

# SE<sup>2</sup> Award Winners 2010

## **Focus on Energy Award of Excellence**

- Madison Fire Station No. 12, submitted by Plunkett Raysich Architects

## **Award of Merit**

- Holy Wisdom Monastery, submitted by Hoffman LLC
- School District of Fort Atkinson, submitted by Sustainable Engineering Group

## **Special Citation**

- Vince Lombardi Charitable Funds Healing Garden and the Agnes and Morland Hamilton Healing Conservatory, Submitted by Mortenson Construction
- Vernon Electric Cooperative Headquarters, submitted by Vernon Electric
- Herrington Recovery Center, submitted TWP Architecture
- Lawrence University Warch Campus Center, submitted by Boldt Construction

## **Winner of the “Focus on Energy Award of Excellence”**

### **Madison Fire Station #12**

**Submitted by Plunkett Raysich Architects**



## Focus on Energy Award of Excellence

Madison Fire Station No. 12

Submitted by Plunkett Raysich Architects



This delightful LEED Platinum building proves that great architectural design and engineering can result in the harmonious integration of efficient technologies without any apparent sacrifice in appearance or functional quality. Moreover, the design team took advantage of Focus on Energy to make many advanced features affordable.

Energy efficiency is the star of this design. Cooling and heating is provided by a geo-exchange system. Domestic hot water is supplied by solar hot water collectors. Pergolas and sunshades mitigate summer sun while permitting sensible amounts of daylighting. A 5,000 gallon rainwater system ensures potable water is not used to wash trucks or irrigate. To top it all off, a green roof absorbs storm-water while adding insulation and summer shading. Overall energy use is more than 50% lower than the average comparable facility.

Most of all, the jury loved the architecture. Through the splendid use of color, line and mass, the architecture takes basic materials and achieves a crisp and edgy visual delight that works well with the site. Inside, well chosen and light colored finishes contribute to efficient, clean and fresh interior spaces that enjoy plentiful daylight. Congratulations to the design team for an especially wonderful project and on being the 2010 SE<sup>2</sup> Excellence Award winner.

## Award of Merit

Holy Wisdom Monastery

Submitted by Hoffman LLC



Committed to caring for the earth, three Benedictine Sisters decided that their underutilized, energy-inefficient conference and retreat center needed to be replaced with a smaller monastery purposely designed to meet their mission and vision of weaving prayer, hospitality, justice, and care for the earth into a shared way of life as an ecumenical Benedictine community. Determined that the facility should be as sustainable as their 95 acres of restored prairie, they insisted on a LEED Platinum rating.

The list of sustainable efforts is amazing. Responsible deconstruction of the former facility diverted 99.75% of the debris from the landfill. The organ and walk-in cooler were refurbished and installed in the new building. Nine tons of building material were recycled, including the masonry which was crushed for use as a base for parking and drives and sculpted into berms. The lowest level was saved, provided with a vegetated roof, and remodeled to create the maintenance building.

The new facility considered both the functional relationships between the spaces and the desirable views from each, while minimizing site disturbance, sparing mature and memorial trees. With bells relocated from the original monastery, the soaring bell tower adds drama and identity to the building. Five additional acres have been restored to prairie, and there are two drought-resistant vegetated roofs four rain barrels, and two rain gardens. Pervious concrete in low spots in the parking lot capture runoff.

Boulders used for retaining walls came from onsite excavation of trenches for the geothermal system which consists of 39 wells, each 300 feet deep, located beneath the parking lot. Overall, the building is designed for a 60% improvement over the LEED energy baseline, and photovoltaic panels supply about 13% of the estimated annual requirement for electricity. There so many other efficiency and sustainability features that it almost appears that this project could receive a perfect LEED score. In fact, it was the highest rated LEED 2.2 project in North America.

The architecture and lighting design are modest and don't give away all of the building's technical features. Clean and light colored interiors don't waste the plentiful daylight. Energy use is substantially less than comparable structures. This is another project demonstrating that everyday projects can be sustainability stars.

