

**Identifying and Managing the Risks Unique to “Green” Construction:
What Sureties Should Know**

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I. Introduction—Green Culture

The benefits of green and sustainable design and construction are multiple: land reuse, water conservation, energy efficiency, and resource preservation, to name some of the more obvious benefits. As society becomes more environmentally knowledgeable and conscious, as energy prices continue to soar, as governments mix mandates and incentives for more and more green and high-performance buildings, green and sustainable building will continue to increase its share of the construction market.¹ Property owners, developers, and building end-users are increasingly demanding that their construction projects attain a “green” rating certification, or an imprimatur from a third-party entity that the project has attained a certain desirable shade of green. A contractor that wants to thrive in such a market should seriously consider cultivating green building opportunities. Construction entities and sureties that ignore the green building movement or, worse yet, engage in it without proper green knowledge and understanding do so at their peril.²

Even on the most vanilla building project, the design and construction process is replete with potential for miscommunication, complications, disputes, claims, liability, mediation, litigation, arbitration, and bankruptcy. A green building project adds another layer of complexity to this already complicated process. A complexity bonus is added by the relative toddlerhood of green and sustainable building projects, the requirements of which will continue to evolve. Contractors that construct such projects--and the sureties that issue bonds for such projects--must identify and manage the significant and unique risk implications.

Sureties that issue bonds for green building projects must be vigilant in assessing the contractor/principal’s qualifications to construct a green building and in analyzing the contractor/principals’ obligations under the contract, in particular any provisions that might extend liability under a performance bond. Accordingly, it is simply good sense (and cents) to be extra-vigilant when evaluating whether to jump into a particular green project, understanding, assessing, managing, and mitigating the particular risks one is, or might be, assuming.

¹ We are only in the initial stages of a process that will fundamentally alter the way buildings are designed, permitted, constructed, inspected, operated, maintained, and renovated.

² Please see **Appendix A** to this paper for a list of selected green and sustainability resources.

II. What Is Green Building?

“Green building” means different things to different people. There is no generally accepted definition for “green building.” It is, however, essentially the design, construction, operation, and maintenance of buildings to reduce the use of natural resources, encourage re-use of construction materials, and encourage site development to minimize injury to the natural landscape and community. One definition of “sustainability” is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”³ The term “high-performance building” focuses on measurable and verifiable improved building outcomes through the use of cost-benefit analysis.

What is certain is that owners that want to build a green project have significantly increased expectations for the project, which could mean increased potential exposures for design professionals and contractors—and their sureties. It is, therefore, critical that all construction contracts provide definitions for “green” as well as proper risk allocations and that green expectations, goals, and objectives are understood.

Many owners now have a keen desire, for various reasons, to construct a green building; but they often do not understand what that means nor do their contracts address what green means. I had one owner client that told me to insert some “green stuff” into a renovation contract; that particular demand led to a lengthy discussion of just what kind of “green stuff” the client was looking to insert into the contract and concomitant revisions to the contract. Many of the potential risks on a green project are caused by the use of standard form construction contracts that do not address—either adequately or at all—green building concepts and the allocation of specific green risks.

III. Green Legislation and Regulation

Besides rising energy costs and increasing demand for environmentally responsible design and construction, green building mandates and incentives in recent legislation, executive orders, ordinances, and policies are largely responsible for the rapid growth of green building. It is critical that contractors and their sureties evaluate and manage the risks related to green building, which means, among other things, that they must keep pace with the rapidly changing green building mandates and incentives. These mandates and incentives significantly impact construction projects in the relevant jurisdictions. And nearly every state in the United States now has green legislation, and many counties, cities, and towns have local ordinances and regulations concerning green and/or high-performance building. The federal government, the District of Columbia, the State of Maryland, Baltimore City, Baltimore County, and nearly every other county and local government in Maryland are pursuing green mandates and initiatives. Indeed, all over the United States, state and local governments are enacting green building and sustainable development laws to mandate that buildings, public and sometimes private, meet certain “green” standards and enacting incentives to encourage compliance.

³ U.N. World Commission on Environment and Development Report, *Our Common Future* (1987), available at www.un-documents.net/wced-ocf.htm.

A. District of Columbia Green Building Act

When the District of Columbia Council enacted the Green Building Act of 2006,⁴ Washington, DC became the first major city in the United States to enact a comprehensive green mandate. The Act phases in mandatory LEED® certification requirements.⁵ The Act includes, among others, the following requirements for both public and private projects:

- District-owned commercial construction projects or substantial renovations initially funded in 2008 or later must achieve LEED Silver certification.
- Starting in 2012, private developers of new and substantially improved commercial buildings of 50,000 square feet or more must fulfill or exceed LEED New Construction standards.
- Expedited permitting and grant incentives are provided for projects that adopt early green building initiatives.
- The Act directs the Mayor to incorporate as many green building practices as practicable in the Washington, DC urban environment.

B. American Recovery and Reinvestment Act of 2009

The Obama Administration has signaled its commitment to green building by including billions of dollars for green initiatives in the American Recovery and Reinvestment Act of 2009 (“ARRA”), which was signed into law on February 17, 2009. The \$787 billion stimulus package will provide, among other things, billions of dollars from the federal government for the green building industry. Below is a summary of some, and only some, of the significant green building funding initiatives in the stimulus package:

Federal Buildings: The ARRA provides \$4.5 billion to the U.S. General Services Administration (“GSA”) to convert GSA facilities to “high-performance green buildings,” to make federal buildings more energy efficient.

Office of Federal High Performance Green Buildings: \$4 million in funds has been set aside to establish the Office of Federal High Performance Green Buildings within the GSA.

Department of Defense: The stimulus package provides that a portion of the \$4.2 billion in funds to modernize various Department of Defense facilities will fund green building-related improvements.

Green Building Training: \$3 million has been allocated for a green building training and apprenticeship program for federal buildings.

⁴ Green Building Act, WASH., D.C. CITY COUNCIL, § 4(a) (West 2001 & Supp. 2007).

⁵ Leadership in Energy and Environmental Design. The LEED rating system is discussed in some detail below.

Green Schools: The stimulus package includes a \$53.6 billion State Fiscal Stabilization Fund, to be administered by the Department of Education, which will provide, among other things, funds to governors to use in providing state funding to school districts. A portion of this fund will be available for use to renovate and repair schools consistent with a recognized green building rating system.

State Energy Programs: The ARRA provides \$3.1 billion to states to fund efficiency and renewable energy projects to encourage states to increase building energy conservation.

Home Weatherization: The stimulus package provides \$5 billion for the federal Weatherization Assistance Program, which provides assistance to low-income families in weatherizing and improving the energy efficiency of their homes.

In addition to funding that will benefit other green initiatives, such as electric vehicles and smart grids, the stimulus package extends tax credits to individuals making qualified energy-efficient improvements to their existing homes through 2010. The ARRA extends the production tax credit for wind facilities by three years to 2013 and for solar, biomass, geothermal, and hydropower to 2014. The ARRA also requires states to update building codes to increase the minimum required energy efficiency standards (ASHRAE) to ensure energy efficient standards throughout the United States.

