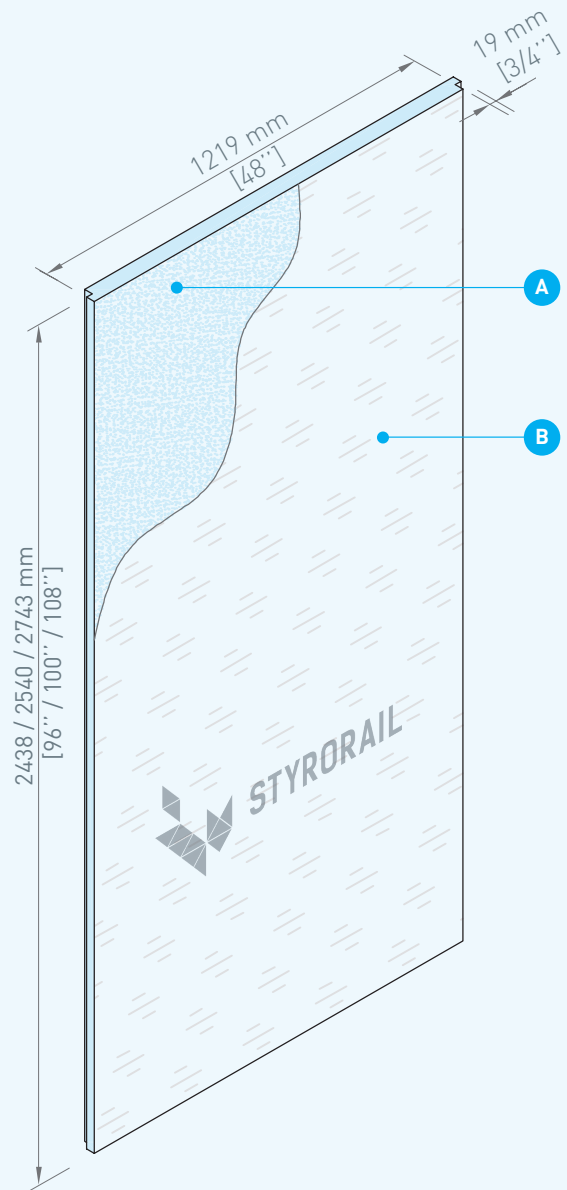


# SR.RADIANT™

EXPANDED POLYSTYRENE RIGID INSULATION COMBINED TO A VAPOR BARRIER REFLECTIVE MEMBRANE

The SR.Radiant™ panels manufactured by Styro Rail™ are composed of type 1 expanded polystyrene [EPS] rigid insulation laminated to a vapor barrier reflective membrane with a reflectivity rate of 97%.



