

The future of Meriden's high schools (Part 4)

By Brian P. Daniels and George McGoldrick

Going green in the upgrades of Maloney and Platt High Schools will present opportunities to provide cleaner, safer and more energy-efficient schools. Importantly, applying our current State reimbursement rate, the State will pay for over 77% of the upfront expense of such new technologies, while the City of Meriden will enjoy 100% of the future energy and maintenance cost savings during the life of the systems.

Such an environmentally friendly and fiscally sound approach will enable Meriden to satisfy the various State green construction requirements and also will allow the high schools themselves to serve as models for teaching important lessons about environmental awareness, sustainable ways of living, and our obligations to future generations. Many proven green technologies are available for inclusion in the school upgrades and offer significant improvements over the aging, inefficient and increasingly difficult to maintain mechanical and electrical systems in the current buildings. These improvements will create more attractive learning environments and more cost effective facilities.

Daylighting, for example, can be maximized to reduce the need for artificial lighting, and energy saving lighting controls can be introduced. New buildings or additions can be oriented to use the sun in ways that will reduce heating and cooling needs. In addition, fuel cells and photovoltaic systems (solar panels) are rapidly becoming cost-effective options for meeting a building's needs for electrical power and hot water. The proper selection of energy saving systems will depend on a careful analysis of all options available at the time the upgrades are implemented.

The technologies are evolving rapidly, and design professionals involved in Meriden's school projects should be charged with evaluating and including the most current sustainability and conservation practices and with incorporating the use of alternatively-generated energy in plans for any new facilities. The plans should maximize all opportunities for the city to gain financial assistance in the cost of installing the systems and rebates on the cost of their operation that may be available through programs in place with the State or through utility companies.

Although going green often is associated merely with energy savings and independence from reliance on fossil fuels, the green movement also includes many broader ideas of sustainability intended to preserve our planet's natural resources and maintain a healthy, renewable environment for future generations. These ideas include continuously evolving advances in the production and use of materials in manufactured items, in alternative ways of generating the energy we need, and in the conservation of critical natural resources like air and water. Thus, incorporating green technologies in our school designs will include careful consideration of the selection, production and transporting of construction materials, disposal of construction debris, and planning for maintenance practices that will include non-toxic cleaning agents, protection of water supplies, and recycling.

The High School Study Committee report identifies five principles to guide green technology considerations in evaluating upgrade options. The first is sustainability, a principle of meeting our needs without compromising the ability of future generations to meet theirs. This calls for practices that can continue indefinitely while conserving vital natural resources. The second principle is cradle to cradle design, which means replacing

the cradle to grave cycle of manufacturing with products that can be fully recycled, reclaimed, or reused. Source reduction is the third principle. It calls for changing our patterns of production and consumption to reduce waste and pollution. The fourth is innovation, which is needed to develop alternatives to current, environmentally harmful technologies like the burning of fossil fuels. The fifth principle, viability, is the creation of economic and intellectual activity around technologies and products that will benefit the environment, create new careers, and protect the planet.

Overall, a wealth of environmental, fiscal and educational opportunities will derive from the incorporation of green technologies in our high school upgrades. The sooner we can move forward in this regard, the better.

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