IV. Green Rating Systems

A. In General

A number of green rating systems have been developed and are currently in use.⁶ The United States Green Building Council (“USGBC”) has developed the well-known LEED rating system. The USGBC is a non-profit private organization that publishes voluntary green building rating systems and certifies projects that meet those goals through its LEED Green Building Rating System. Most green building legislation in the United States is tied to the

⁶ It should be observed that LEED--and other green rating systems--are not building codes. Therefore, compliance with LEED criteria or obtaining a green certification is NOT the same as obtaining a certificate of occupancy. Indeed, a critical question is what the role of building codes will be as the green transformation continues. Regulations that establish minimum safety standards in buildings are likely to be modified to codify sustainability objectives, but will they be done so in a way that minimizes complexities and maximizes compliance? In 2008, San Francisco enacted into law strict new green building codes for new construction and renovations of existing buildings. The new codes apply to residential projects of all sizes, new commercial buildings over a certain size, and renovations of large commercial spaces. The codes will be phased in by 2012, with construction projects evaluated on a point system that gives credits for site location, water and energy efficiency, and sustainable building materials.

Such new laws, which effectively make a green rating system (LEED or another) part of a jurisdiction’s building code, may have unintended negative consequences. In order to be approved for a building permit or be issued a certificate of occupancy, an owner must commit to building green; and the building or renovation must comply with the relevant mandated green rating system. For instance, there is a significant potential conflict between the goals of green building and the goals of historic renovation/preservation. Developers often seek historic tax credits to renovate a historic structure with outstanding non-green features.

LEED certification levels issued by the USGBC.⁷ LEED is the third-party certification program that is, by far, the most widely accepted green building rating system in the United States.⁸ While the USGBC LEED rating system has market hegemony, other green rating systems have been introduced and are used throughout the country. For instance, the Green Building Initiative has developed the Green Globes rating system,⁹ which competes with the LEED system.

The United States Environmental Protection Agency (“EPA”) has developed the Energy Star program,¹⁰ which promotes the development and use of energy-efficient consumer products. In addition, the Energy Star program now includes awarding the Energy Star label to buildings. The EPA Energy Star program has a simple certification process with independent oversight, as well as brand recognition and online resources and marketing tools.

The National Association of Home Builders (“NAHB”) has developed the National Green Building Program.¹¹ NAHB has adopted the American National Standards Institute (ANSI) Standard ICC 700-2008 National Green Building Standard (“NGBS”). The standard rates residential buildings with regard to their potential environmental impact. It includes four tiers: Bronze, Silver, Gold, and Emerald. The NGBS is intended to rate the environmental impact of low-rise, mid-rise, high-rise, mixed use, single-family, and multi-family residential dwellings. The standard also rates green renovations and additions, as well as green sites and subdivisions. The NGBS interacts with provisions in the International Energy Conservation Code, International Residential Code, International Building Code, International Plumbing Code, and International Mechanical Code.

B. LEED Rating System

Unquestionably, the LEED rating system is currently the most recognized and influential green rating system in the United States. While LEED certifications are voluntary, they have been incorporated into legislation; and they have become the most widely accepted standard for green development and building. LEED is a performance-based rating system through which a building project earns points for satisfying criteria addressing specific environmental impacts in design, construction, and operations of the building.

⁷ Indeed, LEED has transformed the marketplace through the certification process that translates to instant and universal recognition and enhanced status for building owners and, possibly, enhanced leasing or resale value for a certified building.

⁸ According to the USGBC website, LEED initiatives, including legislation, executive orders, resolutions, ordinances, policies, and initiatives, are found in 45 states, including 194 localities (130 cities, 36 counties, and 28 towns), 34 state governments (including the Commonwealth of Puerto Rico), 13 federal agencies or departments, 17 public school jurisdictions, and 39 institutions of higher education across the United States. The website (www.usgbc.org) was last visited on September 8, 2009. The USGBC website is a remarkable and highly useful resource for green information.

⁹ See www.greenglobes.com.

¹⁰ See www.energystar.gov.

¹¹ See www.nahbgreen.org.

It is important to note that certification is determined after construction is complete, when an applicant had submitted the documentation that demonstrates the requirements of the rating system have been fulfilled. Registration of a project with the Green Building Certification Institute (“GBCI”) (which took over this function from the USGBC in 2009) is not the same as certification of the project by the GBCI; many more projects are registered than are ever certified.

The LEED certification system is organized into design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad categories. Some of the key concerns for contractors—and their sureties--in these five categories are as follows:

1. Sustainable Site Planning: reduce pollution from construction activities; reduce site disturbance; manage stormwater runoff (erosion and sedimentation controls); environmental assessment and management of risk for redevelopment of Brownfields or other impaired real estate.
2. Safeguarding Water and Water Efficiency: learn new wastewater and water-efficient landscaping strategies and technologies; reduce water use; gain familiarity with new vendors and new products used in estimating and materials procurement; some of these products and technologies may increase the risk of moisture intrusion and mold contamination.¹²
3. Energy Efficiency and Renewable Energy: learn new strategies and technologies associated with reducing dependency on fossil fuel combustion for energy generation and increasing the energy efficiency of buildings and use of renewable energy sources; engage in activities related to commissioning.¹³
4. Conservation of Materials and Resources: manage construction waste; coordinate documentation supportive of meeting the various credit requirements (including recycling and use of renewable materials); engage subcontractors in meeting the requirements and ensure compliance with those requirements; learn new strategies and technologies; gain familiarity with new vendors and new products used in estimating and materials procurement.
5. Indoor Environmental Quality: develop an indoor air quality management plan; eliminate smoking in building once it is enclosed; coordinate documentation supportive of meeting the credit requirements (e.g., low-VOC emitting materials, thermal comfort, daylighting, controlling lighting); learn new strategies and technologies to ensure compliance with requirements; gain familiarity with new vendors and new products used in estimating and materials procurement.

¹² See George Dubose, David Odom & Richard Scott, *The Hidden Risks of Green Building: Avoiding Moisture & Mold Problems* (NCARB 2007), at http://libertybuilding.com/article_images/hidden_risks_of_green_building.pdf.

¹³ Energy is often considered the most important criteria in green building rating systems and standards. Energy performance impacts building carbon dioxide emissions, fossil fuels use, and operating costs. Energy use occurs continuously over the entire life span of a building.

Additionally, there is a sixth category, Innovation and Design process, that awards points for exceptional design or innovative performance.

One of the key concerns for contractors is to learn new strategies and technologies to implement the intents of the various LEED credit categories (e.g., installation of high-efficiency fixtures and dry fixtures such as composting toilet systems and non-water using urinals to reduce wastewater volumes, and reusing stormwater or greywater for sewage conveyance or on-site wastewater treatment systems). Another key concern is to gain familiarity with the new vendors and products that contractors use in estimating and materials procurement.

