

Technical Bulletin

Bulletin #0900 July 2010

Installing Wall Panels

Treated Sill Plate (Full width and supporting the skins of the panel)

When building with SIPs, it is imperative that the load bearing OSB skins of the panel not be in direct contact with the concrete foundation. Any concrete adjacent to any SIPs first needs a pressure treat "sill" plate attached to it. This treated sill does not have to be dimensional lumber - it could be treated plywood. However, this material must be pressure treated and it must be installed over a capillary break like poly sill seal. Attachment of the treated sill plate and bottom plate to the foundation needs to be done in accordance with local codes and engineering specifications. It is a good idea to use anchor bolts long enough to go through both the treated sill and the bottom plates when attaching to the foundation. In addition, always maintain a minimum of 8" distance between the soil and panel. See detail F-1.



Bottom Plates

(Inserted into the bottom of the panel) The bottom plate is the dimensional lumber which attaches the wall panels to the floor. This piece fits into the recessed edge at the bottom of the panel. When building directly onto a concrete slab, or concrete wall, a treated sill below the bottom plate is required; when building on a wood floor platform, the bottom plate sits on top of the subfloor and is fastened directly to the floor joists, through the sub-floor material. The OSB skins of a SIP wall are the load bearing components. As such, it is imperative that the edges of both OSB skins must be in full contact with treated sill or floor platform. A common mistake is to install the bottom plate all the way to the outside of the floor - this is a problem since the outside OSB skin would not be bearing on anything. Position the bottom plate 7/16" in from the edge of the treated sill or the floor platform. This will allow the outside, as well as the inside, OSB skin of the panel to bear on the floor as needed. Fasten the bottom plate to the floor joists with 16D nails. Where possible, double check that the nails penetrate into the floor joists below the subfloor. When installing the bottom plate at a corner, make sure to leave at least 7/16" gap between the two adjoining bottom plates- this will allow room for the OSB skin of the panel to pass between the bottom plates. See details F-1,F-2,F-3.

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Installing the Wall Panels

Prior to installing the first wall panel, determine which corner to use as a starting point. Find the first of two panels that make up this corner. Next, install the corner stud into the end of this first corner panel. Then, find the adjacent corner panel and install the corner stud in the appropriate end of this panel as well. Use construction sealant as noted on the drawing and nail the end studs into position. See detail P-2.



When appropriate, measure to locate the vertical electrical chase locations on the bottom plate and drill wire chase size holes. Apply a continuous bead of foam sealant to the top of the sill plate and continuous beads of construction sealant along the upper edge of each side of the bottom plate. Lift the panel onto the bottom plate, then adjust its location, level, and brace. To double check that the panel is oriented correctly, make sure that the horizontal wire chases are located at the bottom of the panel when installed. Locate the adjacent corner panel; note its dimensions and the location (s) of electrical chases.

When required, drill holes in the bottom plate at wire chase locations. Use SIP screws to attach panel corners together up the vertical edge of the overlapping panel into the adjacent panel. See detail P-2. Before attaching the first two panels to the bottom plate, double check for plumb and level both panels with a bubble level. Use construction sealant on all wood-to-wood connections and expanding foam sealant on all wood-to-foam connections. When both panels are in place, nail the interior and exterior OSB skins to the bottom plate using 8d (0.131"x2-1/2") nails, 6" O.C. Typically corner SIP screws are placed 12" O.C., but make sure to double check the fastener schedule for all fastener spacing. Continue installing wall panels by following construction details and working in sequence around the building. If any fastening is missed during the installation process, make sure to go back and complete all fastening requirements.

Trimming the Last Panel of a Run

Dimensional variations in concrete and other framing may require that some panels are trimmed. To do this, temporarily install the final panel in the run, level and brace. Then temporarily install the first panel of the new intersecting run, positioning the panel so that it is abutting the last panel. Plumb both panels and mark the intersection line of the two panels on the appropriate panel. Remove both panels, trim and recess.

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