifying buildings based upon environmental performance standards, developed by the U.S. Green Building Council. The first version of LEED, now known as LEED 1.0, was launched in 1998. Modifications were released in March 2000 (LEED 2.0); 2002 (LEED 2.1); and 2005 (LEED 2.2). Significant changes to LEED were made in 2009, which is the current version, known as LEED 2009, or LEED 3.0.

    b. LEED Accredited Professional (LEED AP) -- an individual who has attained a qualifying score on the Professional Credential examination, which tests for knowledge about LEED credit intents and requirements, implementing the LEED process, coordinating the project and team, and verifying, participating in and performing the technical analysis required for LEED Credits. Under LEED 3.0, the following subspecialties of LEED APs were developed: LEED AP Building Design and Construction (BD+C); LEED AP Homes; LEED AP Interior Design and Construction (ID+C); LEED AP Operations and Maintenance (O+M) and LEED AP Neighborhood Development (ND) (collectively called "LEED AP with specialty"). Individuals who achieved a LEED AP credential before the new program became effective are sometimes called "Legacy LEED APs"; Legacy LEED APs can voluntarily enroll as a LEED AP with specialty until Fall, 2011. All LEED APs with specialty must satisfy continuing education requirements (known as the Credentialing Maintenance Program, or CMPs) which are currently set at thirty hours for each two year period.

    c. LEED Green Associate -- an individual who has attained a qualifying score on the LEED Green Associate examination. A LEED Green Associate has a basic knowledge of LEED and green building practices and principles.

    d. USGBC – U.S. Green Building Council – A private 501(c)(3) non-profit organization formed in 1993, based in Washington DC. USGBC launched the LEED Green Building Rating System in August 1998. USGBC has regional chapters; the chapter serving the Philadelphia area is the Delaware Valley Green Building Council (www.dvgbc.org). The USGBC website has detailed information about LEED green building certification -- go to www.usgbc.org.

THE LAW OFFICES *of*
CAROLINE
ACHEY EDWARDS

e. GBCI – Green Building Certification Institute – organization established to manage the LEED building certification process and the credentialing of individuals as LEED Accredited Professionals (LEED AP), and LEED Green Associates. The GBCI website includes information about LEED Green building certification requirements and process, information about professional credentials, a Professional Directory of LEED APs and LEED Green Associates, and LEED Online -- go to www.gbci.org.

II. What is a Green Building?

a. A building that is designed, constructed and operated to achieve sustainability goals.

b. Sustainability – Focuses on increasing the efficient use of resources, reducing impacts, and reducing the waste generated by the building.

III. Importance of "green buildings"

a. Buildings have significant impacts on energy use, carbon dioxide emissions, waste generation and water use; "green buildings" seek to reduce those impacts. In the United States, buildings account for approximately 40% of energy use, 38% of carbon dioxide emissions, and 13% of potable water use.

IV. What economic benefits can result to the owner from green buildings?

a. Lower operating and maintenance costs
b. Greater marketability
c. Higher market value
d. Rent premiums

V. What is LEED?

a. LEED is a building rating system developed by the U.S. Green Building Council for measuring and improving the performance of buildings.

b. Rating Systems -- There are presently nine LEED rating systems either fully in effect, approved by USGBC and proceeding through the pilot program, or proposed and awaiting USGBC approval:

2

THE LAW OFFICES of
CAROLINE
ACHEY EDWARDS

i. New Construction (NC) – For new construction of commercial buildings (offices, institutional buildings, and hotels) and residential buildings with four or more habitable stories. LEED NC is also used for major renovations of existing buildings. "Major renovation" includes major interior rehabilitation, significant envelope modifications, and major HVAC renovations.

ii. Existing Buildings: Operations and Maintenance (EB) – For existing building projects which focus more on operations and maintenance activities, and do not involve major renovations or significant design activities.

iii. Commercial Interiors (CI) -- For use by tenants who will be fitting out their own space and do not have control over the building as a whole.

iv. Core and Shell (CS) -- To be used by a building owner when the owner does not have any control over the interior buildout work by tenants. LEED CS can only be used when the owner occupied 50% or less of the buildings leasable square footage.

v. Schools -- LEED for Schools is used for new K-12 school buildings and major renovation of existing K-12 school buildings.

vi. Homes -- LEED for Homes is available for single-family and low rise multifamily dwellings. LEED for Homes is administered differently than other rating systems, in that it uses a third party, called a "LEED for Homes Provider", to provide rating support to homebuilders. The LEED for Homes Provider also coordinates the LEED for Homes Green Raters, who inspect LEED for Homes projects. There is currently a pilot LEED for Homes program for midrise multifamily buildings (over four stories).

vii. Neighborhood Development (ND) – LEED for Neighborhood Development provides for certification of a community as meeting high levels of sustainable and environmentally responsible development. These projects have a three-stage process to achieve certification. LEED ND has credit categories which include smart location and linkage, and neighborhood pattern and design.

