





# Students Drawn to Greener Campuses

## PRINCIPLES OF GREEN CONSTRUCTION & SUSTAINABLE DESIGN

by Sheila Wagner

Many students at private colleges and universities are extremely invested in the environment and interested in knowing what campuses are doing to reduce their carbon footprint and contribute to sustainability goals. When these eco-conscious young people are shopping for the right college for them, the institutions that go to the greatest lengths to make their campuses “green” will be the ones they prefer.

Administrators of private universities and colleges may find that, aside from addressing the environmental topics their students are passionate about—such as climate change and recycling—stricter building codes and long-term costs of ownership will inevitably lead them to consider the benefits of green and sustainable materials in their construction projects.

### Sustainable Design

What “building green” means is that consideration is given to design and construction of buildings and landscapes to reduce or even eliminate negative impacts on the environment and the people involved. Another term for that, of course, is “Sustainable Design.”

There are several fundamental principles of sustainable building design, including proper site selection, energy use, conserving water, indoor environmental quality, and maintenance practices such as using materials that do not require toxic chemicals and cleaners.

The U.S. Green Building Council is an organization that is committed to measuring

and understanding that, and they are identifying tactics to transform campuses to become sustainable communities that will make their students and professors proud. Their site shares a recent article that outlines several ways to show leadership in green building and operations, some of which are outlined here.

### Rating Systems for Maintenance & Future Projects

They are not only dedicated to reducing the environmental impact on the buildings and grounds, but also want to have a positive effect on students to prepare them to be citizens who will lead in the green building movement.

They now have several rating systems that can be used for ongoing maintenance as well as future building projects. USGBC (offers campus assessments when a university is planning new construction or renovating older buildings to make sure they meet their sustainability goals)

These certifications cover nearly every facet of a sustainable build environment:

**LEED** (Leadership in Energy and Environmental Design)

**PEER** (Performance Excellence in Electricity Renewal)

**SITES** (System to distinguish sustainable landscapes)

**TRUE** (Zero waste rating system)

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**WELL** (System for certifying features on buildings that impact health and well-being)



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### A Passion for Building Green

Doug Yancey, an executive with Varco Pruden Buildings in Memphis, Tennessee, has been in the construction industry for 18 years. He is a passionate proponent for green building for initial construction as well as renovation of standing structures. Yancey considers the long term cost of ownership to be the most important component of green construction for private universities.

He added that the two best ways for private colleges and universities to improve their energy efficiency and gain more energy savings with their construction choices to be insulation and daylighting with sensor controlled electric lighting.



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While the cost to “build green” will be more, many administrators and facility managers are surprised to learn that the cost to design and build a structure is insignificant compared to the cost of owning and operating the building over its useful life. According to the Building Owners and Managers Association, only two percent of the total cost of building, owning, and operating a typical office building over a 30-year period is for design fees and construction costs.

### The Cost of Building Green

Yancey stated that while the cost to “build green” will be more, many administrators and facility managers are surprised to learn that the cost to design and build a structure is insignificant compared to the cost of owning and operating the building over its useful life. According to the Building Owners and Managers Association, only two percent of the total cost of building, owning, and operating a typical office building over a 30-year period is for design fees and construction costs.

Operations, maintenance, finance and employee costs account for the remaining

98 percent of the total costs. Adding energy savings may add material and installation costs, but ultimately will reduce the day-to-day operating expense.

### The Mindset of Meeting the Minimum

For economic reasons, some colleges and universities may have the mindset of “what’s the least I have to do to meet code now?” What they are failing to consider is the fact that ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) standards have risen almost every year. By 2020, the

building completed this year will be obsolete in terms of meeting construction code for the future. For new construction, it is imperative to use the best insulation material possible, because the expense of adding insulation later will be substantially more.

Yancey provided a list of benefits that any private college or university can expect from a green building:

- **REDUCED OPERATING COSTS**

It is possible to reduce building energy consumption by 20 to 30 percent within the constraints of most building budgets. This increased energy efficiency can reduce energy costs over the life of a building.

- **REDUCED WASTE COSTS**

Green buildings that are designed with flexible open space can significantly reduce construction waste in facilities that undergo frequent remodeling.

- **ENHANCED OCCUPANT PRODUCTIVITY**

Several case studies of completed green buildings have shown significant improvements in productivity because occupants (students,

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staff, etc.) had a connection to the outdoors and worked in spaces with natural daylight. Skylights might work well in athletic facilities, student centers, and libraries.

#### • STREAMLINED REGULATORY APPROVALS

Sustainable site design strategies can often build public trust and streamline regulatory approvals.

### The Key to Reaping Economic Benefits of Building Green

Overall, Yancey believes the key to realizing the economic benefits of green building is to work with design and construction professionals who have experience with this approach to construction.

Since no two building projects are alike, these professionals can work with clients to develop focused green building strategies that are cost effective and respond to the unique needs of a university's building goals. He reiterated, "Numerous studies have shown that a nominal investment now can pay for itself sooner than you think."



**ABOUT THE AUTHOR:** Sheila Wagner has spent the last several years working as a professional editor and recently became the staff writer for *Private University Products and News*. Wagner can be reached at [sheila@pupnmag.com](mailto:sheila@pupnmag.com).



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