

# The 10 Best Ways to Incorporate Green Design Into Your Project

By *CEM Staff*

Created 02/23/2010 - 00:00



## The 10 Best Ways to Incorporate Green Design Into Your Project

By *Ian Scott*

Sustainability is an integral part of current conversations regarding development and resources. The impact of design and operating decisions an owner will make over the course of their development is becoming increasingly transparent and quantifiable. How can an owner take steps to ensure that they will be prepared as they address issues of sustainability throughout their development process?

The 10 steps described in this article are a framework for understanding what larger issues and resources might come to bear during the course of a development. Laid out chronologically, these steps prepare an owner for issues of sustainability and who might best address them. With a little homework and the right team, an owner can make sure they are gathering and implementing the best sustainable strategy for them.

### **1. Focus on “Whole Building Design”**

Thinking about sustainability and using smart sustainable strategies is not a product of project size or budget. Any project can be approached from a sustainable perspective. All that is required is a commitment among the owner and key members of the design and construction teams. This commitment should not be toward capturing a LEED standard or capitalizing on energy savings alone (though those are both good goals). The incorporation of sustainability into a project should be focused on understanding the impact of owner/designer decisions on energy use and the environment. These “designed” decisions, laid out in the LEED standards for new construction, are site selection, water efficiency, energy and atmospheres, material resources, and environment quality, and they will have a direct effect on your project, patrons, profitability and planet.

### **2. Get Off to the Right Start**

Most large projects rely on different groups (owners, financiers, designers,

engineers, contractors, etc.) with different expertise to work together to accomplish a goal. Understanding and implementing a sustainable strategy is no different. There are many players on the owner/design team that understand portions of the sustainability puzzle. A best practice would be to bring the key members of each point of view together at the beginning of the process.

For example, an owner may go out and pick a site before the design team is involved in the process. The owner will examine that site on issues they are familiar with, such as accessibility, marketing analysis, existing infrastructure, etc. These are all critical issues that are important to determining the right site location, but bringing key members of the design and construction team into that process could bring other sustainability issues to the decision, like effective master planning, daylighting and solar orientation, tying into neighboring infrastructure, and identifying/protecting existing natural resources.

### **3. Create a Value Matrix for Making Decisions**

Putting the right team together will generate a lot of great ideas, but unless your budget is limitless, there will probably be too many ideas. The question is how to decide which approach to pursue and which to save for the next project.

The key is having the team come to a consensus on the value of ideas early in the process and making those values visible to all. It is therefore important to understand how to value sustainability. Sustainability goals are often interrelated. The decision to pursue one goal can affect many parts of a project. This “value matrix” must make value “comparable” when difficult decisions have to be made regarding how resources are going to be allocated.

For example, access flooring can have a higher first cost. This cost may not have been anticipated by the owner. The team must be able to demonstrate how access flooring can lead to reduced energy cost through under-floor air distribution, provide gaming flexibility for cabling and infrastructure, decrease the amount of time gaming machines are inaccessible during a layout change, and provide greater flexibility in the casino ceiling design. Having put everything on the table, the team can make an educated decision about the value that decision could have for the overall project.

### **4. Ask for Help**

Sometimes understanding the value of a sustainable approach requires bringing in an expert. There are many reasons why you might want to bring in an outside sustainability consultant to help a project pursue sustainable goals. Sometimes the team is inexperienced and needs some guidance to get started in the right direction. Other times, a project may need technical assistance in calculating an energy savings or pursuing an energy rebate, or a project may be pursuing a cutting-edge solution that requires new ways of analyzing energy impacts. The important thing is to not let the project get overwhelmed by incorporating sustainability as a goal.

## **5. Know Your Stuff**

Casinos are materially rich environments. Designers love to experiment with materials and lighting that bring a fresh and memorable experience to the guest. To do this, designers and engineers make decisions about literally tons of materials. What do we know about the lifecycle costs and sustainability of those choices?