The certification levels--Certified, Silver, Gold, and Platinum--are awarded based on the total number of points earned. Beginning July 1, 2009, the USGBC implemented LEED 2009, also referred to as LEED Version 3 (v3), which is a refinement and credit realignment of the former LEED program (Version 2.2). The total number of points available has increased from 69 under the former LEED version to 110 possible points under LEED 2009. The points required to reach each level of certification under LEED 2009 are as follows:

Certified:	40-49 points
Silver:	50-59 points
Gold:	60-79 points
Platinum:	80-110 points

The LEED certification programs are tailored to different types of building projects:

- New Construction: LEED for New Construction and Major Renovation is designed to guide and distinguish high-performance commercial and institutional projects.
- Existing Buildings: Operations and Maintenance: LEED for Existing Buildings: Operations and Maintenance provides a benchmark for building owners and operators to measure operations, improvements, and maintenance.
- Commercial Interiors: LEED for Commercial Interiors is a benchmark for the tenant improvements market that gives the power to make sustainable choices to tenants.
- Core and Shell: LEED for Core and Shell aids designers, builders, developers, and new building owners in implementing sustainable design for new core and shell construction.
- Schools: LEED for Schools recognizes the unique nature of the design and construction of K-12 schools and addresses the specific needs of school spaces.
- Retail: LEED for Retail recognizes the unique nature of retail design and construction projects and addresses the specific needs of retail spaces.

- Healthcare: LEED for Healthcare promotes sustainable planning, design, and construction projects for high-performance healthcare facilities.
- Homes: LEED for Homes promotes the design and construction of high-performance green homes.
- Neighborhood Development: LEED for Neighborhood Development integrates the principles of smart growth, urbanism, and green building into the first national program for neighborhood design. This rating system is in its pilot phase and focuses primarily on project siting and infrastructure rather than specific building construction.

Please note that LEED 2009 is only for commercial building applications; therefore, LEED for Homes and LEED for Neighborhood Design are not currently scheduled to be incorporated into LEED 2009.

Because the attainment of LEED or any other green certification is the result of the efforts of the various members of the entire project team, each project team member has obligations and responsibilities concerning attaining the certification. When specific anticipated green credits are not attained for any reason and the project fails to attain the desired green certification, the owner could incur damages and will look broadly to find a responsible party. Contractors and their sureties are two likely targets, among others.

V. Standard Form Green Documents

Despite the rising popularity of green building, most standard form construction contracts either fail completely to address or inadequately address the duties, responsibilities, and risks associated with green building. Currently, standard form contracts generally fail to adequately address the various green issues and allocate the green risks, including, but not limited to, the following:

- “Green” terminology, such as “sustainability” or “green certification,” are often not defined, which creates ambiguity in expectations.
- Party(ies) responsible for failure to achieve LEED or other green certification or sustainability goal may not be specified.
- Party responsible for registering the project and administering the LEED (or other green certification) process may not be designated.
- Appropriate insurance policies for green building issues may not be required, provided, or available.
- Consequences of decertification may not be addressed in the contract.
- Responsibility for due diligence regarding green products and technologies may not be addressed.

- Consequential damages associated with green building (such as lost tax credits and diminution in property value) may not be addressed.
- The impact of the long lead time to achieve a green certification may not be addressed or it may be inadvertently addressed in a detrimental manner.

Therefore, green project contracts must be supplemented or manuscripted to address the green issues, in order to minimize disputes, claims, and litigation/arbitration. Several organizations have made initial attempts to address green issues in their form contracts.

A. AIA Documents

The American Institute of Architects has slightly modified several of its standard form contracts to begin to address green building and sustainable design issues. For instance, pursuant to AIA B101-2007, architects are now required to address sustainability issues with owners. Relevant language from the AIA B101-2007 provides as follows:

§ 3.2.3 The Architect shall present its preliminary evaluation to the Owner and shall discuss with the Owner alternative approaches to design and construction of the Project, including the feasibility of incorporating environmentally responsible design approaches.

§ 3.2.5.1 The Architect shall consider environmentally responsible design alternatives, such as material choices and building orientation, together with other considerations based on program and aesthetics, in developing a design that is consistent with the Owner's program, schedule and budget for the Cost of the Work.

While the language of these two provisions mandates that the architect discuss green design with the owner and consider green design alternatives, it remains to be seen just how much teeth, if any, such provisions have.¹⁴

In addition, AIA B214-2007 (formerly, B214-2004), Standard Form of Architect's Services: LEED Certification, is a scope of services document that establishes duties and responsibilities when the owner seeks LEED certification from the USGBC. Among other things, the architect's services include conducting a pre-design workshop where the LEED rating system will be reviewed and LEED points will be targeted, preparing a LEED Certification Plan, monitoring the LEED Certification process, providing LEED specifications for inclusion in the Contract Documents, and preparing a LEED Certification Report detailing the LEED rating that the project achieved.

B214-2007 may be used in two ways: (1) incorporated into the owner-architect agreement as the architect's sole scope of services or in conjunction with other scope of services documents; or (2) attached to G802-2007, Amendment to Professional Services

¹⁴ In addition, if an architect is not knowledgeable and experienced about green design and building, then he/she will be unable to properly discuss sustainable design issues with a client.

Agreement, to create a modification to an existing owner-architect agreement. B214-2007 is a scope of services document only and can not be used as a stand-alone owner-architect agreement. B214-2007 was revised in 2007 to align, as applicable, with B101-2007.

B. ConsensusDOCS Green Building Addendum

The ConsensusDOCS organizations,¹⁵ with input from various industry stakeholders, have developed a Green Building Addendum (“GBA”), which will be published as a ConsensusDOCS contract in early November 2009. Accompanying the release of the GBA will be commentary and recommendations regarding the use of the GBA.

The GBA was developed to help guide green performance requirements and address risk allocation issues, which are not currently addressed in standard contract documents. The GBA identifies the project participants, the roles of the project participants, and the implementation and coordination efforts necessary to achieve a successful project with green building elements, especially one seeking a third-party green building rating. The GBA contemplates a green-building facilitator (“GBF”), who would be responsible for, among other things, overseeing the green certification process on a specific project. The GBF could be the architect, the contractor, or a third-party consultant. This document would provide much needed clarification concerning who is responsible for overseeing the certification process on the project.

VI. Key Contractor--and Surety--Risks in Green Building

The legal issues surrounding green building development and contracts and the green certification process, among many others, are at this point largely untested. The discussion below identifies some of the major risk challenges associated with green building and provides some suggestions to contractors and their sureties on how to manage the same.

A. Green Contracts

Green contracts must be carefully drafted to achieve the desired goals. Such contracts should clearly define expectations and the meaning of “green” and/or “sustainability.” The contracts must delineate which, if any, specific third-party rating system and which version of that system is the desired goal for the project. As discussed more below, clarity through well-crafted contract provisions will assist all the stakeholders in understanding the roles and responsibilities of each party on the project. Because green contracts are untested in the courts, we can begin to extrapolate how courts will construe various contract provisions from case law on non-green projects.

