

# Cornerstone Building System 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) insulation sandwiched between two structural skins of oriented strand board (OSB), designed, fabricated and cut to meet your custom building specifications. Building with sips prevents moisture or bacteria from collecting in the walls. The closed-cell structure of the EPS foam core, when combined with a properly designed and installed Heat Recovery Ventilator Unit can help prevent "sick house syndrome" and create an allergy-free environment for your family.

SIPs buildings are energy-efficient, quiet, comfortable, clean and resistant to insect infestation and other allergens. Building with SIPs can result in a lower mortgage rate on the house as well as a higher resale value. SIPs cost are the same as other building material costs, but SIPs labor costs are much cheaper, resulting in overall savings. The result is a building system that is very strong, comfortable, energy efficient and cost effective.

CBS insulated panels offer customers a state-of-the-art energy efficient building system using stress-skin panel technology. Panels are manufactured in a controlled environment in which two 7/16" Oriented Strand Board (OSB) skins are laminated to one pound density Expanded Polystyrene (EPS) cores using an industrial grade waterproof adhesive under controlled pressure to form a one-piece panel with the strength of a monolith.

Under testing, CBS panels are more than twice as strong as a comparable conventional stick-frame wall, and will not twist, rack or warp.

CBS panels are environmentally safe, contain no CFCs, emit no toxins or known carcinogens, and are technically inert. Scrap materials created during the manufacturing process are up to 100% recyclable.

Due to the low-permeability and closed-cell nature of the EPS cores, and the waterproof nature of the adhesive, CBS panels retain their high R-value for the life of the structure without the following common drawbacks of conventional structures using fibrous installation:

- Thermal short-circuits at each stud due to the low R-value of the wood
- Heat-robbing thermal siphoning due to the "breathing" of fibrous insulation
- Indoor drafts from voids in the insulation, openings around electrical outlets and mechanical chases, etc.
- Depreciation of the R-value due to the moisture content of the air within the fibrous insulation

Standard CBS panels are manufactured in five thicknesses:

- 4.5" (Two 7/16" OSB Skins) 3-5/8" EPS Core R-17
- 6.5" (Two 7/16" OSB Skins) 5-5/8" EPS Core R-25
- 8.25" (Two 7/16" OSB Skins) 7-3/8" EPS Core R-32
- 10.25" (Two 7/16" OSB Skins) 9-5/8" EPS Core R-43
- 12.25" (Two 7/16" OSB Skins) 11-5/8" EPS Core R-53.

- The 4.5" panel is typically used in residential walls.
- The 6.5" panel is typically used in residential wall and roof panels.

- The three largest panels are used when a higher R-value, and/or greater roof spans or loadings are required.



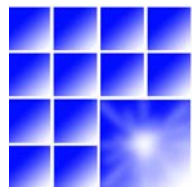
**CBS SIPs are engineered to meet all local, state and Federal building Codes.**

CBS manufactures its panels in 8' x 24' one-piece units. These panels are then cut and machined to individual building requirements. The size of these panels helps to add efficiency for the builders by allowing the installation of very large areas (up to 192 square feet) of walls or roofs in one piece. Electrical chases are pre-cut into all 4.5" and 6.5" wall panels at 14" and 44" from factory edges. Factory edges can be identified as those that have a colored coating on the edge of the OSB sheathing.

CBS follows strict quality control procedures and are continually testing and evaluating our panels. All panels are warranted for a period of ten years from the date of manufacture against delamination and structural defects. CBS panels are building code approved under NER # 467. PFS Corporation of Madison, WI independently monitors the manufacturing process and quality control for CBS.

Each CBS panel delivered to our customers is cut to exact specifications directly from the architect's or builder's plans. Again, this adds to the installer's efficiency by eliminating the necessity for many on-site measurements and cuts. Our panel packages are shipped directly to the job site ready for installation complete with a working set of drawings and with all window and door openings rough-cut. CBS can also supply all plates, splines and adhesives necessary for installation. Accurate door and window openings, intricate dormers and complex ridge and roof cuts are fabricated by our skilled craftsmen using CAD "instructions" and proprietary equipment. Fully pre-cut panels are supplied to most project sites resulting in significant savings in time, labor and clean-up.

Because the entire structural panel shell is fabricated in large sections in a controlled environment, panel shells for buildings from the simplest ranch to multi-floored and multi-winged custom buildings can be installed in just days rather than the weeks required by conventional structures.



"A better way to build"

**Cornerstone**  
energy efficient homes

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