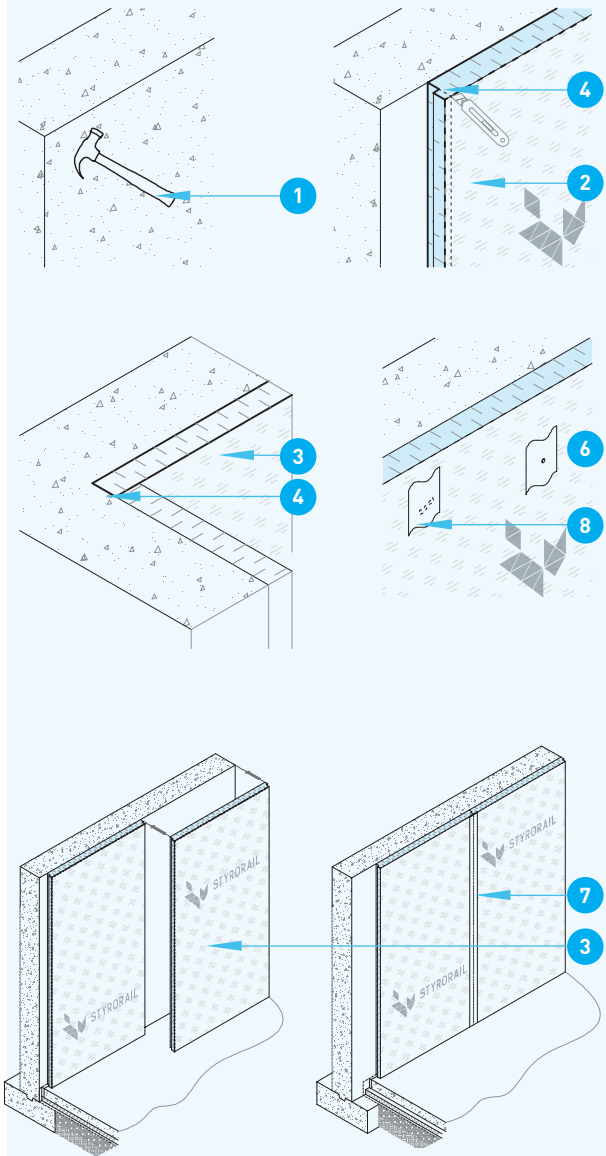
## RECOMMENDED USE

Install SR.Radiant™ panels on the interior surface of foundation walls, the reflective surface towards an enclosed air space with furring strips.

## PANEL COMPOSITION/DESCRIPTION

- A** Type 1 Expanded Polystyrene Rigid Panel Insulation [EPS] manufactured by Styro Rail™
- B** Reflective vapor barrier membrane with a reflectivity rate of 97%

