

## Frequently Asked Questions Regarding Structural Insulated Panels (SIPs)

### What are SIPs?

SIPs are high-performance building panels for floors, walls and roofs in residential and commercial buildings. Each panel is typically made using expanded polystyrene (EPS), sandwiched between two structural skins or oriented strand board (OSB), but other surfaces are also available to meet your needs. The result is a building system that is very strong, predictable, energy efficient and cost effective.

### Why do SIP homes outperform others?

SIP buildings are vastly more energy efficient, stronger, quieter, and more draft free than other building systems, such as stud framing with fiberglass insulation. Rigid insulation is used as solid component insulation in almost every industry for its inherent efficiency and lack of air movement. These attributes are built right into a SIP building. Less air leakage means fewer drafts, less noise, lower energy bills, and a much more comfortable indoor environment.

### How much more energy efficient are SIPs?

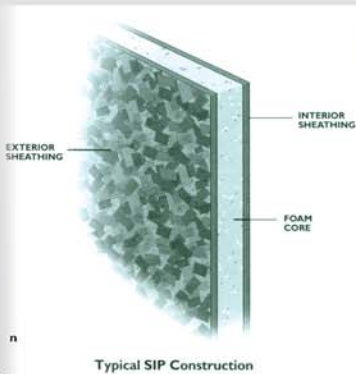
You can slash energy costs by up to 50%. Because SIPs create a tighter building envelope than conventional insulation, your builder can actually reduce the size of heating and cooling equipment. Better yet, SIPs keep your costs down from season to season, year after year, for as long as you own your home.

### How are electrical and plumbing installed?

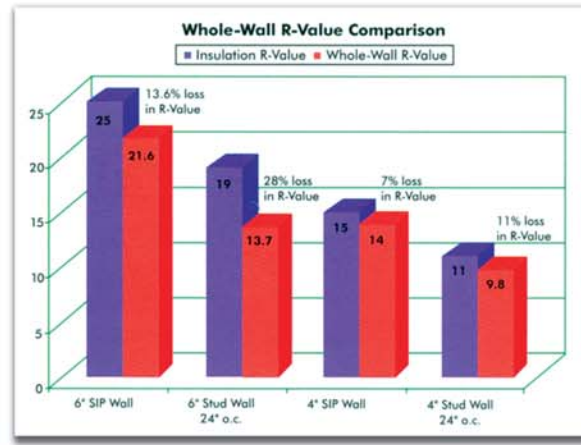
Chases or channels are built into the foam cores of a SIP panel that work like conduit. Electricians use a fish tape and feed the wires through panel chases without compressing insulation or drilling through studs. Typically, plumbing is installed in interior walls and floors, not exterior. Where exterior wall vent pipes are necessary, chases can be formed in the foam cores. Installing island vents or loop vents is also a common practice and can be found in plumbing codes.

### Are SIPs more expensive?

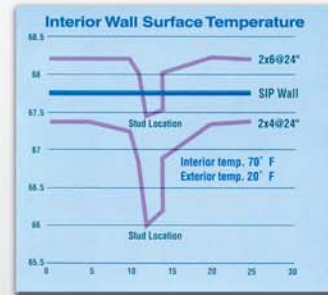
Building with SIPs generally costs about the same as building the typical stick frame wall structure, only when you use a comparable insulation like Icynene® spray foam, not fiberglass. The value really adds up when you factor in the savings gained by reducing the size of the mechanicals, monthly energy savings and faster rough frame completion.



## Apples to Apples: A Realistic Comparison



The above chart shows a realistic comparison between SIP wall and stud wall energy performance. Superior design enables even a 4-inch SIP wall to outperform the fatter 2x6 stud wall, despite the stud wall's nominally higher-rated insulation. For equal thickness walls, a 6-inch SIP wall beats a 6-inch stud wall by more than R-7, while the 4-inch SIP wall beats the 2x4 stud wall by R-4, providing 40% more energy efficiency.



Structural Insulated Panels (SIPs) set a new benchmark for insulation R-value performance. SIPs are the 21st Century construction system with R-values that accurately reflect thermal performance. With SIPs, stated R-value and real-world R-value are nearly identical. There are no cold spots and drafts are virtually eliminated.