## Award of Merit

School District of Fort Atkinson

Submitted by Sustainable Engineering Group



This project personifies “win-win” thinking. Taking advantage of incentives through Focus on Energy, the school district invested in its future by improving the energy efficiency of its existing building stock. The district has retrofitted all six of its schools. Three years ago, they replaced old HVAC systems at three elementary schools and one middle school with a geothermal system. Two years ago, they installed a solar hot water system for the middle school and high school pools. Last year, they installed 19.7 kW of solar electric (PV) panels on one elementary school. Future plans include a 50 kW turbine in late 2010 which will provide 5% of the high school’s electricity needs. To date, as compared to 2005, the district has saved 39% in annual energy and 20% in annual energy cost.

Retrofits are among the smartest efficiency projects that can be undertaken. After all, less than 1% of all buildings are built new every year. Without retrofitting, the remaining 99% or more keep consuming energy just as they were designed, usually inefficiently and often carelessly. Retrofits of lighting are among the very best investments possible in today’s economic market, capable of a rate of return of 10-20% or more per year – forever! Moreover, we all know that energy costs are going to continue to rise, making every retrofit a great future-proofing program, too.

We’re especially pleased to see that the program is not strictly simple retrofits. In fact, there is a healthy mixture of renewables in the overall plan. The entire team is commended for doing the dirty-behind-the-scenes work really well. The School District’s goal was to set a high standard for others to achieve and they more than achieved it.

## Special Citation

Lawrence University Warch Campus Center,  
Submitted by Boldt Construction



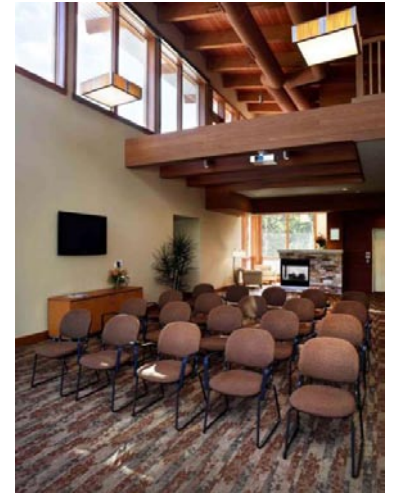
This \$35 million Campus Center is a 107,000-square-foot facility that serves as a visible example of the university's sustainable initiative. Built into the bluff over-looking the Fox River, the building contains three levels partially below grade and two above. The views of the river were natural keys to the building's orientation and shape on site. While contemporary in its design, the Campus Center respects the context of the campus by using natural limestone, precast veneer, and curtain wall to create an appealing, low maintenance architecture well suited for the harsh winter climate.

In achieving LEED Gold, the project has many sustainable features including over \$1.1 million of recycled building materials, recycling 96% of construction waste, a vegetated green roof, low-flow plumbing fixtures, and providing bicycle racks and showers. Interior finishes include natural slate and stone paved interior 'streets' and FSC wood for door veneers, trim, and paneling. Technical features include automated lighting controls with motion and daylight sensors.

This is a beautiful building inside and out. Energy performance is about 20% better than a comparable building, and the University has gained an attractive and efficient Center that will serve well for many years to come.

## Special Citation

Rogers Memorial Hospital Herrington Recovery Center (Summit, WI)  
Submitted TWP Architecture



The Herrington Recovery Center is a 23,000 square foot, 20 bed residential substance abuse treatment center located in Summit. The program's focus is to serve professionals in need of chemical addiction recovery from across the country. Perched atop a wooded hill on a serene rural lake, the site promotes healing, recovery and confidentiality. Working with an integrated project delivery approach, the building owner, the general contractor and design team collaborated to design a serene environment sensitive to patient recovery while achieving LEED Silver.

