



## SUSTAINABLE DESIGN – KENTUCKY-TALCOTT RENOVATION

### ARCHITECTURAL DESIGN

1. The re use of the existing building is a major environmental / LEED accountability point. The re use / recycling of the exiting structure is of major importance.
2. Aluminum window screens are used to save energy and provide natural ventilation in dorm rooms.
3. Water-saving toilets, bladder style, are provided in individual bathrooms.
4. Insulated glass with Low E coating is provided.
5. Extensive use of daylighting of interior spaces with glazed interior openings in doorframe transom lights.
6. The existing exterior wall was insulated with 3 1/2 " batt insulation. The attic space was insulated with R-30 insulation.
7. Items incorporated in the design were modeled after a field vist to Northland College and reviewed by the project team for implementation.
8. Furnishings for dorm rooms to be provided by Ecological Furniture – renewable wood product, see attached information.

### MECHANICAL / ELECTRICAL DESIGN

9. We have provided an outside air energy recovery unit that uses a recovery wheel unit that exhausts the building air and accomplishes a 70% recovery of energy for outside air.
10. For pumping chilled and hot water, we have provided variable speed controls that achieve a significant savings.
11. For domestic hot water we have provided a recirculating system that provides hot water to the user at the point-of-use. This kind of system will provide hot water to the user in a minimum amount of time.
12. In cooperation with the Architect, we have provided for an insulation envelope for the entire building that matches the new window installation to maximize the total energy infiltration and leak influence on the total building envelope.
13. The chilled water unit selection was based on the most energy-effect models. As a result of these models, we were able to reduce this selection from 200 tons to 130 tons based on the Architect's commitment to high-energy values in the basic construction.
14. For energy efficiency, we have reduced the lighting load. For example, we have eliminated all forms of incandescent lamps.
15. For all of the corridor lights, we have provided either compact fluorescent lamps of 32 or 42 watts (with an efficacy of 28 or 33 watts, respectively) to minimize the consumed watts per square foot for all commons place lighting systems.
16. In the dorm rooms we have provided two types of lighting systems: Where possible, we have furnished twin fixtures that have high efficiency T5HO lamps to illuminate the room to a 35 Foot-candle average, where in other locations, we have used T8 lamps in appropriate fixtures in corridors and common spaces to achieve I.E.S foot-candle recommendations for the task at hand.