## PANEL INSTALLATION

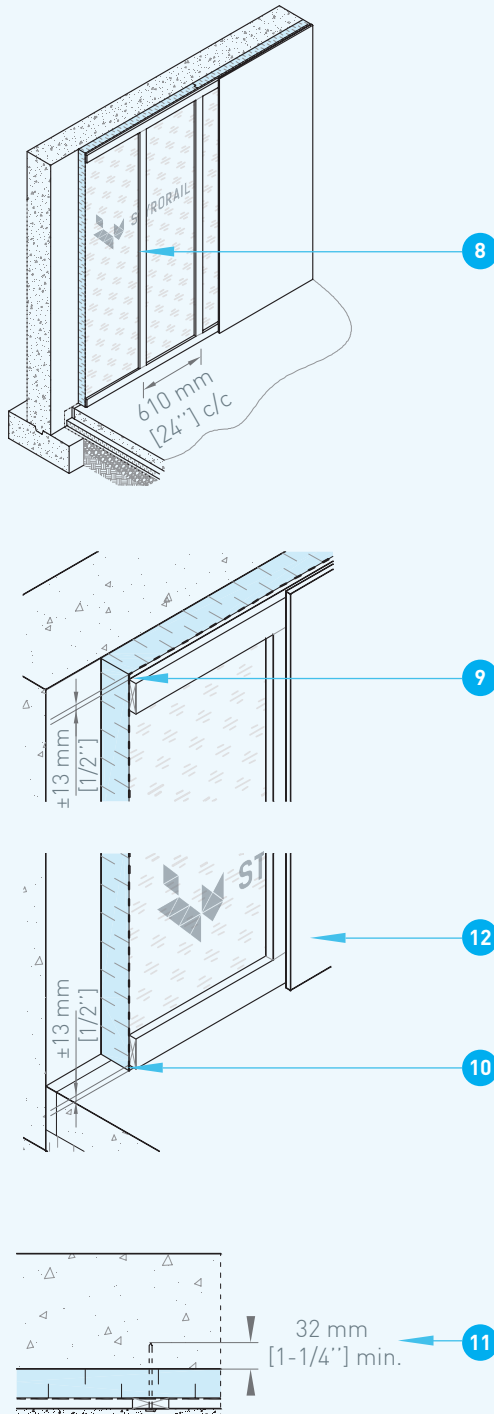


## GENERAL INSTALLATION

- 1 Using the flat surface of a hammer; scratched the surface of the concrete wall to remove concrete bumps.
- 2 Install the panels on the interior surface of the foundation wall; the reflective surface being visible.
- 3 Install vertically on the full height of the wall. Start from the interior corner, from left to right. Butt ends between panels. Install panels continuously and uniformly.
- 4 Using a knife with retractable blade; cut off the ship lap to ensure insulation continuity at the corner.
- 5 Temporarily secure with a compatible adhesive<sup>††</sup>. Press firmly on the glued part in order to limit adhesive accumulations that would prevent the complete contact of the panel on the wall.
- 6 If nails are used to temporarily secure the panels; fix where a furring strip will be installed. Cover the nail with a compatible reflective vapor barrier tape<sup>†††</sup>.
- 7 Seal the joints with a compatible reflective vapor barrier tape<sup>†††</sup>.
- 8 If the membrane has been perforated during the installation; plug the holes with a compatible reflective vapor barrier tape<sup>†††</sup>.

**Note:** Renovation installation shown here.

PANEL INSTALLATION

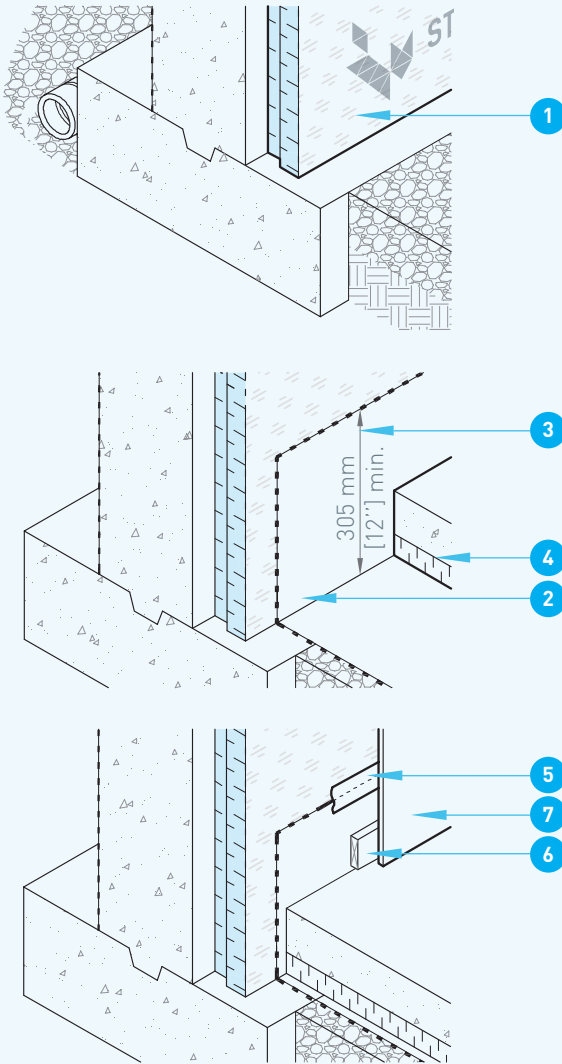


GENERAL INSTALLATION  
[CONTINUED]

- 8 Install the 19 mm x 64 mm [1"x3"] furring strips at the upper and bottom edge of the wall. Install vertically at 610 mm [24"] o.c. in order to create a closed air cavity in front of the reflective membrane.
- 9 Leave a spacing of approximately 13 mm [1/2"] between the upper edge of the panel and the horizontal furring strip in order to leave a space for the sealing of the wall with spayed urethane.
- 10 Leave a spacing of approximately 13 mm [1/2"] between the furring strip at the bottom edge of the wall and the concrete slab in order to limit the migration of humidity.
- 11 Use concrete nails ensuring a penetration of 32 mm [1-1/4"] in the concrete wall. Predrill the wall using an impact drill if necessary.
- 12 Install a protective barrier such as gypsum boards.

