

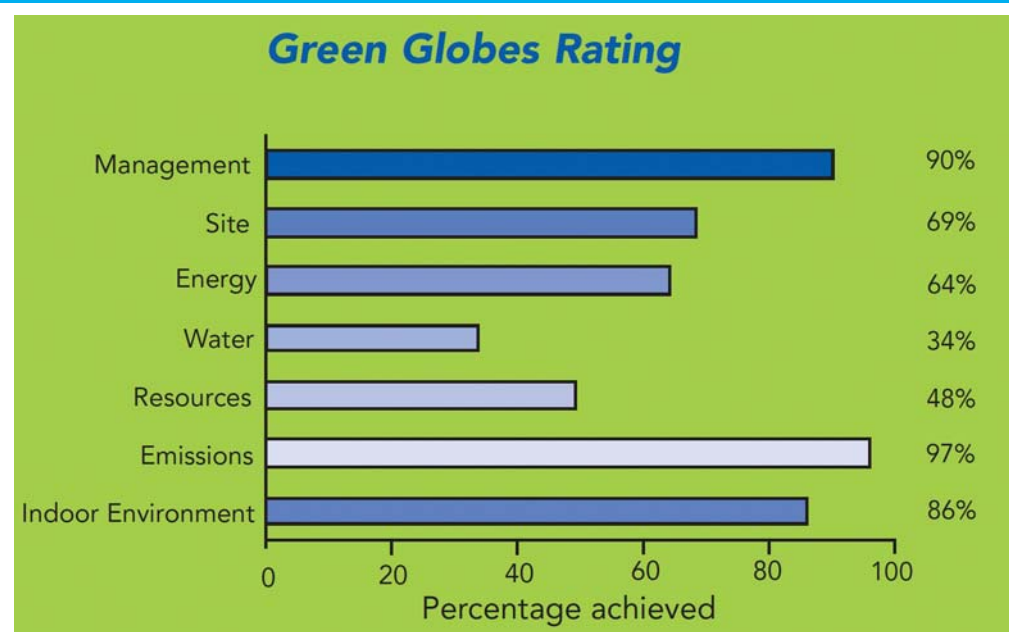
A GREEN EXHIBIT

Visitors to the William J. Clinton Presidential Center not only learn about the policies of the Clinton administration and what it is like to live in the White House, but they also learn about what it is like to live green.

One exhibit talks about how the toilets in the facility are cleaned using denture tables instead of harsh chemicals. Another provides green recipes for such common everyday items as furniture polish. An outdoor exhibit also talks about the Library's green efforts.

The Library's new neighbor, Heifer International, is also a green building and it also gives tours. "It has all been outstanding. Visitors talk about being green," said Debbie Shock, director of operations and facilities with the Clinton Foundation. "We're so glad to be a role model. Yes, that is what it is all about."

Percentage of points achieved by William J. Clinton Presidential Center for each category:



WILLIAM J. CLINTON PRESIDENTIAL CENTER ACHIEVED AN OVERALL RATING OF 68%. RATING: TWO GREEN GLOBES



BUILDING NAME	William J. Clinton Presidential Center
LOCATION	Little Rock, Arkansas
SIZE	150,122 square feet
COMPLETED	November 2004
USE	Open to the public as a retrospective on President William J. Clinton's Administration. Also houses documents from the Administration as maintained by the National Archives & Records Administration (NARA).
LOCATION	The Presidential Center is located within a 30-acre city park along the south bank of the Arkansas River. It includes the Presidential Library and Museum and the renovated Choctaw Station, built in 1899, which houses the Clinton School of Public Service and Clinton Foundation office.
DISTINCTIONS	A featured piece of the Center and Park is the Rock Island Railroad Bridge that will be renovated into a pedestrian bridge crossing the Arkansas River.

GREEN BUILDING INITIATIVE™

CASE STUDY



THE WILLIAM J. CLINTON PRESIDENTIAL CENTER FROM THE GROUND UP

The main public portion of the Library and Museum is enclosed in a glass bridge cantilevered over the Arkansas River. The building features an 80-seat theater, multi-purpose event facilities, café, research offices and support space for archivists and scholars. The secure collection of the Clinton Presidential archives, administered by the National Archives and Record Administration (NARA), is located at and below grade in the Archive building whose north side is defined as a two-story pavilion. Seventy-six million pages of paper documents, 75,000 museum artifacts and nearly 2 million photographs form the core collection.

