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Virginia Tech's college of architecture and urban studies has decided to join forces with the Shenandoah Valley Discovery Museum in an effort to build a "green museum." This new building project would not only contain interactive exhibits exploring energy conservation, but the actual structure itself would be considered energy efficient, or "green."

The 27,000-square-foot children's museum is to be built in Jim Barnett Park in Winchester. The sustainable systems being incorporated into the museum include: active and passive solar energy collection, storm water management systems, natural ventilation systems, and geothermal pump systems for heating and cooling the building. According to Peggy McKee, the museum's executive director, "The building itself will be an exhibit. Everyone who visits will see what it means to build 'green.'"

It is estimated in the plans that 75 percent of the needed energy for the museum will come from photovoltaic cells and wind-generated energy. The structure will also include green roofs and rain barrels to assist in the recycling of rain water. Water can then be purified and placed into the city's water system.

The initial budget for the "green" museum is estimated to be around \$8 million. The conservation efforts are expected to lower the long-term costs of the project, and the sustainable features will ultimately profit the community.

The plan for the building, developed by Reader and Swartz Architects, has already won the Award of Merit in the 2005 Design Awards for The American Institute of Architects Northern Virginia Chapter. The design is also set to meet the highest standards prepared by the U.S. Green Building Council, and achieve the top rating on the Leadership in Energy and Environmental Design (LEED) scale.

The hope is that by earning this level of certification the museum will not only prove everyone's dedication to the project, but also the building's benefit for the surrounding community. The LEED rating will make the Discovery Museum one of four platinum buildings in the east.

Tech was approached to participate in the project by the museum's executive director. Tech will be responsible for evaluating the energy savings and the effectiveness of the sustainability systems.

Robert Schubert, the associate dean of the college of architecture and urban studies, is excited about the opportunity the school has been given. He said the students will be observing “a fully functioning and operating building, and learning from it.” They will be working with “cutting-edge” designs and materials and getting hands on experience.

The project will originally be reserved for graduate students only, and many will be able to use this as part of their final thesis projects. The evaluation component of Tech’s job will also allow for future Tech graduate students to play a role by continuing to monitor the success of the sustainability systems. Schubert also hopes that since the project “cuts across so many disciplines,” students from other majors and undergraduates will eventually be able to take part.

The ground-breaking ceremony took place on April 18, 2007 in Winchester. Fundraising and design development are currently in the works. The museum aims to open its doors sometime in late 2008.