**Note:** Renovation installation shown here.

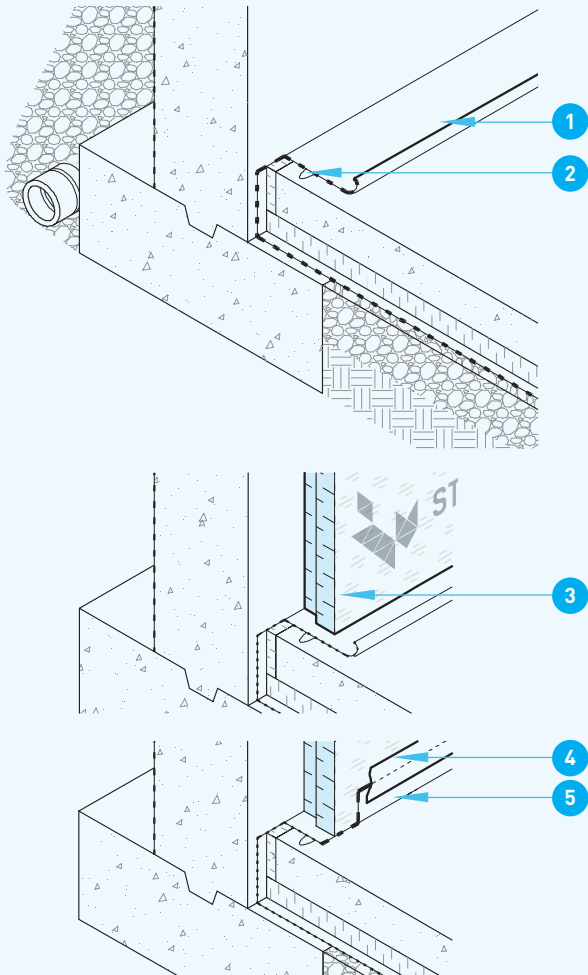
PANEL INSTALLATION



INSTALLATION  
[NEW CONSTRUCTION]

- 1 Install panels directly above the footing, before the pouring of the concrete slab.
- 2 Install and seal a vapor barrier on the ground and on the footing.
- 3 Leave a minimum 305 mm [12"] strip at the bottom of the wall. Fold back the strip on the wall. Temporarily secure with an adhesive tape.
- 4 Install expanded polystyrene insulating panels on the ground, over the vapor barrier. Pour the concrete slab.
- 5 Fold back the vapor barrier on the reflective membrane. Seal with a compatible reflective vapor barrier tape<sup>+++</sup>.
- 6 Install the furring strips as per the installation method described in this guide.
- 7 Install a protective barrier such as gypsum boards.

PANEL INSTALLATION

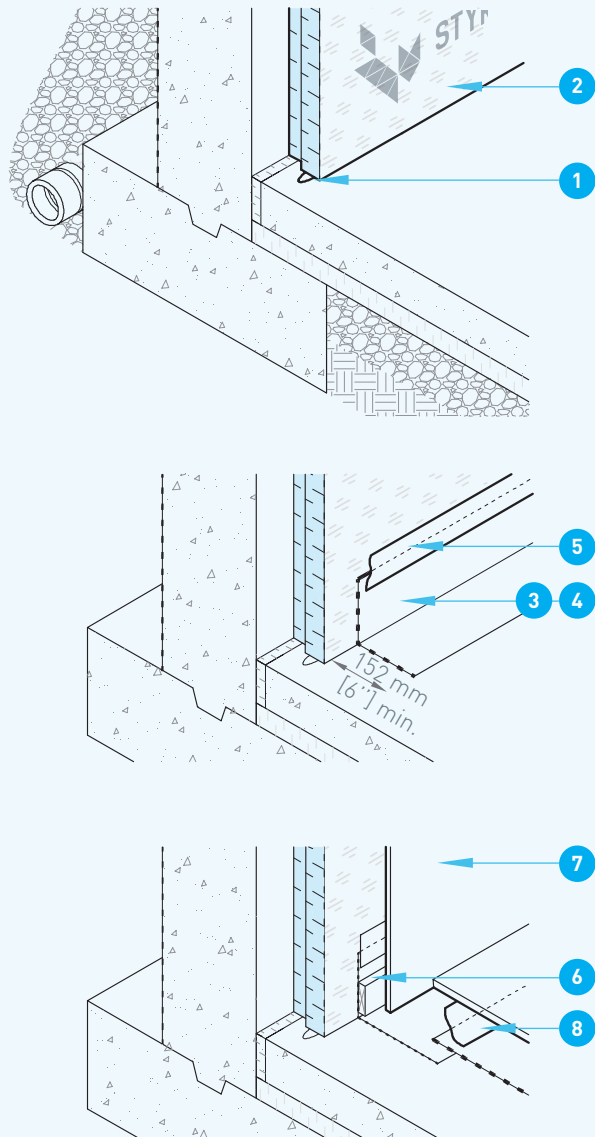


INSTALLATION  
[RENOVATION]