As discussed above, standard form construction contracts do not generally adequately address green risk allocation; but that issue can be handled through contract supplementation. There is no magic “green paragraph” to address all the various additional issues that green construction projects carry, but each set of contract documents should properly allocate risks predicated on that project’s specifics. Clearly defined terms and risk allocations, particularly in the specifications and warranty provisions, will help avoid potential pitfalls. As always, contract

¹⁵ As a member of the AGC Contract Documents Committee’s Green Working Group, I had the privilege of working on the GBA and the comments and recommendations concerning the GBA.

provisions should shield a party from risks that the party cannot control. Contractors and their sureties should be especially mindful of specifications and warranty provisions that seek to shift the risk of a building's performance to the contractor.

B. Green Team Credentials

Although the green and sustainable building movement is rapidly growing, it is still a relatively new concept and practice to many design professionals, contractors, specialty contractors, and material suppliers. It is critical that each participant on a green project be familiar with sustainable design, green building rating systems, green products and systems, the applicable certification process, and the relevant green laws. Without designers, contractors, subcontractors, consultants, and material suppliers with extensive green knowledge and experience, a green project has a higher risk of failure. The numbers of construction industry entities with green experience is growing, but a desire by some entities to cut corners causes them to engage in "greenwashing." Greenwashing (green + whitewash) is an exaggerated representation of green benefits or experience.¹⁶ Some entities disseminate disinformation in order to obtain green contracts for which they are not qualified. Due diligence by green project participants is important in order to execute a successful project that achieves the desired green results, on time and on budget.

Furthermore, the owner, the design professional(s), the contractor, and subcontractors will likely all have roles and responsibilities that will impact whether a project achieves the desired green certification. If one of those parties with such responsibilities fails to understand and implement relevant green decisions, then the project is much more likely to fail to achieve the desired green goal.

There is a common misconception that, if a green building feature is awarded points in a green building rating system, it is no longer required to comply with code-related criteria. That is simply not so. Achieving a green credit does not alleviate the necessity to comply with applicable code provisions. Knowledgeable green team members will understand this matter.

C. Green Materials and Technologies

Green products and technologies are largely new to the market and lack much field testing. In addition, some green products manufacturers overstate the performance characteristics of their products (greenwashing). With so many new products being used in green construction, from vegetative roof materials to low-VOC flooring materials, a contractor could easily find itself in a dispute with the owner, as well as the product manufacturer. To minimize such disputes, the contract should clearly set forth installation obligations v. product warranties.

Will a new green product or system perform as promised?¹⁷ How will a specified green product or technology that fails impact the project contractor and, thus, its surety? Will

¹⁶ Greenwashing occurs, for instance, when architects exaggerate their green project experience, when contractors overstate their knowledge of green rating systems and processes and green products, and when product manufacturers make unsubstantiated claims about new energy-efficient building materials and systems.

¹⁷ For instance, how will a "vegetecture" feature perform? Vegetecture, or vegetated architecture, is a form of building design using vegetation as part of construction.

unexpected conflicts arise? Will specified green construction materials and systems be available, or will additional lead time be necessary? Will there be special storage needs for the products? The contract must address these questions. If the specifications are ambiguous or unclear, a contractor must generate Requests for Information to clarify the designer's intent.

Such issues make it all the more important that a contractor construct in accordance with the plans and specifications and document the same, so that any new technology failure can not be laid at the feet of the contractor. New construction technology often will have unintended consequences. Coordinating the interplay of building systems can be dicey when using experimental materials and technologies in new ways. A green project that takes advantage of building information modeling ("BIM")¹⁸ is likely to present fewer risks because those potential conflicts can be identified and rectified during the virtual construction of the building rather than later in the field, where remediating the problem will be exponentially more expensive and almost certainly generate disputes and claims among the parties.

Contractors need to ensure that specified green products have been adequately tested and, furthermore, are in stock. Contracts must address who has the responsibility for due diligence regarding green products and technologies—architect, contractor, other? As we all know, project delays are highly likely to give rise to disputes.

The use of innovative and recycled products and materials could also generate unforeseen environmental issues as well. A current example of this problem is the Chinese drywall issue. Because of the alleged high sulfur content, the Chinese-manufactured drywall produces a low-grade sulfuric acid and impairs the integrity of structure when exposed to moisture. Besides the structural failures caused by Chinese drywall, there is also a question whether the drywall negatively impacts indoor air quality and human health.

D. Green Representations and Advertising

Any green owner, architect, engineer, contractor, subcontractor, supplier, vendor, or consultant should be very careful in articulating its green bona fides. Lack of clear standards for green building and mismanaged expectations increase the potential for misrepresentation and fraud-related claims. Representations and advertising, whether verbal, written, or internet, concerning green services and/or products must be verifiable, specific, and clear. A green contractor or design-builder must not misrepresent its experience and abilities in constructing (and designing) green projects. Overstating green qualifications could fall into the greenwashing trap.

Misleading statements or inaccurate advertising claims that cannot be backed up or verified may be considered fraud. Performance claims in marketing material could be construed as part of a warranty by courts. Therefore, a contractor or design-builder must

¹⁸ "BIM, in theory, creates a complete digital representation of a building, including physical attributes, geometric form, material description, and thermal and structural behavior. Ideally, the model is the joint creation of all design and construction disciplines. It grows throughout design, informs construction, and continues to serve facility managers during post-occupancy operations. It has been accepted as key to integrated project delivery (IPD) in which the owner/designer/builder team cooperates in shared risks and rewards. By stressing multidisciplinary cooperation early in design, BIM also provides a framework for sustainable design." B.J. Novitsky, *BIM Promotes Sustainability*, in GREENSOURCE (May/June 2009).

avoid any health or productivity promises and any vague, undefined, or overstated terms, or any other non-verifiable representations that could be deemed deceptive marketing claims.

The Federal Trade Commission (“FTC”), which regulates marketing claims in all industries, has developed *Guides for the Use of Environmental Marketing Claims*,¹⁹ otherwise known as the FTC “Green Guides.” The Green Guides provide examples of proper and improper environmental claims. Greenwashing could expose contractors to liability under misrepresentation and fraud theories and breaches of warranty. The Green Guides articulate principles that are useful guidance in avoiding false advertising and marketing claims concerning green building: green qualifications should be clear, prominent, and understandable; a clear distinction should be made between benefits of the product or service or a component of the product or service; environmental claims should not be overstated, expressly or implicitly; and claims should be clear, specific, and verifiable.²⁰

E. Green Guarantees and Warranties; Design Specifications or Performance Specifications?

Contractors--and their sureties--should ensure that green contracts expressly disclaim any warranty or guarantee that any certification level will be achieved. This is the green building liability issue that most concerns architects, contractors, and sureties. And it should: standard LEED contract templates include such terms as “declare,” “affirm,” or “certify,” which might indicate a warranty or guarantee that the work will achieve a certain level of performance, such as a LEED standard. The contract should not obligate the contractor to guarantee a certain level of fuel and/or energy efficiency. Any guarantees should be eschewed in favor of certain desired “goals.” To the extent any “green” criteria in a contract are deemed performance specifications, a contractor--and its surety--may inadvertently be guaranteeing the performance standards of the sustainability objectives.

