

Redwood Terrace Supportive Housing

Richmond, Indiana, USA



Insulspan® SIPs help cut energy use in multifamily housing development

Redwood Terrace Supportive Housing in Richmond, Indiana offers a supportive housing environment with 24-hour onsite supervision for the mentally and physically impaired. Funding for the 57,000 sq. ft. building was largely provided through the U.S. Department of Housing and Urban Development (HUD) HOME program. But the funding came with strict guidelines for energy efficiency and environmental sustainability.

Architect Sam Miller and the design team at ARCHitecture trio took a whole-building design approach to sustainability that included a passive solar design, high performance building envelope and efficient HVAC system.

“One of the things we do from the beginning is think of the entire building as an integrated unit,” said Miller. “For example, if you get a really efficient envelope you can reduce the size of your air handlers.”

Miller specified the Insulspan® Structural Insulating Panel (SIP) system for the walls and roof of the 60-unit building.

“We had some familiarity with Insulspan and thought it would be a really excellent choice to make an energy-efficient building,” he said.

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Insulspan SIPs have a continuous core of expanded polystyrene insulation and less framing than wood framed walls with cavity insulation, reducing the effect of thermal bridging through studs. Air leakage rates for energy-efficient buildings using Insulspan SIPs will typically be lower—another potential source of energy savings.

The combination of Insulspan SIPs with energy-efficient windows and air handlers achieved calculated energy savings of 40 percent over the 2006 code, according to REM/Rate software. These improvements are projected to save \$44,000 annually for non-profit building owner Centerstone.

Redwood Terrace received the Wayne County Area Chamber of Commerce Community Improvement Award for its significant improvement to the quality of life in the community.

“With a relatively simple solution of good design, Insulspan SIPs, and energy-efficient HVAC systems, ARCHitecture trio attained tremendous energy savings,” said Plasti-Fab Sales Representative Aaron Hinde, who assisted on the project.



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