Couzens Hall Renovation

Project Description

Couzens Hall is an approximately 180,000-gross-square-foot residence hall housing approximately 560 students. The renovation will repair and update infrastructure, including: new plumbing, heating, ventilation, fire detection and suppression systems, wired and wireless high-speed network access, renovated bath facilities and accessibility improvements. New spaces will be created in the vacated dining areas that are no longer needed since the Hill Dining Center became operational. New and reorganized spaces within the facility will revitalize the old residence hall and create spaces for living-learning and academic initiatives, student interaction, and creation of community. The energy performance of the overall building will be brought up to our current design guidelines by: adding insulation to exterior walls where feasible, replacing most of the glazing and/or window systems, adding occupancy sensors for ventilation and lighting system control, and providing energy-efficient heating and air conditioning systems, as well as other energy conservation measures. Although the building will be more energy-efficient and meet our current design guidelines, the addition of air conditioning throughout the building will increase overall energy consumption. The scope of this project includes the architectural, mechanical, and electrical work necessary to accomplish these improvements.

Energy Efficiency Measures

- This project has been approved for the Designed to Earn ENERGY STAR® certification. This certification recognizes that this design project has met Environmental Protection Agency (EPA) criteria for energy efficiency
- Insulation added to existing exterior walls to improve thermal performance of building envelope
- Replacement of existing window framing and glazing in the west half (original) of the building and replacement of glazing in the east half (newer addition) of the building to increase thermal performance
- Chilled water utilized from the Mechanical Services Building adjacent to Mosher Jordan Residence Hall as the cooling source for the Resident Rooms in lieu of DX units
- Enthalpy wheel in the mechanical system used as a means of energy recovery to utilize lost heat from the toilet room exhaust system
- Occupancy sensors on the first and second floor common spaces reduce run hours for the central station air handling units
- Lighting power density reduction for the first and second floor common areas
- Occupancy sensors in the resident rooms reduce lighting power density and reduce run hours for the fan coil units
- Increased inspections, including infrared scans during construction completed to identify missing insulation, gaps in the enclosure and other wall/roof assembly deficiencies

Other Sustainability Features

- Project site located near public and U-M bus routes to encourage use of public transit
- Bike racks installed to encourage the use of bicycles for transportation
- No new parking provided on site to reduce pollution and land development impacts

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- Water conserving plumbing fixtures including low flow toilets, urinals and shower heads installed to reduce water consumption by over 20%
- Renovated with over 95% of the existing walls floors and roof and 50% of the interior non-structural elements reused
- Regional and local materials used where possible (not less than 10%)
- Low-VOC materials including adhesives, sealants, paints, coatings, carpet systems, composite wood and agrifiber products
- Daylighting and views provided for over 75% of the spaces in the building

Project Data

- Budget: $49 M
- Schedule: Completion Scheduled for Summer 2011
- Square Feet: 180,000 gross sq. ft. renovation

Substantially Complete: July 2011

- Project Status: Substantial Completion
- Design Complete: 100%
- Construction Complete: 100%