In addition, a contract should specify that innovative products and technologies may be used and that all project objectives may not be realized. The specifications should not shift the obligation of certifying the contents of recyclable material used in construction to the contractor. Another consideration is whether failure to achieve a green certification will activate the contractor’s warranty obligations.

Contractors warrant, of course, workmanship: that the project will be built according to the plans and specifications. Contractors--and their sureties--should ensure that any reference to a desired green certification and design specifications are phrased so that they are not interpreted as performance specifications. The more performance related and results oriented a specification is, the more likely that it will be deemed a performance specification. This is significant, of course, because with a design specification, the architect/engineer and owner are responsible for the specifications; and with performance specifications, the contractor is responsible for the specifications.²¹

¹⁹ Green Guides, available at <http://www.ftc.gov/bcp/grnrule/guides980427.htm>.

²⁰ 16 C.F.R. § 260.6 (2008).

²¹ This is furthermore significant because, under the *Spearin* doctrine, the owner warrants the sufficiency of the specifications given to the contractor. *United States v. Spearin*, 248 U.S. 132 (1918). This warranty from the owner to the contractor, however, only extends to design specifications, not performance specifications.

As an example, the following language could be used to disclaim any guarantee of a particular outcome:

Roadrunner Contractor will endeavor to build the building as specified by the Contract Documents provided for the construction of the building by Wile E. Designer. Roadrunner cannot guarantee that the building will perform as expected, as the green performance of a building depends on factors beyond the control of the contractor, including, but not limited to, the design of the building by Wile E. Designer and the use, operation, and maintenance of the building by Acme Owner.²²

Another method to manage this issue is to provide in the contract that failure to achieve a desired certification is deemed a consequential damage—and ensure that the contract waives consequential damages.

F. Consequential Damages

Most standard form contracts now contain mutual waivers of consequential damages that prohibit the recovery of consequential damages. Indeed, the contract between the owner and the contractor should waive consequential damages; and those damages should be delineated, including, but not limited to, the following:

1. Failure to achieve desired certification level
2. Failure to recognize energy savings
3. Failure to achieve improved health and productivity
4. Failure to achieve reduced water consumption
5. Diminution of property value
6. Loss of tenants
7. Failure to obtain tax credits
8. Loss of goodwill

G. Certification Process and Credit Implementation

It is critical that the contract documents set forth who is responsible for registration of the project for green certification and for management of the certification process. It might be the architect, an engineer, the contractor, or a third-party certification manager; but the certification process adds an additional layer of requirements to the project. A contractor provides the work that is in the specifications, so it must be wary of incomplete green specifications.²³

Even when one specific entity is tasked with managing the certification process, various stakeholders in the project may have responsibilities associated with achieving certification credits, including the owner, design professionals, the general contractor, and subcontractors.

²² The language provided is an illustration only and does not constitute legal advice or opinion and should not be acted upon without consulting an attorney.

²³ In addition, a contractor must analyze how, under the contract, a change order, a value engineering proposal, or substitution might impact credits towards a green certification.

Because achievement of the desired certification involves multiple parties, a knowledgeable and experienced green team is critical as is the proper risk allocation in the event that the building fails to achieve the desired certification.

Even if a project is properly constructed, without the proper documentation to support the certification request, green points will not be awarded. A contractor should take care that substantial completion is not tied to achieving a green certification. First, it is likely to take a minimum of six months after substantial completion for a certification to be obtained. Second, an owner could take beneficial occupancy of a building and still claim delay damages or liquidated damages prior to obtaining certification. A contractor should also be wary that an owner might insert language into the contract that retainage can be withheld until the green certification is achieved.

H. Document Collection and Submittal

While all projects require contractors to make submittals for various materials used, LEED projects require a heightened level of collection and submittal. The details required of the contractor are greater, and the impacts of non-compliance are greater. The most salient consideration is this: a green credit will only be awarded if there is the proper documentation to back it up. Therefore, while a product might have been manufactured locally, if that information is not documented, the project will lose any credit it might have otherwise obtained for using local products.

In addition, a contractor must ensure that its subcontractors similarly provide the proper submittal information for materials they supply. One way to encourage such compliance is to include in the subcontract a provision that progress payments will be predicted on, among other things, timely submittal of required documentation. In other words, a contractor should ensure that its green building obligations flow down to its subcontractors.

I. Special Risks of Green Design-Builders

Green design-builders take on extra risks, so those must be managed through, among other things, contract language. The contract documents should specify that any representations on credit submittals are made solely for the purpose of satisfying the rating system credit and are not intended as a guarantee or warranty of functionality or performance.

Because a design-builder has no control over operations or maintenance, there is significant potential liability if the design-builder guarantees or warrants a specific performance. There is generally an expectation that the plaintiffs' bar will attempt to argue that green design-builders should be subject to a different--a rising--standard of care if a green project is challenged for not meeting a consumer's expectations.

In addition, a green design-builder must beware of a contract provision that entitles the owner to withhold funds until the project receives the desired green certification. As noted above, it can take a minimum of six months, and more than a year after substantial completion, for a building to obtain the desired green certification, if at all.

J. LEED 2009 Decertification

LEED 2009 includes a provision that certification may be revoked from any LEED project upon the knowledge of non-compliance with any applicable Minimum Program Requirements (“MPRs”). MPRs are minimum characteristics a project must possess in order to be eligible for certification under LEED 2009. As one prerequisite of certification of all buildings under LEED 2009, owners must commit to sharing building energy and water usage data for a minimum of five years after a new building is occupied or an existing building is certified. The USGBC plans to use the performance data, which it claims it will keep confidential, to compare proposed and metered energy performance. This performance information would inform future versions of LEED. These provisions create novel legal issues concerning the decertification process.

LEED v3 expressly provides the Green Building Certification Institute (“GBCI”), the LEED certification entity, with the ability to revoke LEED certification “upon gaining knowledge of non-compliance with any applicable MPRs.” It is unclear if the discretion to decertify rests with the USGBC or the GBCI or a third party. In addition, this language appears to create tail responsibilities for owners, who, in the event of decertification, would likely turn to the project’s designers and contractors (and their sureties). Furthermore, a government that had provided a certification incentive for a project might seek to recover that incentive were the project decertified.

Contractors and their sureties should be concerned about potential performance bond demands after the completion of a project. This becomes problematic for a number of reasons, not least of which is that poor energy performance can be based on inefficient operations and maintenance of a building, not necessarily poor design or construction.

VII. Green Insurance/Surety Bonds

A. In General

Insurance companies are carefully monitoring the progress of green design and construction and are still gauging the market. Insurance carriers are seeing an increase in green-building related claims, including, but not limited to, claims for failure to achieve the desired goal of green certification; mold damages caused by the use of green products; delays due to the unavailability of sustainable materials; green certification deemed to guarantee indoor air quality; and greater energy use than the owner anticipated.