OWNER	William J. Clinton Foundation
ARCHITECT:	Polshek Partnership Architects
MECHANICAL ENGINEER:	Flack + Kurtz Inc.; Cromwell Architects Engineers, Inc.
ELECTRICAL ENGINEER:	Flack + Kurtz Inc.; Cromwell Architects Engineers, Inc.
STRUCTURAL ENGINEER:	Leslie E. Robertson Associates



Green Globes™ for Continual Improvement of Existing Buildings Assesses -

William J. Clinton Presidential Center Revitalizes the "Other Side of the Tracks"

Every city has one—

an area that people dare not venture. In Little Rock, Arkansas, the area was literally on the other side of the tracks—the east side of Interstate 30. “No one went on that side of I-30. The whole downtown area is on the west side. No one crossed that line,” said Debbie Shock, director of operations and facilities with the Clinton Foundation.

Daring to cross that line was former President William J. Clinton. “He wanted to do something in that area to change people’s minds about I-30, so he chose that site for his Presidential Library,” Shock said.

Prepping the Site

The site posed its share of problems. It was a brown field, where the soil was contaminated with hydrocarbons from the underground tanks that had previously been used by the railroad to store fuel. “We had to literally haul off all of the contaminated dirt, dispose of it properly and haul in clean dirt before we could move forward on the building,” remembered Shock, who worked closely on the project and the construction team.

Cleaning up the site prior to construction began took three months, during which time the construction team took control of the site, including controlling soil erosion from heavy rains. “We had many, many soil tests done before we started work on the site, so we knew what we were in for before we took out that first truckload.”

Thanks to careful site planning, there were no surprises. All of the clean-up work was built into the budget and the timeline. “Once it was determined that the President and the architect thought that was where the building should be, there was no second guessing. We just worked through the issues. We had great contractors who supported us every step of the way,” said Shock.

“If the site had not been brown, we would have taken the footprint of the building and only disturbed what we needed to. That would have been a nice problem.”

Two Goals

With the site cleaned, two goals stood to the fore. First, the library was to “build a bridge to the 21st century.” To that end, the building was designed to resemble a modern bridge as it reaches out north to the Arkansas River. “What is neat about it is this - we have this modern, sleek building that looks like a bridge to the future and next to it we have the Rock Island Railroad Bridge that dates back to 1898,” added Shock.

Secondly, the building was to be made of sustainable materials. “It was President Clinton’s goal from the very beginning to make every attempt to make it a green building. It was built-in with the architects. I was part of that lead team. We knew to be green we had to start with the contractors in terms of securing the materials and resources we needed for the building.”

“Going green causes everyone to be aware,” Shock continued. “People have to educate themselves about it. I don’t think it caused any extra headaches to build green, you just have to be aware of what it takes to build the building green and once you educate and help the contractors to understand that it is relatively easy. You must be organized to be green. A lot of paperwork needs to be submitted with a green building and it is hard to go back and get the information you need after the contractors have left the job.”

Building Local

Educating the contractors early on proved invaluable as the project got underway. Everyone was alerted to stay within a 500 mile radius when sourcing products and materials. “We did it as much as we could,” said Shock. “Not everything could be found locally, so our goal was to try for 20% of the products and materials to be within 500 miles. We ended up having 42.8% of the total building materials come from this area, so we exceeded our goal by quite a bit.”

Shock attributed their success to research, thoroughly checking out all the materials from the building’s marble, limestone, structural steel, concrete, drywall and insulation to all of the building’s landscaping materials. “Once we started checking on these products and made our contractors aware of our goal, everyone went beyond the call of duty. Everyone had so much influence in the project and we exceeded our goals by far.

“We wanted to make a difference in this region,” she continues. “It helped this whole region by building this Presidential Library in Little Rock. Yes, we could have gone overseas and bought all sorts of materials—but we would not have been helping our region.”

Sourcing Recycled Content

In addition to being locally manufactured, materials from renewable sources were specified to minimize the consumption of resources. Once again, the builders had their goal: aim for 10% of the total building materials to be manufactured using recycled materials. “Here again, we exceeded our goal,” said Shock. “We ended up with 22.3% of the materials used containing recycled content. Our success had to do with educating the contractors and letting them go out and resource what they could find.”

Materials containing recycled content included cast in-place concrete, pre-cast concrete systems, structural steel, self-adhering sheet waterproofing, hot fluid-applied roofing, gypsum board assemblies, acoustic panel ceiling, resilient floor tile and carpet. Reused ceiling tiles, light fixtures were used. Recycled steel for the structure, recycled blast furnace slag was included in the concrete foundation and sidewalks, while recycled aluminum could be found in the curtain wall system. Said Shock, “we used a lot of stainless with a high recycled content and the rubber matting came from rubber tires. It was important to use things again instead of throwing them into a landfill.”

