

## Bill Chaleff's Tips for Designing with SIPs

Over the years, Bill Chaleff has learned how to optimize a design for the SIP building system. "When you fully understand how to use the product, it really sings. Unfortunately, we're not yet at the stage where most builders, designers and engineers are fully exploiting the capability of the panels in their SIP structures. Despite that, I eventually see SIPs as completely replacing stick framing." When asked to share design and building tips for working with SIPs, Chaleff offered the following:

1. "Use SIPs for your cathedral ceilings; they really shine here. People who just use SIPs in walls are missing out." Here's the dollar savings trick: bring your second-story walls up just five or six feet instead of a full eight feet or more. Then with a moderate roof pitch, you optimize the mix between square footage of panels installed to useful space created on your upper level.
2. While Chaleff says headers are regularly overbuilt in typical framed construction, he urges engineers and designers to use panels to their full potential; often that will either minimize or eliminate the use of headers and lintels. He also sometimes sees posts embedded in panels that are also oversized. "Insulspan has a wonderful bit of engineering, covering load-span tables and charts, that was written up by Thomas Bible. It includes a 40-page tutorial that is excellent. If people carefully put that in practice, we would have less over-building and less 2x lumber in SIP structures."
3. Where you have large cantilevers that need to hold up walls and roof systems and which would normally require added structural beef, Chaleff says you can save money by using panels instead.
4. Rooms with conventionally framed floors that are either above garages or are completely exposed to the outdoors often are the source of comfort callbacks. Chaleff uses SIPs for exposed floors and never has related comfort complaints.
5. Chaleff likes using the Endura roofing product over panels "because it gets rid of telegraphing at roof panel joints." Made of recycled materials impregnated with asphalt, the Endura product comes with a lifetime warranty.

Apart from these and other design tips, Chaleff believes the energy-saving advantages of SIPs will become more appreciated by prospective buyers as energy costs rise and general environmental awareness increases.

If people want to optimize their use of roof panels, they shouldn't opt for complex hip roof designs. "Yes, you can use SIPs in all roof design applications, but they are much more suitable for single slope and single ridge roofs. Cathedral ceilings and clerestory windows are some of the especial benefits of SIP roof framing which can be lost when cookie cutter type plans are used.