More insurers are now introducing policies aimed at green building. Underwriters are addressing the issues in different ways. It is, therefore, critical that specific policy language is carefully reviewed. One insurer offers coverage to avoid gaps in traditional policies, including property, builders’ risk, and comprehensive general liability (“CGL”). Another insurer has introduced a builders’ risk green endorsement, with additional coverages, including restoring air quality, costs associated with building commissioning, fees for re-certification and registration, additional expenses related to public utilities, and recycling expenses. As more claims arise, more green products are likely to be offered in the marketplace.

As discussed above, architects and design-builders should be concerned that green building requirements will be deemed a warranty/guarantee that voids professional liability

coverage. A contractor should ensure that green building requirements are not excluded by the builders' risk insurance policy.

One insurer has recently offered two new green endorsements to CGL policies: one for green reputation coverage, which "responds to adverse green publicity events" if a building fails to meet green industry standards; and another for green indoor environment coverage, which provides insurance for bodily injury exposures from specialized green equipment and products.

For those who wish to find out more about green insurance currently being offered, I recommend Marsh's *The Green Building Environment in the United States: 2008 Year-End Update of the State of the Insurance Market*.²⁴ This report is an update of Marsh's first industry green market report in June 2008. I have been told by the green cognoscenti at Marsh that more updates will be forthcoming. The report discusses, among other things, professional liability coverage, environmental coverage, builders' risk coverage, CGL, and surety.

With respect to surety, the Marsh Report states as follows:

At this point, the surety markets we surveyed have not developed new products or services for green building, and they have made no specific adjustments to their underwriting standards to deal with this sector.

* * * *

Much of what happens in this market going forward is likely to depend on the sureties' actual experience, the experience and qualifications of the firms working on green projects, and the contractual allocation of risk.²⁵

B. Some Sureties Are Green on Green

Sureties are already bonding green projects, often without knowing it. And sureties are just now beginning to seriously assess their green-specific risks. Earlier in 2009, I conducted a very informal survey of about a dozen surety companies. I asked the following question: "How are you, _____ Surety, managing the risks of green building projects?" I received various responses, but the following are representative of all:

- "Primarily through prayer. We are only now beginning to try and 'manage' this. Yea, we are WAY behind."
- "It is not on the radar as far as I know."
- "We are not doing much about green building underwriting, per se. . . . It is only a matter of time until 'green' underwriting hits our radar screen."

²⁴ Hereinafter, the Marsh Report, available at http://global.marsh.com/news/articles/green_building/. Marsh requires registration to obtain a copy of the report.

²⁵ Marsh Report at 16.

- “We are looking at this issue very carefully. . . . Right now we have no set protocol, but we are studying the implications of green building.”
- “All we have been doing is circulating articles to the underwriters about risks involved in ‘green’ construction, particularly that the contractor and, therefore, the surety could be held liable for performance guarantees in the contract.”

The final quoted response identifies one of the most salient concerns of a contractor (and, therefore, its surety) on a green project: inadvertently guaranteeing performance for green materials, energy usage, water consumption, or green certification.

VIII. Inartful Green Laws

Sometimes green building legislation can create less than desirable consequences for contractors and their sureties. For instance, the D.C. Green Building Act of 2006 (“Act”) contains a controversial “performance bond” requirement. The Act requires that applicants for green certification must provide a performance bond guaranteeing that the green requirement is met; in other words, the bond is intended as an enforcement mechanism. Prior to January 1, 2012, “commercial applicants” that apply for incentives must provide a bond upon approval of the first construction permit application; and on or after January 1, 2012, applicants for privately owned projects must provide a bond prior to receipt of a certificate of occupancy.

If the performance bond is required prior to January 1, 2012, the bond must equal 1 percent of the incentives received. If the bond is required after January 1, 2012, the bond amount increases, based on the size of the project, from two to four percent of the cost of the building, not to exceed \$3 million. Significantly, if the building fails to meet the “verification requirements” in the Act, the bond will be forfeited to the District of Columbia and deposited in the Green Building Fund.

In response to this unsavory bond requirement, the National Association of Surety Bond Producers (“NASBP”) and the Surety and Fidelity Association of America (“SFAA”) responded in an August 13, 2007 letter²⁶ with understatement: the Act contains “bond requirements that, if not clarified significantly, may make sureties reticent to issue such bonds.” The August 13, 2007 NASBP/SFAA letter identifies the very legitimate concerns over the Act’s bond requirements. The Act uses the term “performance bond” to describe a bond that is both more like a forfeiture bond and a license or compliance bond. In addition, the Act does not designate which party should furnish the bond. Lacking a designated furnisher, the “default” furnisher is likely to be the contractor, as the party most conversant in bond furnishing. Perhaps most disturbing is the conflict of interest inherent in the bond requirement: the bond is paid to the very agency that enforces the law.

The DDOE has formed an interagency working group to formulate implementing regulations. By letter dated January 28, 2009, NASBP and SFAA have reiterated their

²⁶ Representatives of NASBP and SFAA also met thereafter with folks at the District Department of the Environment (“DDOE”) to discuss these concerns.

concerns with the Act's bonding requirements and requested another meeting with the working group to discuss those concerns. The DDOE, however, has taken an adamant position: on March 18, 2009, in testimony before the Council of the District of Columbia, the Director of the DDOE dismissed the legitimate criticisms of the bond requirement and testified, among other things, that the use of the performance bond is "an appropriate and sufficient enforcement mechanism to ensure compliance with the Act" and that "the bond requirement under the Green Building Act is viable and can be implemented."

IX. Green Litigation/Arbitration

A. Green Litigation

While green claims and disputes have arisen and more will continue to arise, green issues are largely untested in the courts. And as more green projects are completed, more claims, litigation, and arbitration will ensue.

The case that has been touted as the first owner/contractor green building litigation in the United States is *Southern Builders, Inc. v. Shaw Development, LLC*, filed in a Maryland circuit court in 2007.²⁷ This case is referred to as the Captain's Galley case, because the project was Captain's Galley, a \$7.5 million, 23-unit condominium next to a marina on the Chesapeake Bay in Maryland. The project incorporated green design elements with the intention that the project achieve a LEED Silver certification. Obtaining the Silver certification would have entitled the owner to receive about \$635,000 in tax credits under Maryland's Green Building Tax Credit Act. This project did not involve surety bonds, but if it had, the surety would certainly have been invited to the party and enjoyed the potential exposure.

The litigation began, like so many others, with the contractor filing a \$54,000 mechanic's lien against the project, and an ensuing lawsuit. As owners are wont to do, the owner filed a counterclaim in the amount of \$1.3 million to recover its damages, alleging negligence, breach of contract, delays, defective workmanship, and failure "to construct an environmentally sound green building in accordance with the LEED rating system." The damages included the tax credits lost (\$635,000) when the owner was unable to obtain a final tax credit certificate from the Maryland Energy Administration.