Recycling On-Site Buildings

Even some of the buildings on the site were recycled and put back into use from day’s gone by. The architect’s design integrated all existing façades from the original Rock Island Railroad station building, specifically the Choctaw Station, built in 1899 and located in front of the Library. “Some of the buildings we couldn’t save; that one did. We left the brick and found matching brick. We matched the marble inside and saved what we could,” said Shock, who happily notes: “they say it looks like the original train station. It looks a lot like it did.”

In the end, 50% of the existing major structures—other than the shell—were reused on the building.

Turning Brown to Green

Not to be outdone, the internal workings of the Library were also chosen for their green attributes. Everything that could be done to make the mechanical portion of the building as efficient as it could be was done.

RADIANT A radiant system that heats and also cools was installed under the bamboo flooring. It was so effective that shortly after construction was complete, Shock reported a difference in their energy bills. “In the summer, we take the water from the cooling tower and the floor is cool to touch. In the winter, we do the opposite. It cuts the work of the heating, ventilation and air conditioning equipment dramatically. In fact, it has cut it nearly in half by using the radiant to heat and cool.”

LOW-E WINDOWS WITH SUNSCREEN The building itself is cantilevered and two glass walls are actually cantilevered to project past the primary structure. Low-E glass was specified to protect artifacts from ultra-violet and infrared rays entering the building, while another glass wall was embedded with frets that work like a sunscreen to block damaging rays. “It really helps. With all that glass, you’d think the building would get hot, but having sunscreen embedded in the windows bounces the rays back off, so it doesn’t warm the building,” Shock explained.

SOLAR POWER ON-DEMAND Photovoltaic solar panels installed on the building provide 3% of the facility’s energy, which is immediately used to feed the lighting system; it isn’t stored, but used on demand.

A CARBON NEUTRAL SITE In addition, the building offsets 100% of its energy costs through wind power. It is a carbon neutral site. It pays its energy bill, which is “dirty” energy. Then, it buys an amount of wind credits from a wind farm that is equal to the amount of the monthly energy bill. The wind credits feed clean energy back into the power grid. “This is something that the President was really committed to doing,” explained Shock. “We know we’re paying for the energy twice, but we budgeted for it. We couldn’t make enough energy of our own on site, so the next best thing was to go offsite and put more energy back into the grid. We are on year four of this and we’ve committed to do it every year since we opened.”

Personalized Indoor Environment

According to Shock, the most important initiative was installing a high-tech ventilation system. “We took extra steps to minimize dust particles, pollution and pollen, etc. Any thing you can do to have your filters collect more of that airborne debris will enhance the work area for the employees,” she said of the fully-automated system, which allows operators to open and close air ducts via a computer depending upon the outside temperature and other variables.

Also key to employee job satisfaction was the fact that direct ambient daylight of 80% was built-into primary work spaces. Moreover, solar shading devices enable occupants to control brightness and glare from direct daylighting. “Architects don’t work in the building so few think of this, but ours did. They included windows where the employees work so they have daylight and a view, which has been shown in research to enhance employee productivity,” added Shock. “We also gave employees their own lighting control, occupancy sensors and their own thermostats so they have control of their areas. Happier employees equal less sick time.”

“Many government employees came to work in this building from places with zero windows. They have really enjoyed being part of this building and having all of their lighting and thermal comfort right in their office space.”

In Retrospect

Construction began in October 2001 and wrapped up in November 2004. The process was tough, said Shock, who noted that there were a lot of standards that had to be followed to complete the requirements for the National Archives & Records Administration (NARA). Combine NARA’s requirements with the President’s expectations and the desire for sustainability made the project challenges at times. “But everything worked hand-in-hand,” said Shock.

Perhaps the greatest benefit of the building, she says, is what it has done for the community at large. “I think the greatest gift of this green building is the public awareness it has given and the education it provides to future generations. The library will make a difference from now until eternity because people are experiencing it, asking questions and learning about how every single person can make a difference. I like that we’re a tool for the public,” said Shock.

Going green did increase the price of the project, but it wasn’t anything substantial, says Shock. “When you took at the building like this with all the technology and interactive displays, it didn’t add a substantial number to the top of the building.”

What they did spend upfront on green initiatives already appears to be paying off. “After the first year, we were 34% more efficient than a comparable building and that has increased in efficiency every year,” reported Shock, who attributes the building efficiency to an automated building system and the day-to-day building operators. “They look at the data, trend it and they continue to keep tweaking everything they can to make it more efficient.”

Looking Ahead

Shock only wishes that they could have done more. She is getting her wish. The William J. Clinton Presidential Center earned two Green Globes from the Green Building Initiative (GBI) for its use of environmentally sensitive systems and low impact materials as well as the reuse of a previously underutilized industrial area. “We’re committed to continuing to get better. Next year, we will recertify GBI and try to reach four Globes. I’m a big believer.”