McEwen Dining Hall

McEwen Dining Hall is a two-story, renovated and expanded 29,000 square foot dining facility located in the historic part of Elon's campus. The facility includes a residential dining hall and dining engagement space on the first floor, two new retail dining options on the second floor and expanded patio area for outdoor seating.

Per the University's Green Building Policy, the building was designed and constructed using the principles of the LEED program and received LEED Silver certification. LEED stands for Leadership in Energy and Environmental Design and is the preeminent green building rating system internationally.

Sustainable Sites

The facility is located within walking distance of many commonly used buildings on campus as well as downtown Elon. Bike racks are provided on the site and no new parking was added to the site. The site includes ample open space for outdoor seating and enjoyment. The roof incorporates areas of highly reflective material, which minimizes the heat island effect.

Water Efficiency

The restroom plumbing fixtures in the building are low-flow. The lavatory faucets use less than 1 gallon of water per minute, toilets have dual-flush handles and the urinals use only 1 pint of water per flush. These fixtures are expected to reduce the building's potable water usage by about 32%. The landscaping around the building is designed to minimize the need for irrigation.

Energy Efficiency

Energy efficient systems were integral in the design and construction of McEwen Dining Hall. The energy cost savings of the building is about 20% compared to a building that meets the standard building energy code. Among the energy efficiency strategies there are variable speed drives on pumps and fans, energy recovery wheels, variable air volume air handling units with air side economizing and high efficiency condensing type boilers for both heating and domestic services. The central chilled water system employs dual variable capacity, high efficiency air cooled chillers that also serve McEwen Hall, replacing 20-year old inefficient units. The exhaust and make-up air fans on kitchen hoods have variable speed drives controlled by heat and smoke intensity sensors to vary the speed of the fans to match the cooking load rather than being fully on at all times. Building lighting is controlled through a combination of switching and occupancy sensors. All lighting is energy efficient LED, including specialty lighting, which does not contain mercury. There is metering for water, natural gas and electricity, including sub-metering for HVAC, lighting and plug loads, which allows for improved monitoring and tracking of consumption.

Materials and Resources

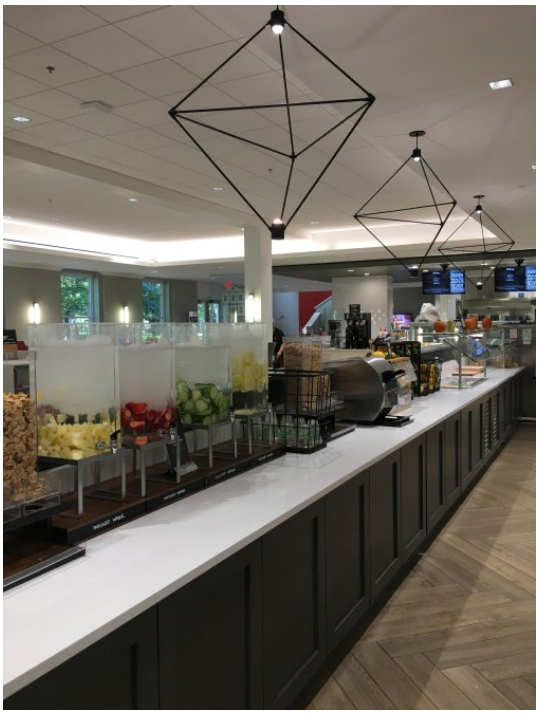
During the demolition and construction process, about 38% of the waste was recycled or reused, which kept it out of the landfill.

In addition, building materials with recycled content (pre and post-consumer) were used, about 15% based on cost. Using recycled content reduces the need for virgin materials. Specific examples include the structural steel, metal framing and drywall.

To support the regional economy and reduce the impact of transportation, regional materials were used as much as possible. In the LEED system, regional materials are those that are extracted, harvested, recovered and manufactured within 500 miles of the project site. Based on cost, about 11% of the building materials were regional. Specific examples include the structural steel, metal framing and some drywall and acoustical tile materials.

In addition, many of the furniture pieces contain recycled content.
As in all buildings at Elon, recycling containers are located throughout the building for single stream recycling, and cardboard recycling is also available. This building also has compost bins in food preparation and guest areas.

Indoor Environmental Quality



Providing excellent indoor environmental quality was another essential component in the design and construction of McEwen Dining Hall as it contributes to the health and productivity of building occupants. Great care was taken during construction to ensure the building and systems were kept clean and free of contaminants benefiting the construction workers and the eventual building occupants and users. For example, duct work was kept covered to prevent debris from accumulating and a special sweeping compound or wetting agent was used to minimize dust.

The adhesives, sealants, paints and flooring systems used in the building contain low or no amounts of volatile organic compounds (VOCs). Low VOC products allow for better air quality during and after construction. The composite wood products used in the building contain no added urea-formaldehyde. Many of the furniture pieces also incorporate low-emitting materials, and some have earned a third-party designation that verifies low chemical emissions.

The entry way systems also help provide good indoor air quality be preventing dust and other contaminants on shoes from entering the building. Most of the seating areas and many work areas have natural light from windows. Studies have shown that natural light improves occupant well-being and productivity.
A green cleaning program is also used in the building, which benefits occupants and maintenance personnel. Green cleaning improves air quality, occupant health and well-being and is better for the environment.

Innovation in Design

This category within LEED recognizes exceptional performance and innovative strategies not covered in standard credits. One strategy used in McEwen Dining Hall that earned an Innovation in Design credit is the use of low mercury lighting. The project also exceeded the open space requirement, has a design that supports active occupants and has enhanced water metering. An educational program to educate building occupants, visitors and the greater community on the sustainable building features and their benefits also received credit. If you would like a tour focusing on the sustainable features of this building, please contact us.