The contract was an AIA A101-1997, Owner-Contractor Stipulated Sum Contract, with a "project manual" that referred to green building and LEED as follows: "Project is designed to comply with a Silver Certification Level according to the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Rating System, as specified in Division I Section LEED Requirements." The contract documents failed to indicate who assumed the risk of obtaining the LEED certification and, in addition, failed to indicate who bore the risk of obtaining the tax credits.

The Captain's Galley case settled out of court in November 2008, and the terms of the settlement were not disclosed. Therefore, we do not have the benefit of a court decision on the disputed matters. What we do have, however, is an object lesson on how not to proceed on a green project. The "takeaways" from this matter include the following:

²⁷ No. 19-C-07-011405 (Cir. Ct. Somerset Cty, Md. 2007).

- Do not rely on standard form construction documents for green projects.
- Ensure that each entity understands the applicable legislative and regulatory framework for a specific green project.
- Clearly define the project's green goals and requirements in the contract documents.
- Clearly define who is responsible for a failure to achieve a LEED or other green objective.

B. Green Arbitration

While there will be an increasing number of green cases filed, there will also be many demands for arbitrations involving green projects. Many construction contracts either designate mediation, arbitration, and other forms of alternative dispute resolution rather than litigation as the dispute resolution mechanism or permit an election of the dispute resolution mechanism, with the parties often electing arbitration. A case in point is a recent American Arbitration Association (“AAA”) arbitration to resolve a green building dispute between an owner and a contractor. Again, this matter did not involve a surety; but if it had, the surety would have been involved in the dispute—sooner or later.

In this matter a contractor filed a demand for arbitration with AAA, claiming \$400,000 for retainage and change orders on a contract for renovation of a commercial space. The owner, of course, counterclaimed for \$2 million, in part alleging damages associated with loss of LEED certification and shutdown to attain that LEED certification. According to the counterclaim documents, the contractor had represented that it had expertise in LEED-related construction. The contractor was allegedly required under the contract documents to perform work to achieve certain credits, including waste management credits and documentation of same. Because LEED credits are obtained by submission of relevant supporting documents on-line, if the documents are not obtained and submitted, the credit is not earned.

The owner alleged that there was no documentation showing how waste products were segregated for recycling, no receipts showing how any materials were disposed, and no documentation showing how indoor air quality procedures were followed. Additionally, the counterclaim alleged that the contractor failed to document the use of specified green materials. According to the counterclaim, the project was delayed because the contract required doors made from lumber certified by the Forest Stewardship Council, which had an 8-12 week lead time, for which the contractor did not properly schedule. The owner claimed that, if the contractor had performed as promised, the owner would have been the first LEED-certified such business in the country; accordingly, the owner made a claim for damages for lost status and market differentiation.

After the arbitration hearings,²⁸ I learned from the arbitrator in this matter that “nobody knew enough about green building to create a green building contract.” He stated that there were no green provisions at all in the contract and that the green requirements were

²⁸ The owner and the contractor retained green building experts, who took, not surprisingly, diametrically opposed positions concerning the green building issues.

apparently only verbal. The owner had no idea what green features it wanted; the designer, from the West coast, had only participated previously in one green design; and the contractor had no idea at all about green building. The project has not yet achieved the certification, although the owner is still attempting to obtain it.

Lessons that can be drawn from this failed project include the following:

- Ensure each party to the project has an understanding of its obligations on the green project.
- Ensure that the project participants are experienced and capable of fulfilling their responsibilities on a green project.
- Clearly define the project's green goals and objectives in the contract documents.
- Clearly define who is responsible for green goal reporting obligations on the project.
- Clearly define who is responsible for green projects/systems "due diligence."
- Clearly define who is responsible for preparing, collecting, assembling, and submitting green certification documentation.
- Clearly define who is responsible if a green certification goal is not achieved.
- Clearly and broadly define and waive consequential damages.

Essentially, this particular project is a case study in how not to contract for, design, manage, or construct a green project.

X. What's a Surety To Do?

In determining whether to provide a performance bond on behalf of a contractor on a green project, the surety should consider the underlying construction project and whether the contractor is capable of fulfilling that contract. The surety should review the underlying contract to determine if there are any improper transfers of risk to the contractor and the surety, in particular, any warranties or guarantees of green certification. The underlying contract should specifically exclude a warranty or guarantee that the project will achieve the desired green certification.

In addition, the performance bond itself should contain language that specifically excludes green building liability from the scope of coverage of the bond. An example of such language that could be inserted into a performance bond to limit the surety's liability solely to the contractor's performance obligations follows:

NO LIABILITY FOR GREEN BUILDING REQUIREMENTS. The condition of this Bond does not include any obligation to achieve any green building certification, status, level of performance or energy usage, whether mandated by statute, ordinance or otherwise. The Principal and Surety shall not be liable hereunder for any damages or costs caused or allegedly caused by, arising out of, or related to the project's failure to achieve such certification, status, level of performance or energy usage, including, but not limited to, attorneys' fees, unrealized costs savings, lost profits, lost tax credits, or other costs, expenses, fees, or benefits.²⁹

A sage surety will also consider whether its principal, by contracting to construct a green building project, is biting off more green than it can chew. In other words, a contractor that has never constructed a green project but seeks a performance bond for a large and complex green project with certification goals will certainly increase the surety's risk. Each surety should ensure that its underwriting standards address the increased risks inherent in green building projects.

XI. Conclusion

Green construction is a rapidly evolving industry, and most green disputes will likely relate to performance issues, green products and technology, indoor air quality, energy costs and usage, and the use and re-use of water resources. Managing the risks inherent on a green project requires from a contractor, among other things, a deep and broad knowledge of a rapidly growing industry; contracts with defined green terms, green expectations, and proper allocation of green risks and responsibilities; an understanding of applicable green laws and certification rating systems and processes; and a credentialed green team. If a green project lacks any of these items, and perhaps others, that contractor and its surety are at a significantly increased risk for a performance bond claim that could be very green indeed. A surety can manage such risks by, among other things, performing due diligence on the underlying contract documents and the contractor/principal's "greenness" and by ensuring that the bond limits liability to the contractor/principal's performance obligations. By educating themselves and implementing steps to manage and minimize their risks, contractors can successfully build green; and contractors and their sureties can make green.

This article was originally prepared for the Northeast Surety & Fidelity Claims Conference, September 23-25, 2009, in Atlantic City, New Jersey.

²⁹ I am indebted to Mark McCallum, General Counsel and Director, Government Relations of National Association of Surety Bond Producers, for his permission to include this example green bond language, which is included in a white paper, "Performance Bonds on Green Building Construction," drafted by NASBP and SFAA. The language provided is an illustration only and is not intended to be legal advice or opinion and should not be acted upon without consulting an attorney.

