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New automotive training center in Manchester showcases environmentally responsible design

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Central New Hampshire will soon show further evidence of an important commitment to environmentally responsible architecture. The new Automotive Science and Technology Center at Manchester Community College is designed to be the city's first US Green Building Council Leadership in Energy and Environmental Design (LEED) Certified Building and the first for the Community College System of New Hampshire. In fact, the facility will be the first LEED Certified automotive training facility in the country.

The facility, designed by Lavallee Brensinger Architects and built by Jewett Construction Co., Inc., will support the college's growing Automotive Technology programs and be the first new construction on campus to meet the American College and University Presidents Climate Change Commitment. Manchester Community College President Darlene Miller pledged to create a comprehensive action plan for the campus to move toward climate neutrality. This commitment demands a sharp reduction and eventual elimination all of the College's global warming emissions, and accelerating educational efforts to equip society to re-stabilize the earth's climate. The new Automotive Science and Technology Center will be the first major step toward this commitment.

Designed to achieve a LEED Certified rating as guided by the USGBC, the center will incorporate a variety of strategies to increase energy efficiency and reduce environmental impact. Some of these strategies include a rainwater collection for flushing toilets and urinals, to reduce potable water demand, a daylight harvesting system using 48 tubular skylights designed to turn off electric lighting thus saving electricity, in-slab radiant-heating for better thermal comfort, high-efficiency boilers and heat recovery units, as well as solar panels to heat water.

"The new Automotive Training Center is a terrific example of how to design a building that is highly functional, energy efficient, environmentally responsible, as well as cost effective," said Chris Drobat, principal-in-charge for Lavallee Brensinger Architects.

Beyond the design features of the building, sustainable technologies will also be implemented during the construction process, which begins this month. Jewett Construction will target a minimum of 90% recycling of on-site construction waste, and will implement an indoor air quality management plan to ensure a healthy environment for contractors working in the building and those who will occupy the building. For areas outside the facility, a pollution prevention plan will address minimizing overall construction impact on the site.

"We are happy to have the opportunity to work with the owners and Architects to prove that you can build a project that is sustainable and LEED Certified -- within a previously established budget." said Randy Overbey, LEED Accredited Professional and project manager for Jewett Construction.

While other highly sustainable buildings exist in the State, including the Primex Office Building in Concord and the new Pondside III Residence Hall at Keene State College, both which are LEED

Silver Certified and designed by Lavallee Brensinger Architects, the Automotive Science and Technology Center employs several new systems and strategies. As with the other LEED Certified projects, the Automotive Science and Technology program will be making changes to raise awareness for students and building occupants. All cleaning agents used by students will be water-based and biodegradable, and there will be a designated area for recycling items such as metal, aluminum, paper, and glass. This ongoing education and awareness is an important element in the sustainable design movement as new materials are utilized and life style changes are required.

"The center will be a showplace that is environmentally conscious, learning friendly, and cutting edge for automobile technicians. The proposed 70,000 s/f building, to be constructed in two phases, offers opportunity to explore advanced technologies and alternative fuels," said Marc Bellerose, Manchester Community College Automotive Technology department chair.

The facility will consist of 4 drive-in laboratories, each with a capacity of 12 vehicles, several drive-in classrooms, and component laboratories, that will allow students to focus on specific systems of a vehicle, like transmissions, engine management systems, or electronic systems.Â A central, automated storage area for lab components and secure storage areas provides space for studentsÂ’ tools.Â Another key feature for the program will be a new dynamometer lab that enables students to evaluate vehicle performance for learning diagnostic skills.Â

For more information on LEED Certification Guidelines from the US Green Building Council, visit www.usgbc.org.

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