EXISTING CONCRETE SLAB WITH VAPOR BARRIER

- 1 If a vapor barrier strip exceeds at the bottom of the foundation wall, fold forward over the concrete slab before the panel's installation.
- 2 Apply an acoustic sealant<sup>†</sup> bead between concrete slab and vapor barrier.
- 3 Install panels on the concrete slab, above the vapor barrier.
- 4 Fold back the vapor barrier strip over the panel.
- 5 Seal the junctions between the vapor barrier and the panel with a compatible reflective vapor barrier tape<sup>†††</sup>.

PANEL INSTALLATION

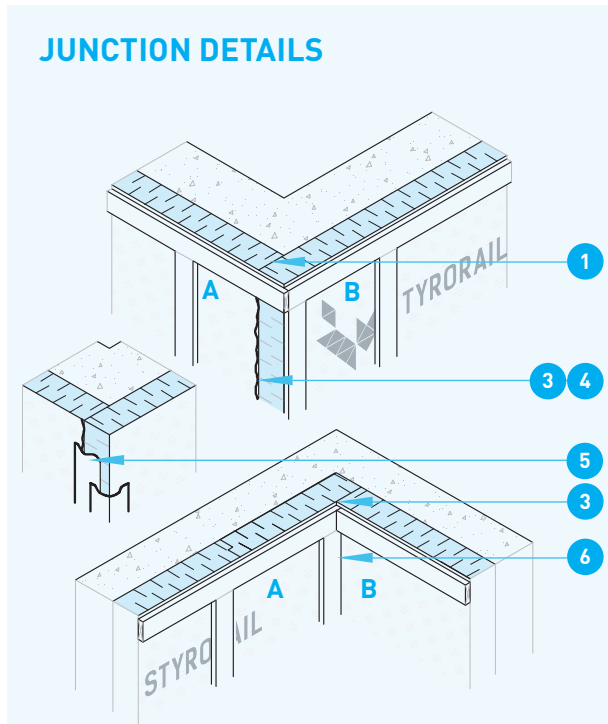


INSTALLATION  
[RENOVATION]

EXISTING CONCRETE SLAB WITHOUT VAPOR BARRIER

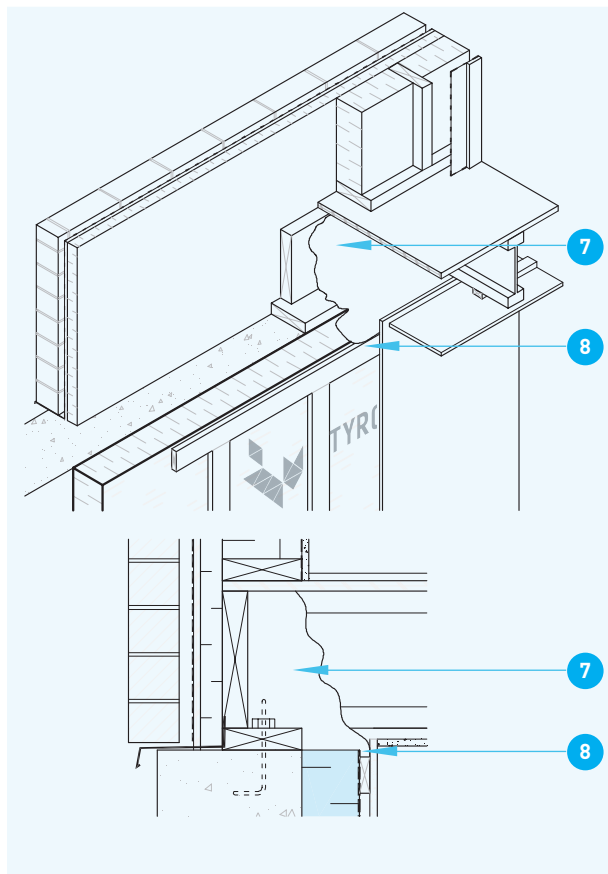
- 1 Apply an acoustic sealant<sup>†</sup> bead on the concrete slab or underneath the panel.
- 2 Install the panels directly on the concrete slab.
- 3 Install a vapor barrier strip at the bottom of the wall at the junction of the floor.
- 4 Leave a minimum 152 mm [6"] strip at the bottom section of the wall to seal the vapor barrier junction underneath the floor covering.
- 5 Seal the junctions between the vapor barrier and the panel with a compatible reflective vapor barrier tape<sup>†††</sup>.
- 6 Install the furring strips as per the installation method described in this guide.
- 7 Install a protective barrier such as gypsum boards.
- 8 During the floor installation, install a vapor barrier underneath the finished floor. Seal the vapor barrier strip at the junction of the wall.

