
INSULSPAN STRUCTURAL INSULATING PANELS (SIPS)

Areas included are as described in your estimate / proposal. Structural Insulated Panels have proven to be the perfect mix of a “structural” panelizing system and a superior insulating system all in one. SIPS, having “super insulating” qualities, also produce a “super tight” building envelope or shell. This “super insulated” and “super tight” combination is the best of all worlds in energy efficiency and regularly achieves a high grade in Energy Star Ratings. Insulspan SIPS are manufactured under ISO 9001:2000 Certified standards to assure fail-safe quality and code compliance. NER 520 Code approval information is available at the Insulspan website (www.Insulspan.com). Click on *For Professionals* and select *Technical Specifications* to view and download these reports.



PANEL CONFIGURATIONS:
THE PANELS CONSIST OF A CORE OF EXPANDED POLYSTYRENE (EPS) INSULATION LAMINATED BETWEEN TWO SHEETS OF 7/16" ORIENTED STRANDBOARD (OSB).

Panel thicknesses are as described in your estimate/proposal. Different from conventional wafer board, “oriented strandboard” (OSB) crosses the layers of wood fibers, making for an 8’ x 24’ sheet of board with superior strength and integrity. The Structural Panels outer OSB layers are held like the wafers of a sandwich cookie by the inner layer Expanded Polystyrene, which is the insulating core. The EPS and the SIPs are manufactured under ISO standard to the optimal balance of strength and insulating qualities. Our jumbo SIP panels start at a size of 8’ x 24’ which minimizes joints and simplifies construction. The Insulspan panels are manufactured in our own shop to assure timely deliveries and quality control. Panels are available in 2, 4, 6, 8, 10 and 12-inch nominal thicknesses based on load requirements and desired insulation qualities.

ROOF PANEL RAKES



The edges of the roof panels are cut to shape and the foam is relieved to receive the 2x sub fascia material. The 2x for this job is included and ripped on the proper roof pitch angles for a snug fit in all the eaves and gables around the roof's edge

FOOT PLATES



This 2x material is glued and fastened to the perimeter of subfloor. The panel wall is relieved to fit over this footplate making a solid connection of wall to floor.

LUMBER IS PRE-INSTALLED IN THE PANELS AS MUCH AS POSSIBLE



A substantial percentage of the lumber that has to be installed with the panel system, i.e. bucks, corners, edges, etc. can be installed ahead of time in the controlled shop environment. The quality of the installation is higher when this can be done, and saves tremendous amounts of time, labor and money.



Splines are used to connect panels to each other. Using adhesive and nails, splines connect the panels and capture the expanding foam as it is injected into the joints. This system keeps the foam insulation continuous, and makes an uninterrupted blanket around your home.

Non-structural HEADERS



Headers are used to transfer loads over and around window and door openings in walls. Many times the panel itself is capable of handling this in a configuration known as a box beam header. If additional strength is needed, an LVL or LSL header is used.

WINDOW AND DOOR BUCKS

Each window and door opening in the panel system, where the foam is exposed, has the foam relieved 1 1/2" to receive the bucks. This 2x material gives you a solid opening and prepares this "rough opening" for the installation of windows and doors. These window and door bucks are included as part of your panel package.



SUB-FASCIA FOR ROOF PANELS, EAVES AND RAKES



The most important detail to get right in the installation of Structural Insulated Panel systems is the airtight sealing of the roof panel joints. Airborne moisture, usually at higher levels in the interior, (or vice versa in hot humid climates) must not be allowed to pass through these roof joints. Seal tape is our way of making sure the seal is complete. These redundant systems are your assurance of satisfactory results. Do not allow your home to be finished without both foam and tape systems properly in place.

WEATHER RESISTANT BARRIER (FOR WALLS) / HOUSEWRAP

Insulspan weather barrier is your second line of defense against moisture coming through your exterior finish. Our Insulspan house wrap is designed mainly to keep moisture that penetrates the exterior finishes i.e. sidings, brick or stone, from reaching the OSB sheathing. We include this house wrap with our package.