3

THE LAW OFFICES *of*
CAROLINE
ACHEY EDWARDS

     viii.   Retail (Pilot) -- LEED for Retail is presently in the pilot program and is planned to launch late in 2010. LEED for Retail has pilot programs for New Construction and Existing Buildings.

     ix.   Healthcare (Proposed) – LEED for Healthcare is designed to serve the healthcare market, including hospitals, outpatient facilities, long-term care facilities, and may include assisted living facilities, medical offices, and other medical-related buildings. LEED for Healthcare completed the third comment period in early September, 2010, and as of this writing had not yet been submitted to USGBC members for a vote on the rating system.

c.   LEED Reference Guide -- The specific requirements for each rating system are contained in the current edition of the LEED Reference Guide applicable to that rating system. The LEED Reference Guide is indispensable when working to achieve LEED building certification. Among other things, the LEED Reference Guide gives detailed information about each prerequisite and credit, providing the number of points, the intent of the credit, the requirements to achieve the credit, related credits, calculations, if any, guidance on documentation, examples and resources.

d.   Each rating system has prerequisites that must be achieved in order to obtain LEED building certification. Prerequisites do not earn credits towards building certification.

e.   Each rating system also has specific credits which can be achieved to earn certification. Each credit is assigned a given number of points which "count" towards building certification.

f.   Certification Levels -- LEED provides for four levels of building certification:

     i.   Platinum (highest)
     ii.   Gold
     iii.   Silver
     iv.   Certified (lowest)

g.   The number of points needed to achieve each level of certification depends upon the rating system being used. For example, LEED New Construction requires 40 points for Certified; 50 points for Silver; 60 points

4

THE LAW OFFICES *of*
CAROLINE
ACHEY EDWARDS

for Gold; and 80 points for Platinum. A maximum of 100 points are available by earning credits in the five substantive credit categories, plus 10 possible bonus points in the Innovation in Design and Regional Priority categories.

h. <u>Credit Categories</u> -- Credits can be earned in seven categories, the first five being substantive categories, and the last two providing for bonus points:

   i. <u>Sustainable Sites</u> -- Sustainable Sites (SS) credits address environmental concerns related to exterior building issues, building landscape and hardscape. Examples of SS credits include site selection, Brownfield redevelopment, access to public transportation, maximizing open space, and heat island effect, both roof and nonroof.

   ii. <u>Water Efficiency</u> -- Water Efficiency (WE) credits encourage water conservation and reuse. Examples of WE credits include water efficient landscaping, innovative wastewater technologies, and water use reduction.

   iii. <u>Energy and Atmosphere</u> -- Energy and Atmosphere (EA) credits address the energy performance of the building, and include optimizing energy performance, use of on-site renewable energy, and green power (off-site renewable energy).

   iv. <u>Materials and Resources</u> -- Materials and Resources (MR) credits focus on environmental issues relating to the selection of materials, waste reduction and waste disposal. Examples of MR credits include reuse of building components, reuse of materials, use of recycled content, use of regional materials, and construction waste management.

   v. <u>Indoor Environmental Quality</u> -- Indoor Environmental Quality (IEQ) credits address occupants' exposure to pollutants and improving occupants' quality of life within the indoor environment. Examples of IEQ credits include control of tobacco smoke, increased ventilation, use of low emitting paints, adhesives, and other materials, occupant control of lighting and temperature, and views to the outdoors.

THE LAW OFFICES *of*
CAROLINE
ACHEY EDWARDS

   vi. <u>Innovation in Design</u> -- Innovation in Design (ID) credits provide project teams with opportunities to develop new and innovative ways to achieve LEED performance goals, and credits for exceptional performance. Having a LEED AP as part of the project team earns one ID credit.

   vii. <u>Regional Priority</u> -- Regional Priority (RP) was added to the credit categories in 2009. RP credits encourage project teams to select credits which have been identified as priorities for the geographical region (delineated by zip code) in which the project is located. Each region is assigned six credits under the other credit categories which are deemed to be a priority for that region. A project team that earns a credit which is identified as a regional priority can earn up to four additional points for that credit.

VI. <u>The LEED Building Certification Process</u> -- obtaining LEED building certification requires a strong commitment from the building owner and the project team working to achieve certification. The process follows the basic path described below:

  a. <u>Decide to seek LEED building certification.</u> The owner makes a decision to seek LEED certification for the project. Considerations in making this decision include:

   i. Cost – Fees must be paid by the owner at the time the project is registered with GBCI, and when the LEED application for the project is submitted for review. Additionally, the application process is complex and requires participation by the project team, which can incur costs in addition to the typical development-related costs for professional consultants. Finally, depending on the approaches taken to achieve credits, those approaches could carry greater costs than "typical" building.

   ii. Purpose – The owner should evaluate the reason to seek LEED building certification. This could be for image/public relations purposes, the prediction that the building will have lower long-term maintenance expenses, or the expectation of greater marketability and market value.

b. <u>Assemble the project team.</u> Once the decision to seek LEED certification has been reached, the owner should assemble the project team. LEED certification requires the various trades and professionals to work closely together to meet the LEED credit requirements, which can be complicated and interdependent. Therefore, it is important to assemble a project team committed to working together to achieve LEED certification and, if possible, familiar with the LEED certification process. The project team includes the owner, architect, engineers, general contractor, subcontractors and legal counsel. While subcontractors will not be under the direct control of the owner, their work can make the difference between a project that receives LEED certification, and one that does not. The owner's contracts with the general contractor should contain specific provisions dealing with LEED certification.

c. <u>Decide on the LEED rating system to be used.</u> The project team should assist the owner in deciding on the rating system to be used, when more than one option is available. In making this decision, the team should review the prerequisites applicable to the rating systems being considered, and the available credits, to determine which rating system would be most likely to result in LEED building certification.

d. <u>Register with GBCI.</u> Registration of the project with the Green Building Certification Institute through LEED Online allows the applicant to access the online forms and tools which are needed for the application process. It is a good idea to register early in the process, so that the LEED forms and requirements are available for review during project planning and design. Registration fees are currently $900.00 for USGBC members, and $1,200.00 for nonmembers, for a project seeking certification under LEED NC. At the time of registration, one person on the project team must be designated as the Project Administrator. The Project Administrator is the only individual permitted to submit a Certification Application to GBCI.

e. <u>Decide on the desired certification level, and the credits to be earned.</u> The project team should assist the owner in deciding on the desired certification level, and identify the credits to be achieved.

    i. Some credits will be able to be ruled out or in quickly, based on the project site and location. For example, a LEED NC project can earn 6 points if the project is located within a half mile walking distance of an existing (or planned and funded) commuter rail, light rail or

7

THE LAW OFFICES *of*
CAROLINE
ACHEY EDWARDS

subway station (SS Credit 4.1). If the project is located in a rural area, this credit probably won't be an option.

    ii.   Other credits will depend on factors that are within the control of the owner, such as building design, building orientation on the site, materials to be used, etc. The project team will need to evaluate each of the credits available for the selected rating system to decide whether the project should strive to achieve that credit.

    iii.   As part of deciding on the credits to be sought, the project team should decide which level of LEED certification (Certified, Silver, Gold or Platinum) it wants to try to achieve. As a rule of thumb, it is best not to work to achieve the very lowest possible "score" needed to achieve a certification level - some credits may not be achieved, or may be disallowed.

f.   <u>Design and Build the Project to earn LEED credits.</u> During the design/build stage, there needs to be regular feedback among the project team members so that everyone is aware of decisions being made and the possible impact of decisions upon LEED certification. For example, if a contractor had expected to be able to obtain salvaged materials which would have earned the project two points under MR Credit 3, but was unable to obtain those materials, the project team needs to (i) be made aware of that change and (ii) work together decide whether those two points can be achieved by earning points for a different credit.

g.   <u>Apply to GBCI for LEED Certification through LEED Online.</u> LEED identifies each credit as a "design" or "construction" credit. Design credits are those for which fulfillment of the credit requirements can be projected based on the construction documents. Construction credits are those for which a determination can be made only after construction is substantially completed. LEED provides the owner with the option of submitting all credits (both design and construction) for review after construction is completed (Combined Application Review), or of submitting the design credits for review first, upon the completion of the construction documentation ("Split Application Review").

    i.   <u>Split Application Review</u> -- If a Split Application Review process is selected, the process is as follows:

1. Design Phase Submittal -- Design credits are submitted to GBCI through LEED Online upon the completion of the construction documentation. Design prerequisites and credits are reviewed and designated as either "Anticipated" or "Pending" or "Denied", and technical advice can be provided by the review team. The initial review of the Design Phase Submittal is identified as the Preliminary Design Review. The project team can accept the Preliminary Design Review as final. If the project team needs to file a response to an issue raised in the Preliminary Design Review, the response must be submitted within 25 business days after receipt of the Preliminary Design Review. A Final Design Review is then conducted, in which each prerequisite and credit is designated as either "Anticipated" or "Denied".

2. Construction Phase Submittal – After the project team has accepted the results of the Design Review as final, and when construction is essentially completed, the project team assembles the final packet of credit templates and documentation and submits it via LEED Online. Each credit is reviewed and designated as either "Anticipated", "Pending" or "Denied". As with the Design Phase Submittal, the initial review is identified as a "Preliminary Construction Review", which the project team can accept as final. If the project team chooses to file a response to an issue raised in the Preliminary Construction Review, the response must be submitted within 25 business days after receipt of the Preliminary Construction Review. A Final Construction Review is then performed, and each credit is designated as "Awarded" or "Denied".

ii. Combined Application Review -- If the owner elects to proceed with a Combined Application Review, the initial submission is made after the construction of the project is completed. Both design and construction credits are submitted at the same time via LEED Online. A preliminary review is conducted by GBCI, following which each prerequisite and credit is designated as "Anticipated", "Pending" or "Denied". The project team can elect to accept the results of the preliminary review as final, or can submit a response to an issue raised in the review; the response

9

must be submitted within 25 business days following the receipt of the Preliminary Review. A Final Review is then conducted, and each prerequisite and credit is identified as "Awarded" or "Denied".

h. Making the Submittal to GBCI -- LEED Online contains project scorecard and credit templates which are used to apply for LEED building certification. The project scorecard helps the project team to keep track of which credits are being sought, and the number of points associated with each credit. A copy of a LEED NC Project Scorecard is attached at the end of these materials. Credit templates are the online forms which are completed and submitted to GBCI in support of the awarding of each credit. A copy of a sample credit template is attached at the end of these materials (the sample is for LEED 2.0, as sample templates are not yet available for LEED 3.0). All submissions for a project to GBCI must be made through the designated LEED Project Administrator.

i. Fees -- Certification fees are paid when documentation is submitted for review through LEED Online. The fees are based upon the building size, and whether the owner is a member of USGBC. Expedited review is available for an additional fee. By way of example, current certification fees for a building of less than 50,000 sf seeking certification under LEED NC by a non-USGBC member are:

Design Review: $2,250.00
Expedited Fee: $5,000.00 (in addition to regular fee)

Construction Review: $750.00
Expedited Fee $5,000.00 (in addition to regular fee)

Combined Design and Construction Review: $2,750.00
Expedited Fee: $10,000.00 (in addition to regular fee)

j. Credit Interpretation Requests – Credit Interpretation Requests (CIRs) can be submitted to GBCI after a project has registered with GBCI, and before the Application is submitted. CIRs allow a project team to get an advisory ruling on a question about the team's proposed approach to satisfying credit requirements. There are specific requirements for submission of CIRs, and each inquiry is limited to guidance on a single prerequisite or

10

THE LAW OFFICES *of*
CAROLINE
ACHEY EDWARDS

credit. GBCI's guideline in reviewing a CIR is whether the proposed approach meets the intent of the credit as stated in the applicable Reference Guide. The fee for a CIR submission is $220 per CIR.

k. <u>USGBC Ruling on Application</u> – After the final application review has been completed, GBCI issues a final review decision which identifies the credits which were awarded and denied for the project. The owner has 25 business days following the posting of the decision to accept the decision, or to file an appeal from the rulings on particular credits. The certification level for the project (Certified, Silver, Gold or Platinum) is based on the number of credits awarded under the decision.

l. <u>Appeal</u> -- An owner does not appeal the overall decision, but only appeals a denial of individual credits. Any appeal must be filed within 25 business days after GBCI has posted the final decision on the project. The fee for an appeal is $500.00 per credit. From a strategy standpoint, an owner would likely not appeal a credit denial unless the owner needed that credit to achieve LEED Certification at all, or to achieve a desired level of LEED Certification.

m. <u>Certification</u> – After the project team has accepted the final decision, the project receives LEED certification. LEED certified buildings receive a certificate of recognition for the certification level achieved, and information about ordering a plaque, marketing and photo submissions. Additionally, the project can be included in an online directory of LEED registered and certified projects at the GBCI website. (To see the current directory of LEED projects, go to www.gbci.org, and click on "Building Certification" at the left of the screen, then click on "LEED Project Directory").