### JUNCTION DETAILS



### CORNER

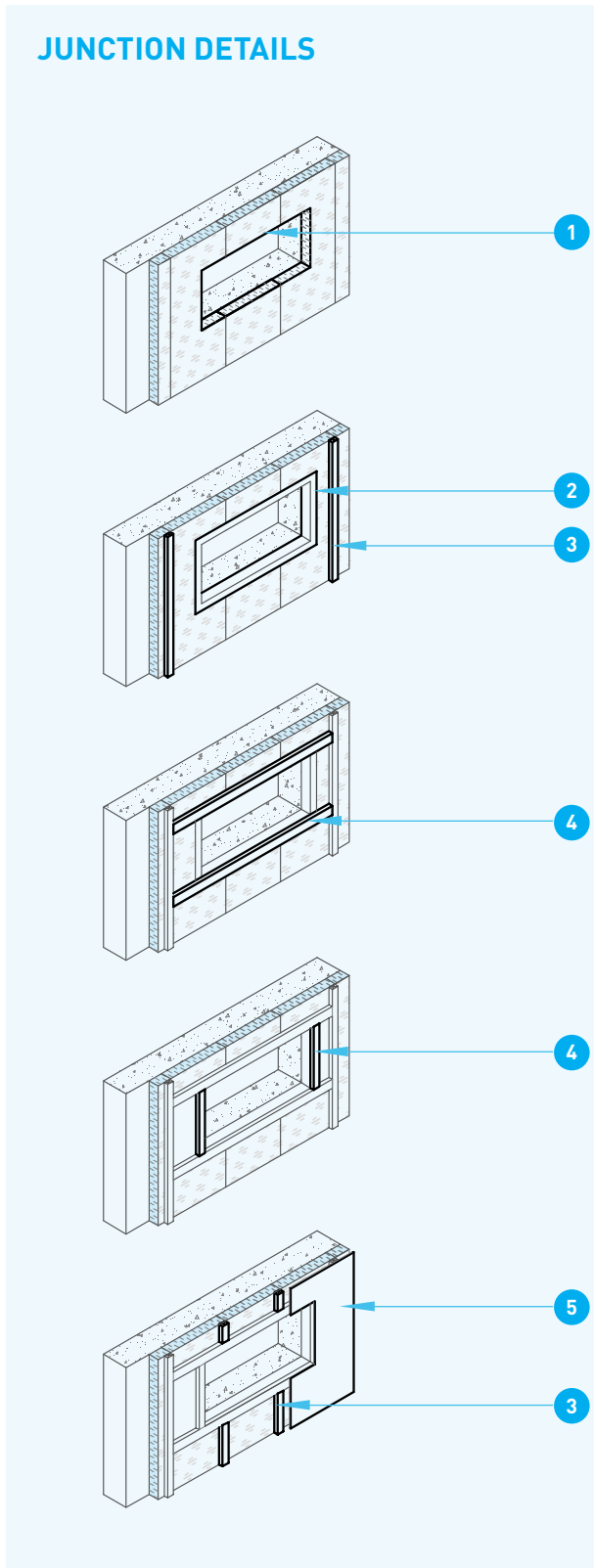
- 1 Cut the panel [A] using a knife with a retractable blade or a circular-saw. Align the panel with the corner of the foundation wall.
- 2 Cut the ship lap of the panel [B]. Install panel [B].
- 3 Spray a urethane bead<sup>++</sup> at the corner in order to fill the cavity which may have formed during the cutting of the insulation.
- 4 Cut the exceeding urethane foam using a knife with a retractable blade.
- 5 Cover the side of the panel with a compatible reflective vapor barrier tape<sup>+++</sup>.
- 6 Install the furring strips and the protective barriers [gypsum boards] as per the installation method described in this guide.



