



Rebuild America Success Stories highlight partnerships working to improve communities by practicing energy awareness and investing in energy-saving measures.

- New Building Design
- Existing Building Improvement
- Operation and Maintenance
- Renewable Energy Technologies
- Financing Building Improvements
- Energy Education



# Jackson Street Village

## *Building Energy-Efficient and Healthy Affordable Housing*

The Amherst H. Wilder Foundation, a Rebuild America community partnership, is working to create affordable housing in St. Paul, MN, that is energy-smart and healthy. The partnership - composed of the Amherst H. Wilder Foundation, the American Lung Association of Minnesota and RS Eden, Inc. - built a multifamily complex on a reclaimed brownfield site. Jackson Street Village will benefit its residents through lower utility bills, healthy indoor air quality and a comfortable environment.

### The Challenge

A challenge in building low-income housing is to ensure affordability long after the last nail is hammered. A complex can quickly become unaffordable if its residents are burdened with high utility bills. Furthermore, if the indoor environment is unhealthy, it may affect residents' respiratory health, which means more doctor's visits and medical bills. The Amherst H. Wilder Foundation's goal was to create an affordable housing complex that avoided these common problems, while keeping the extra expenses to no more than 10 percent above the costs of a conventional project.

### The Solution

Energy-smart materials and practices were incorporated into Jackson Street Village to ensure that residents' energy bills are, and continue to be, affordable. Rebuild Minnesota facilitated the process by putting the builders in contact with utility programs that fund energy-saving practices.

The complex, which houses 24 low-income families, features energy-efficient windows and a ground source heat pump that will reduce heating and cooling costs.

An innovative construction method known as "PERSIST" (pressure-equalized rain screen insulated structure technique) will help reduce moisture build-up in the buildings. Jackson Street Village is the first project in Minnesota to use the technique imported from Canada. Traditionally, sheathing, insulation and moisture barriers are placed on the inside of a building's frame. The PERSIST method, however, places those components on the outside. "This construction technique is literally 'thinking outside of the box,' by putting insulation on the outside of the structure's frame," says Bruce Nelson, senior engineer at the Minnesota State Energy Office. "The building method is expected to increase energy efficiency while at the same time reducing the chances of mold and durability problems." Tom Schirber, with the Amherst H. Wilder Foundation, notes that they were aiming to make the building envelope as airtight as possible.

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# Partnership Facts:

**Name of Partnership:**

Amherst H. Wilder Foundation

**Targeted Buildings**

Public & Multifamily Housing

**Space Completed:**

39,000 square feet

**Annual Energy Savings**

\$300 per unit

**Amount Invested in Energy-Saving Project:**

\$400,000 - \$450,000 (includes Health House components)

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For more information about energy-saving technologies, visit the Business Partners section of the Rebuild America Web site: [www.rebuild.gov](http://www.rebuild.gov) or contact Rebuild America at: 252-459-4664.

To ensure adequate ventilation, air is changed about 2.2 times per hour in the units. Continuously-operating fans were installed to remove moist air from bathrooms and kitchens.

Jackson Street Village is being built in accordance to the American Lung Association Health House® program guidelines. The performance-based program - started by the American Lung Association of Minnesota a decade ago - helps builders and homeowners create sustainable, energy-efficient homes with healthy indoor environments. Health House is active in 30 states with over 120 completed houses. Jackson Street Village is the program's first multifamily project.

Although Jackson Street Village incorporates energy-smart building techniques and materials, the project's additional costs were less than 10 percent above traditional construction methods, meeting the Foundation's goal.

## Partners

- American Lung Association of Minnesota
- Minneapolis Foundation
- Minnesota Housing Finance Agency
- Rebuild Minnesota
- RS Eden, Inc.
- University of Minnesota
- Xcel Energy

## Key Technologies

- Pressure-equalized rain screen insulated structure technique (PERSIST)
- Exhaust-only ventilation system
- Ground-source heat pump
- Energy-efficient windows

## What the Future Holds

The University of Minnesota, in conjunction with Xcel Energy, will provide energy training to the residents. The training will cover topics such as HVAC operation to ensure optimum energy performance and healthy indoor air quality.

The complex will also be monitored by the Health House program - through devices installed during construction and portable equipment - to study air quality, temperature control and utility consumption. Health House plans to publish the research so that others can learn from Jackson Street Village.

To learn more visit: [www.eere.energy.gov](http://www.eere.energy.gov).

## A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

Rebuild America is a U.S. Department of Energy program that focuses on improving communities through energy-saving solutions.



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