The architecture blends harmoniously into the surrounding setting using natural stone and locally harvested cedar. The efficient building envelope employs locally manufactured windows and doors. Energy Star rated building systems are used throughout the project, and daylighting and natural ventilation practices are employed in occupied rooms and public spaces. An occupiable partial green roof includes a vegetable garden, with the balance of the roof being white to control solar gain. The interior features flooring with high levels of recycled content, including linoleum and sheet vinyl. Bringing the exterior inside, locally harvested natural stone, cedar wood siding and low-VOC paints are used. Recycled glass resin panels are used as sidelights, door inserts and in millwork.

The site is equally well done. The building is sited to maximize daylight and views. The landscaping retains established trees with new water efficient landscaping of indigenous plantings. Impervious storm water runoff is channeled and absorbed through a collection of rain gardens and bioswales. And a bike rack and shower facilities encourage bicycle commuting and visiting.

Total building energy use is at least 15% better than the average comparable building. This project embodies solid sustainable practices with good architecture and the result is an outstanding place to encourage recovery and promote renewal of life principles.

## Special Citation

Vernon Electric Cooperative Headquarters (Westby, WI)

Submitted by Vernon Electric



The Cooperative Headquarters is one of the best technical building projects in the competition. Clearly, the Owner and design team set out to build an energy efficient, central location for office, warehouse, garage, service center, and secure outdoor storage. It is amazing how well they did given their limited budget.

The building's technical design is almost textbook perfect. It was sited to take maximum advantage of the passive heating possibilities of the winter sun while using the warehouse and high bay work areas as a buffer for the north side winter cold. Ground source heating and cooling contributes to an efficient HVAC system, and heat is recovered from the computer/IT room for other uses. A white roof reduces summer heat gain, and south facing glazing employs tinted low-e glazing for additional cooling benefit. High performance T5 lighting systems are used indoors and dark-sky friendly lights are used for outdoor lighting, with a 50% cut-back after evening business hours. This project operates at 75% less than a comparable standard building and is one of the most efficient projects in the SE2 program over the years.

The architecture of the project is modest, using durable materials to create a robust and super insulated shell that blends into the surrounding land. The interior is clean and bright, with sealed concrete floors chosen to reduce cleaning requirements and eliminate indoor air polluting chemicals. Sensible siting readily allows for bicycle commuting, and the site employs natural materials and high albedo concrete to prevent heat island effects. In almost all ways, this is an exemplary project for light commercial industrial structures.

## Special Citation

Vince Lombardi Charitable Funds Healing Garden and the Agnes and Morland Hamilton Healing Conservatory (Milwaukee)

Submitted by Mortenson Construction



The 14,000-square-foot Healing Garden sits atop the eighth-floor roof of the medical center. It offers two distinct natural spaces - an outdoor garden and a 4,000-square-foot indoor garden featuring a glass conservatory for year-round access to trees, shrubs, flowers, and water features. Designed with input from patients and caregivers, the garden includes pathways ranging from five to eight feet wide to accommodate hospital beds and wheelchairs. The indoor conservatory provides several works of art, an interactive fountain pool, and an eight-by-eleven foot water wall.

Sustainability was obviously a first design consideration. The Healing Garden Conservatory was built with a glass curtain wall system spanning the entire front of the project, as well as portions of glass on the sides of the project. This creates daylighting and views for 100% of the occupied space in the conservatory. The Conservatory lights are controlled by an interior photocell that continuously dims according to daylight levels. Occupancy sensors control all the bathrooms, storage closet, janitor's closet, and mechanical room lights within the facility. The project features a drip irrigation system, drought tolerant plants, and a green roof that does not require irrigation.

The project was built on the existing medical center roof to offer the best possible location and usability for patients and visitors. Careful construction techniques diverted 89% of the construction waste from landfills through re-use and recycling of the materials. Architecturally, it blends nicely with the balance of the medical center, an attractive and desirable amenity adding a wonderful respite for patients and visitors alike.