### FLOOR JOIST

- 7 Fill the cavity towards the joist header with a vapor barrier sprayed urethane.
- 8 Exceed the urethane over the reflective membrane to ensure the vapor barrier continuity.

## JUNCTION DETAILS

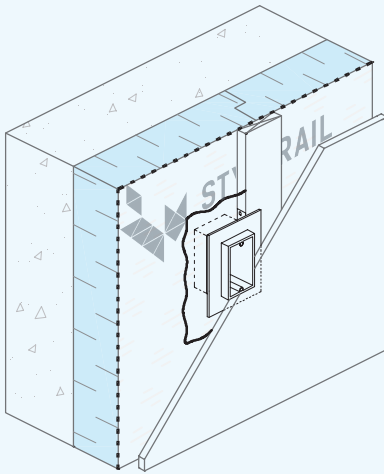


## OPENING [DOOR AND WINDOW]

- 1 Cut the panels to adjust them to doors and windows gross dimensions, before they are installed. Cut panels flush to the gross opening.
- 2 Seal around the opening with a compatible reflective vapor barrier tape<sup>††</sup>.
- 3 Install the furring strips as per the installation method described in this guide.
- 4 Install furring strips around the gross opening.
- 5 Install a protective barrier such as gypsum boards.
- 6 Once the window installed, seal the gap between the gross opening and the frame of the doors and windows with an elastomeric sealant or by filling with sealing foam<sup>††</sup>.



## JUNCTION DETAILS



## PENETRATION

[PIPE, DUCT, ELECTRICAL BOXE, ETC.]

- 1 Install electrical boxes in the space located between the insulation and the vapor barrier, next to the furring strips.
- 2 Install slim electrical boxes. Embed the electrical box into the insulation. Trace the outside of the box using a knife with retractable blade. Cut the perimeter and remove approx. 25 mm [1'] of insulation where the electrical box will be installed. Use airtight electric boxes.
- 3 Screw the electrical box on the furring strip.
- 4 Spray the edges of the electric boxe with a urethane foam<sup>††</sup>.

# GENERAL ADVICES

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## RECOMMENDED PRODUCTS

† The acoustic sealant must be compatible with expanded polystyrene. Use *Tremco* acoustic sealant or equivalent.

†† Adhesive must be compatible with expanded polystyrene. It must not be solvent based. Use *PL®300* adhesive from *Lepage* or equivalent.

††† The sealing tape must be compatible with the reflective membrane and must be vapor barrier. The tape should ideally be reflective to maximize heat gain by radiation.

‡ Sealants must be compatible with expanded polystyrene. Use *ADFoam* from *ADFast* polyurethane insulating foam or equivalent.

## STORAGE AND COVERING

Store panels in a dry and ventilated location, protected from the outside elements, ultraviolet rays, open flames or other sources of ignition. Stack panels on pallets of minimum 100 mm [4''] above the ground. If provided packaging has been damaged during shipping, cover panels with a weather and ultraviolet tarp. Panels must be dry and in good condition before installation.

## EXEMPTION FROM LIABILITY

The information herein is based on the present state of our best scientific and practical knowledge. They are provided to facilitate Styro Rail™ product's installation and may not apply to all situations. The user is responsible for checking the suitability of products for their intended use. Styro Rail™ installation guides are updated on a regular basis; it is the user's responsibility to obtain and to confirm the most recent version. Information contained in this data sheet may change without notice. The drawings and details herein have not been scaled up.