AREAS OF EMPHASIS

Construction Law

- Contract review and negotiation
- Litigation on behalf of owners, general contractors and subcontractors
- Alternative dispute resolution on behalf of owners, general contractors and subcontractors

Surety Law

- Representation of sureties in all bond related matters
- Investigation and defense of performance bond claims
- Litigation involving performance bonds
- Investigation and defense of payment bond claims
- Litigation involving payment bond claims
- Investigation and pursuit of discharge, overpayment and indemnity claims for sureties

Fidelity Law

- Investigation and defense of claims against various types of fidelity bonds and policies
- Investigation and pursuit of recoveries for fidelity bond and policy losses

NOTEWORTHY EXPERIENCE

- Regular representation of general and specialty contractors in all aspects of construction law, including contract drafting and negotiation, risk management counseling, contract performance advice, claims analysis, and dispute resolution

Regular representation of owners, contractors and sureties in matters related to mold in construction

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- **American Arbitration Association Construction Industry Panelist**
- **Member: AGC of America Contract Documents Committee**
- **Member: Program & Education Committee of Washington Building Congress**
- **Board Member: Professional Women in Construction**
- **Member: Fidelity & Surety Law Committee (FSLC), Tort Trial & Insurance Practice Section, American Bar Association (ABA)**
- **Executive Editor: FSLC Newsletter**
- **Member: ABA Forum on The Construction Industry**
- **Member: Associated General Contractors of Metropolitan Washington, DC**
- **Member: Surety Claims Institute**
- **Member: National Bond Claims Association**
- **Advisor: Fidelity Law Association**
- **Co-Editor-in-Chief: *Fidelity Law Journal***
- **Presenter: "How to Identify and Manage the Risks Unique to 'Green' Construction" (AGC of America Meeting on Risk Management, February 11, 2009)**
- **Co-Author and Presenter: "Effectively Managing Large Construction Projects: Can They Be Performed On Time and On Budget?" (Washington Metropolitan Chapter of the Community Association Institute Annual Program March 31, 2007)**

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- University of North Carolina (M.A.Ed., 1975)
- Mississippi College School of Law (J.D., *with high distinction*, 1990)
- University of North Carolina (B.A., 1974)

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- Author: Chapter on “District of Columbia,” in *Payment Bond Manual, 3<sup>rd</sup> Ed.* (ABA 2006)
- Co-Author: “Cancellation,” in *Annotated Commercial Crime Policy* (ABA 2006)
- Co-Author and Presenter: “Paperwork,” in *The Construction Project* (ABA 2006)
- Author and Presenter: “Managing the Risk of Mold, Silica, and Welding Fumes Liability,” Associated General Contractors of America Risk Management Committee Meeting (2005)
- Author: “Change of Control” and “Deductible Amount,” in *Annotated Financial Institution Bond* (ABA 2004)
- Co-Author and Presenter: “Termination and Cancellation,” in *Commercial Crime Policy* (ABA 2004)
- Author and Presenter: “The Rights and Obligations of the Surety Under Dual Obligatee Bonds” (Surety Claims Institute 2004)
- Co-Author: “Contractual Risk Allocations for Mold Conditions,” in *AGC Constructor* (Feb. 2003)
- Co-Author and Presenter: “Mold Claims and Litigation on Construction Projects: Risk Management Strategies for Sureties” (Surety Claims Institute 2003)
- Author: “Talking to Owners About Mold: ‘We’re All In This Together,’” in *Construction Risk Management* (August 2003 Supp.)
- Co-Author and Presenter: “Mold’s Growing Impact on the Construction Industry,” in *Mold: The Challenge Ahead* (American Insurance Association 2002)
- Co-Author: “Financial Guaranty Insurance and Surety Bonds,” in *The Law of Commercial and Miscellaneous Bonds* (ABA 2001)
- Author and Presenter: “Financial Guaranty,” in *Law of Suretyship* (ABA 2000)
- Co-Author: “Recent Developments in Fidelity and Surety Law,” in *Tort & Insurance Law Journal* (1997-2003)
- Editor-in-Chief: Mississippi College Law Review (1989-1990)



## APPENDIX A

### SELECTED GREEN AND SUSTAINABILITY RESOURCES

American Council for an Energy Efficient Economy

<http://www.aceee.org>

Baltimore County Office of Sustainability

<http://www.baltimorecountymd.gov/Agencies/executive/sustainability/index.html>

Center for Resource Solutions' Green-e Program—certification and verification program for green electricity products

<http://www.green-e.org>

Database of State Incentives for Renewables and Efficiency (DSIRE)

<http://www.dsireusa.org>

Delaware Valley Green Building Council (DVGBC) (Pennsylvania/Delaware USGBC Chapter)

<http://www.dvgbc.org>

Department of Energy

<http://www.doe.gov>

Energy Efficiency and Renewable Energy Network (Department of Energy)

<http://www.eren.energy.gov/>

Energy Efficient Building Association

<http://www.eeba.org>

Energy Star—EPA program that helps to increase energy efficiency of appliances and technologies

<http://www.energystar.gov/>

Environmental Building News

<http://www.buildinggreen.com>

Federal Trade Commission—"Guides for the Use of Environmental Marketing Claims" ("Green Guides")

[http://www.ftc.gov/bcp/edu/microsites/energy/about\\_guides.shtml](http://www.ftc.gov/bcp/edu/microsites/energy/about_guides.shtml)

Forest Stewardship Council

<http://fscus.org/>

Green Biz Journal—new release from Business Journal

<http://www.green.bizjournals.com>

Green Building Initiative (GBI) (Green Globes rating system)

<http://www.thegbi.org/>

Green Building Media—publishers of Green Building Magazine (green real estate)

<http://www.greenbuildermag.com/>

Green DC—DC Department of the Environment (DDOE) resource on environmental issues in DC

<http://www.green.dc.gov/green/site/default.asp>

Green Power—EPA program for energy conservation

<http://www.epa.gov/greenpower/>

Green Source Magazine—construction section of this resource

<http://www.greensource.construction.com>

International Code Council—Green Building

<http://www.iccsafe.org/news/green>

James River Green Building Council (JRGC) (Central Virginia USGBC Chapter)

<http://www.jrgbc.org>

Maryland Smart, Green & Growing—State initiative to help create a more sustainable future for the State

<http://www.green.maryland.gov/>

National Association of Home Builders (NAHB) (Model Green Home Building Guidelines and ANSI-approved ICC 700-2008 National Green Building Standard)

<http://www.nahbgreen.org>

Sustainable Industries—newsletter of sustainable businesses

<http://www.sustainableindustries.com/newlsetter>

U.S. Green Building Council (USGBC) (LEED rating system)

<http://www.usgbc.org>

U.S. Green Building Council Maryland (USGBC Maryland Chapter)

<http://usgbcbalt.org>

U.S. Green Building Council National Capital Region Chapter (USGBC Metropolitan DC Chapter)

<http://usgbcncr.org>

Whiteford, Taylor & Preston LLP's Green Building and Sustainability Industry Group

<http://www.wtplaw.com/practice.cfm?id=284>