CASE STUDY:

**New Crow Wing County Campus Facilities Will Benefit from Energy Efficient Elements**

By Rin Porter, Central CERT

The giant construction project in Brainerd that is creating new facilities for Crow Wing County has many energy efficiencies, starting with the location. Wold Architects of St Paul is reusing the urban site where other buildings used to stand, providing Crow Wing County residents with services in a convenient, familiar location and allowing suburban spaces to remain green.

A new 240-bed county jail, Community Services Building, Central Services Building, Law Enforcement Center, Historical Museum, and new Judicial Center are being completed in phases. The Social Services Building will be remodeled to become the County Administrative Annex. The Historic Courthouse is being remodeled to include a new elevator and mechanical upgrades. Construction began in 2004. The Central Services Building opened in May 2005.

A centralized heating and cooling plant will serve all the buildings in the new campus. High efficiency water heaters and boilers have been specified for the complex. All the HVAC will be controlled by an Energy Management System. Heat recovery wheels at the air handler units collect heated air and return it to the system instead of exhausting it to the outside. The motors which run the system have variable speed drives.

Exterior lighting, corridor lighting, and large room lighting will be controlled by an Energy Management System. High efficiency T-8 fluorescent lights and HID lights will be installed, along with occupancy sensors, dual level switching, and dimming functions.

Low-e tinted glass will be used to retain heat and reduce summer heat gain. Daylighting will be provided through skylights and windows.

The building envelope will be highly insulated, and the exterior finish will be brick.

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