



White Paper

**THE DRIVERS OF GREEN: BEYOND THE CHECKLIST**

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## THE DRIVERS OF GREEN



The concept and practice of green building has clearly gained market acceptance and is being incorporated regularly into design and construction projects across the country and in every market sector. Despite recent criticism of the U.S. Green Building Council's LEED™ system (USA Today, In [U.S. Building Industry, Is It Too Easy To Be Green?](#), 10/24/12) as one that often rewards low-cost adaptations that have little or no proven environmental benefit or proven operational impact, the overall impact on the industry and value of mainstream incorporation into projects cannot be denied. The past decade has seen “sustainable” and “green” building initiatives rise to the forefront of today's construction environment as factors such as impact from rising energy costs, fierce competition for talent and market share, and the elevated conscientiousness of corporations and the building industry all fuel our desire to continue to push toward beneficial “greener” solutions. Portraying the LEED system as an easy route to tax incentives/breaks and grants or charging higher rents by certifying them as “green” does not consider the more diverse goals of the owners that we find within our client groups.

### Integrating Green

The effect of LEED and the U.S. Green Building Council must be viewed in context of the overall impact it has had on standard building practices and also on a shift in philosophy within the industry and with owners. Gilbane has actively expressed its commitment to sustainable responsibility through a variety of programs impacting both our internal and project operations. Our approach to sustainability incorporates practicing environmental stewardship in our internal operations and practices as well as the execution of both LEED concepts and of high performance building solutions. However, incorporating these practices, as with all of our projects, begins with a thorough understanding of client goals.

One aspect of leadership is embodied in our inter-regional Sustainability Council which serves as the “sustainable conscience” for the company and is responsible for setting strategic direction; making company-wide recommendations on initiatives, programs, and policies; developing training programs; and ensuring Gilbane stays at the forefront of our industry as it pertains to sustainability. In addition, each of the regional Sustainability Council designees serves as the leader within their respective region to ensure Gilbane's commitments are met; they lead “Green Teams”, coordinate sustainability-related community education and enhancement, organized Earth Week events and serve as a resource to our project teams.

Gilbane's commitment to environmental responsibility is based on the simple principle of *"Doing the right thing for the communities where we live and work,"* says Thomas Gilbane, Jr., Chairman and CEO of Gilbane Building Company.

At Gilbane, project sustainability is determined by the goals of our clients. In analyzing those drivers, Gilbane has found our clients are motivated to obtain LEED certification and to apply sustainable and high performance building practices for several reasons but there is typically a primary driver. While tax incentives, energy cost savings and other financial drivers are a factor for many of our clients, we have found that drivers such as corporate/organizational philosophies, operational efficiencies, and an enhanced occupant experience tend to be the factors that guide the process and decisions. Understanding and clearly defining that primary driver is key to aligning the project sustainability approach and ultimately to project success. We work with our clients to outline their goals and allow those goals to inform the design process. Among the most common drivers for sustainable construction are:

- ▶ Mission/Organizational Philosophy
- ▶ Enhanced User Experience
- ▶ Operational Efficiencies



## Mission/Organizational Philosophy

Often, clients' sustainability goals are largely driven by their corporate missions. The Fraunhofer Center's goal for the **Center for Sustainable Energy**, Five Channel Center in Boston, targeted for LEED Platinum certification, is to create a first-of-its-kind project representing the future of sustainable design and construction. The very nature of the organization and its mission drove the company's desire for a highly sustainable facility. Genzyme's Corporation Cell Culture Manufacturing Expansion in Framingham, MA, a LEED Gold Certified project, is driven by the company's commitment to environmental sustainability and to "creating a cleaner, greener, healthier world for patients, employees, and surrounding communities". Genzyme proactively explores way to improve their environmental performance. The company symbolizes how a business can integrate sustainability into its business mission.



For the **Carbon Neutral Energy Solutions Building** in Atlanta, GA, Georgia Tech's commitment to the development of a sustainable campus community was the primary goal of creating a carbon neutral "net zero site energy use" facility. Utilizing Gilbane's HPB services including design peer reviews, energy modeling peer reviews, renewable energy options evaluation and Life Cycle Cost Analysis, we were able to help Georgia Tech determine the most appropriate and effective energy strategies, employing long-term, cost-effective solutions to shape the energy profile of the building during design. Using a variety of systems —including a full photovoltaic array—the facility harvests energy on-site and achieves carbon neutrality without purchasing carbon offset credits. The project achieved a LEED Platinum Certification, exceeding the Gold certification targeted by all new building construction on Georgia Tech's campus, and was the recipient of the National Institute of Building Science 2012 Beyond Green™ High-Performance Building Award.