The good news is it is a lot easier to make these decisions today than it was even five years ago. Manufacturers today are working hard to demonstrate, through certification, the sustainability of their materials, products and processes. We have taken advantage of this by reworking our entire materials library so it only offers those products we feel are sustainable.

Another area where design can contribute materially to a more sustainable building is lighting. Lighting has a significant impact on both energy use and lifecycle costs. One of the ways we are trying to decrease the impact of lighting costs is using diffused daylight in our casino designs. This reduces the amount of artificial lighting we need for the casino during the day and provides a distinct lighting scheme between day and night, which enriches the guest experience.

## **6. Well-Being**

It used to be that a guest's well-being was solely based on having a great time. Our increased understanding of environmental and air quality issues has changed that. Your guests today are making greater commitments to sustainability in their everyday lives, and they want to know that businesses they choose to deal with are doing the same.

To reflect this, designers now choose materials with your guests' health in mind. It is still important to have a fabulous carpet, but one that meets Green Label Plus standards. A sumptuous wood lobby is fantastic, but one that uses FSC certified wood. Smoking is still part of most casino environments, but under-floor air moves it straight up and out, as opposed to recirculating it around the casino floor

## **7. Commission Your Building**

Hiring a commissioning agent to participate in your project is a prerequisite for LEED certification. LEED places this importance on the commissioning process because it is a job other members of the team do not have time to do while fulfilling their own individual job requirement. The commissioning agent's focus is on making sure there is quality control over the issues that affect energy performance from the design stage to operations. LEED states that having this kind of oversight to reduce errors and omissions regarding sustainable issues leads to less change orders, more efficient construction, and 5 to 10 percent energy savings for the project.

A commissioning agent also helps the project team focus its sustainable strategies by having the owner complete an Owner's Project Requirements document and the designers complete a Basis of Design. These documents help set the standards the project must achieve toward sustainable goals.

### **8. Market Your Efforts**

Once you have made sustainability a priority and completed the hard work to incorporate it into your design, it is time to celebrate it. Casinos have certainly never been known for being shy about showing themselves off, and they should not start by being shy about what they have done to improve the environment for their clients.

Marketing sustainability is an important part of understanding value. The LEED reference guide specifically states sustainability as a market advantage. A casino's marketing team should be part of the process so it fully understands the efforts that have been made to increase the wellbeing of the casino's guests. This will allow the team to create effective marketing strategies around those issues.

### **9. Train Your Staff**

Sustainable strategies require operation and maintenance. In fact, operation and maintenance is an entire aspect of sustainability itself. Being aware of which cleaning products you use, the waste you recycle, and the maintenance of your mechanical and plumbing systems for optimum energy use all adds up toward operating a more sustainable and efficient casino. Having a representative from operations and maintenance involved in the design process will go a long way toward making sure the transition to operation is seamless.

It is also important to train your staff in the proper procedures for how to take care of the sustainable materials you have put in place. Some materials or systems may require unfamiliar cleaning or operating practices. Training will go a long way toward making sure your clients experience the casino the way the design team imagined it.

### **10. Follow Up**

You have your casino up and running. You are busy tracking your favorite players, watching revenue rise (hopefully), and paying attention to operating costs. Now is not the time to forget about sustainability.

It is important to follow up and check to see if the goals you set out for your sustainable strategies are working. Are you getting that 20 percent water use reduction you wanted to achieve? Is the mechanical system delivering the energy savings you had hoped for? Are guests responding to the better environmental quality of your gaming floor's mechanical system? These are all things you can find out with a little bit of effort, and this information can be used to reinforce the value of the sustainable decisions to the shareholders.

These 10 steps will help you lay out a sustainable strategy for your development. They will help you assemble the right team, start your development off right, improve your operations, consider your guests new expectations and market/track your success. A little preparation goes a long way.

*Ian Scott, LEED AP, is a design principal at Walsh Bishop Associates in Minneapolis.*