**SIPs are the cost-effective solution for energy and comfort conscience homeowners.**



Jerry Olejar  
www.sixjsconstruction.com  
jolejar.mn@netzero.com  
612-801-6565  
Fax 763-441-8898



**Specialized Installer of  
Structural Insulated  
Panels (SIPs)  
& Insulated Concrete  
Forms (ICFs)**



Jerry Olejar  
www.sixjsconstruction.com  
jolejar.mn@netzero.com  
612-801-6565  
Fax 763-441-8898

# Seven Ways You Save With Structural Insulated Panels

## Slash energy costs by up to 50%.

Because they are far better at tightening the building envelope than conventional insulation, you can actually reduce the size of heating and cooling systems. In itself, that reduces costs immediately. Better yet, SIPs keep your costs down from season to season, year after year, for as long as you own your home – often saving homeowners as much as 50% on energy bills.

## Qualify for energy-efficient loans.

Building with SIPs may help you qualify for an energy-efficient mortgage. Monthly savings resulting from energy efficiency can be used to qualify borrowers for a larger mortgage.

## Cut down on drafts.

Why are SIP homes so draft free compared to ordinary houses? Consider ordinary insulation. The most common – fiberglass – lets air pass with



surprising ease. In fact, because air moves through it so freely, it is often used as furnace filters.

SIPs, on the other hand, permit no air leakage. That means your home will

maintain a more even temperature throughout the day and night. Your furnace and air conditioner system won't have to work overtime to keep you comfortable. And you won't be annoyed by drafts interrupting your daily activities.

## Save construction time.

Materials are delivered cut-to-shape and assemble with trouble-free precision. And because the insulation is already in place, the time-consuming task of installing fiberglass or other material is eliminated completely.

## Reduce construction waste - and associated costs.

Part of every construction job is the clean-up afterwards, which includes landfill charges. Because structural insulated panels are made to order, they fit together exactly and create far less waste.

## Reduce worry. increase peace of mind.

The phrase "solid construction" takes on new meaning with SIPs. The panels are literally solid, which results in a stronger home. Not only do laboratory tests bear this out, but houses built with SIPs fare far better in events such as straight line winds and tornadoes. So why worry, when you can enjoy the peace of mind of SIP construction?



## Decrease noise.

SIPs give you another kind of peace as well. Peace and quiet. Thanks to their solid core, they muffle noise coming from outside the home. And when used in floors and ceilings, they really cut down on the noise created inside your home – good news for everyone who enjoys a peaceful atmosphere around the house.

## Six J's Construction, Inc. is also a Professional Installer of Insulated Concrete Forms (ICFs)

### Healthy Indoor Air/Comfort

Homes built with ICF's, allow very little air escape or infiltration resulting in a reduced level of airborne dusts and allergens, especially when a fresh air exchanger is used. The home will also maintain a more uniform temperature throughout the day.

### Mold Resistant

Moisture during the building cycle invites dry rot, mildew and mold. Because of the absence of wood in the exterior envelope of an ICF foundation/home, this type of damage is virtually unyielding.

### Savings:

ICF Home owners save 50-80% on energy costs and 15-25%

on insurance premiums. Lower maintenance costs and higher resale values also put money back into your pocket.

### Noise Reduction:

An ICF walls greatly reduces outdoor noises like busy streets, freeways, airports, or barking dogs and lawn mowers on early Saturday mornings.

### Strength & Durability:

ICF's, with a reinforced concrete center, tested below grade, resist buckling and cracking nearly 5 times better than traditional hollow concrete block foundations. ICF structures are more resistant to severe weather conditions than wood framed construction.



## SIPs are the solution.

Make your own comparison between SIPs and other wall systems by visiting the SIPA home page at [www.sips.org](http://www.sips.org) where you'll find ORNL's Summary Data, as well as complete test results.

Don't just take our word for it, check in and see for yourself. SIPs outperform the other systems.

Six J's Construction, Inc. is your professional installer of Structural Insulated Panels.

Call today and welcome to the high-tech home with savings built right in.



Jerry Olejar  
[www.sixjsconstruction.com](http://www.sixjsconstruction.com)  
[jolejar.mn@netzero.com](mailto:jolejar.mn@netzero.com)  
**612-801-6565**  
 Fax 763-441-8898