When the Rhode Island Department of Education set out to build the new **Paul Crowley East Bay Met Center**, a 16,000 SF educational facility, they based their objectives on a net zero strategy with the goal of meeting the Northeast Collaborative for High Performance Schools (CHPS) protocol following the "Living Building Challenge" verification process. Similar to LEED, the Living Building Challenge is a philosophy, advocacy tool and certification program that promotes measurement of sustainability in the built environment. It has guidelines that incorporate many of the goals of highly sustainable projects – user experience, cost savings, reduced environmental impacts in addition to meeting state-mandated requirements and performance based incentive programs.

## Enhanced User Experience

Factors driving LEED and sustainability goals for projects such as U.S. Army Corps of Engineers' Ft. Belvoir Community Hospital, a major office facility for a confidential client in the Northeast and the Kirsch Center for Environmental Studies were focused on user and occupant experience. One of the primary goals of the Army Corps of Engineers for the new **Ft. Belvoir Community Hospital**, a LEED Gold certified building, was to provide "World Class" healthcare services for our soldiers and their families. The goals of the project were driven by a desire to utilize "Evidence-Based Design" to improve patient outcomes. The use of natural light, views of nature and the reduction of ambient noise are shown to have positive effects on patient recovery. The Defense Department's desire to embrace these principles resulted in a highly sustainable and ultimately a LEED Gold certified facility.

As members of the Living Building Challenge community, our **confidential Northeast client** challenged the project team to design a space that goes beyond the typical LEED goals to create a facility that suits the needs of their individual groups while enabling the client team to remain flexible and work as a cohesive unit. By experimenting, exploring, and beta testing environmental and workspace concepts, a critical goal will be the implementation of a holistic design process that incorporates all aspects of the building's systems. Gilbane is working with the client and the architect during the design process to determine what aspects of LEED will be most effective in helping them achieve those goals.





## Operational Efficiencies

Other clients, including the General Services Administration (GSA) recognize the cost and efficiency implications of a LEED certified building. In October 2009, an executive order from the White House was issued requiring all federal buildings to reduce their dependency on oil and gas. After thorough examination, the **Major General Emmett J. Bean Federal Center**, Indianapolis, IN was selected for a solar technology project due to its expansive roof area. After an on-time delivery of the project, the new solar technologies at the Bean Federal Center have already had a big impact on helping the facility reduce energy consumption and save taxpayer money; an impressive effort that provided an annual cost savings of approximately \$500,000 for the GSA.



An example of how Gilbane utilized high performance building strategies to help the New Haven School District continually improve efficiencies is the **New Haven Schools**. Gilbane is providing program management services for a 46-school construction and renovation program involving 4.2 million square feet in the city of New Haven, CT. The \$1.5 billion, 14-year construction program has been lauded as a landmark model for its unique project approach and broad success in achieving goals in energy conservation. The Mayor's Energy Task Force for the City of New Haven, together with Gilbane and the School Construction Program have advanced a significant High Performance Schools Initiative that has successfully reduced operating cost and set an example for social consciousness. Since 2003, through the implementation of the High Performance Schools, average system wide building energy efficiency has improved by 70% - and is estimated to produce total utility cost savings ranging from \$40-60 million over the next 20 years.

To learn how Gilbane can assist with your sustainability, contact:

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As demonstrated through the projects above, we have found that the drivers of sustainability and LEED certification vary greatly from client to client. As LEED and sustainability have become more and more integrated into our mainstream building practices, owners and users have become better informed and more aware of what the LEED system offers. While cost savings, tax incentives and other financial savings are often a benefit of sound environmental practices, we have found our clients can benefit from the LEED system as a means of ensuring a variety of goals can be set including those that address philosophy, corporate mission, and enhanced user experience. The process must begin with determining those unique needs so the appropriate sustainable practices and high performance building principles can be applied to ensure the needs and goals of owners and users are met.