MATERIAL FOR SPACERS



Spacers are used to hold the panels away from the timbers. This “space” is sized so that the finish materials, i.e. drywall, plaster, tongue & groove wood can slide behind the timber and their raw edges be hidden. A much cleaner look is achieved by the use of this method, and no trim is needed to cover ugly material edges or gaps. It’s these kinds of details that give Riverbend homes a superior finished look.

SPLINES

SPIKES, SCREWS

The panels are connected to one another and to the timber frame as per the fastening schedule. All the specialty screws or spikes are included for the complete assembly. Having the right fasteners put in the right place and in the right way is essential for proper system performance and enforcement of the warranty.



ADHESIVE



Insulspan's special sealant/adhesive is designed to seal off gaps and potential air leaks in addition to being a construction adhesive. Super tight, super insulated homes require special attention to details when assembling and sealing the envelope. Using the right material for this job is essential. These adhesives must have superior tack, elasticity, and be compatible with the foam components. The wrong adhesives will melt the foam away, defeating all efforts to seal up the structure.

FOAM SEALANT



Two part expanding foam is an essential part of the assembly process. It is injected into every spline-jointed panel joint, every pre-design foam gap, and any gap or void left after assembly. The foam expands to completely fill every nook and cranny, creating a continuous insulation blanket enveloping your home. Doing this step correctly is essential to achieve the tight home quality that Insulspan SIP systems are known for.

ASPHALT ROOF CAULK



This type of caulk is used to seal the outside roof panel joints, which minimizes the potential for edge swelling and shingle ridging.

PANEL SEAL TAPE (FOR ROOF)

ALL PANELS ARE PRE-CUT TO SIZE AND SHAPE;

Every piece of the SIP puzzle that makes up the shell of your home is pre-cut to size and shape. Cutting the panels in the controlled environment of the shop by skilled professionals will always render better results than site cutting. Site cutting has unpredictable weather conditions that can wreak havoc on quality control. Less time in the field will render less cost for crane and crew and pre-cutting will result in superior fit and integration with the timber frame. Dry in times are substantially reduced with the average home being under roof in less than three weeks.



WINDOW AND DOOR ROUGH OPENINGS ARE ALSO PRECUT



Precutting of the window and door rough openings is included as part of the package. Pre-engineering assures that any loads coming from floors or roofs above are properly headed off and transferred around the openings. Cutting these ahead makes for quicker dry-in times and less cost on site.

WIRE CHASES



This is the standard, pre-drilled wire chase configuration. Horizontal placement at 14" and 44" above the finished floor and vertical chases 6' from door openings on both sides. Any other wire chases can be added during the designing of the panel system. Chases for things like ceiling fans or high-placed lighting should be made known to us as soon as possible during design. However, if necessary, there are many ways to get chases in the panels after they are installed. Your Riverbend representative will help with any questions related to the electrical wiring of your home.

SIPS PACKAGE INCLUDES THE FOLLOWING:

(overhangs and soffit can be designed to many dimensions.)

The “rake” overhang is stated so because it is raked or sloped like on a gable end. If the overhang is such that a gutter would not typically be installed or is not level with the horizon, it is a rake overhang. Its dimension can be determined independently of the “eave” overhang. The edges of the rake overhangs are cut squarely to receive the sub fascia and trim boards.



ROOF PANEL EAVES



The “eave” overhangs are the areas where the gutter would or could be installed. They are level with the horizon.

There are three (3) generally accepted ways to cut the edge of the roof panel in these areas.

SQUARE CUT EAVES



Sample Square cut eave detail.

PLUMB CUT EAVES



Sample plumb cut eave detail:

LEVEL OR HORIZONTAL CUT EAVES



Sample level cut eave detail:

PANEL FABRICATION AND ACCESSORY MATERIALS:
