

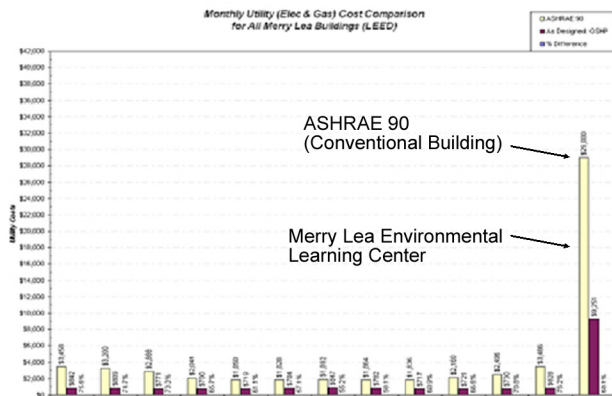
Sustainable Design

Merry Lea Environmental Learning Center
Wolf Lake, Indiana
U.S.Green Building Council
LEED Rating System™
LEED-NC, Platinum Level

This building achieved a Platinum rating under the LEED Green Building Rating System established by the U.S. Green Building Council. Having participated in the charrette facilitated by the Rocky Mountain Institute, the firm designed a mechanical system based on ground source heat pump technology. Innovative use of large paddle blade fans reduce the amount of ductwork required in the building and, in conjunction with operable skylights, completely “flush” the building with fresh air when outside conditions permit. Extensive computer energy modeling shows that the building will yield annual utility cost savings of 60% versus a building constructed to current industry standards, while at the same time providing the occupants with individual control and operable windows. Incorporation of a wind turbine and solar photovoltaic cells were included in the design. As part of its mission to minimize the building’s environmental impact, the firm - in concert with the design team - designed a “rainwater catchment” system to save and store rainwater on site, thereby minimizing any interruption of the natural water flow on site.



Architect's Rendering of the Academic Building at the Merry Lea Environmental Learning Center



Results of Computer Modeling of Building Utility Cost



Ecological Engine Designed by John Todd Research and Design to Process Wastewater on Site

integrating
MEP
design
with
comfort *and cost*
effectiveness

This project was undertaken and completed by Eta Engineers which became a division of HDC Engineering in 2009. The division specializes in mechanical, electrical and plumbing engineering services.