Enercept Technical Bulletin #10b

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CANTILEVERED SIP ROOF PANELS

When evaluating overhangs or cantilevers, consideration must be given to how the panel is to be used on the roof. The two applications that are possible are: either the panel spans parallel to the support wall (FIGURE 1 and FIGURE 3), or the panel spans perpendicular to the support wall (FIGURE 2). Panels installed perpendicular to the support wall can support longer overhangs (FIGURE 2).

FIGURE 1

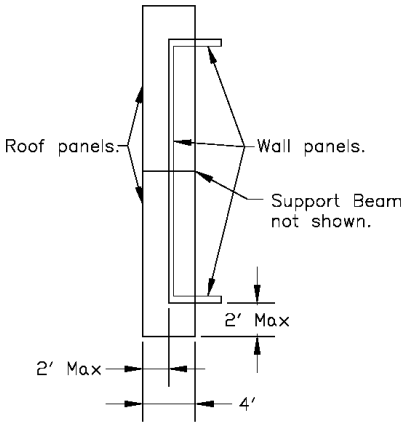


FIGURE 2

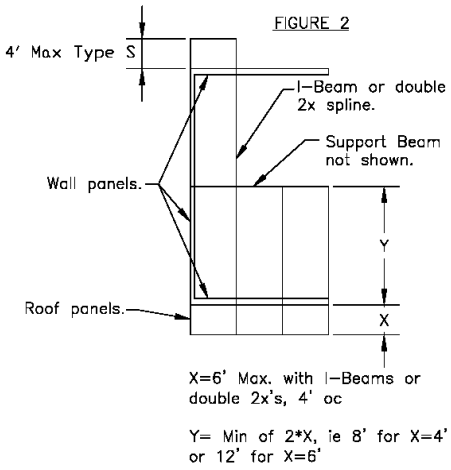
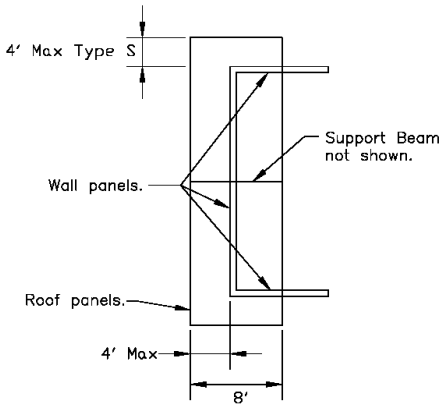


FIGURE 3



Enercept SIPs used to create overhangs on gable end walls or at eave walls where the roof panel is parallel to the support wall, can be cantilevered up to 2' for the overhang (FIGURE 1) for 4' wide panels. Panels used parallel to the support wall can support loads indicated in the "Cantilevered Roof Panels Parallel to Support Wall – Surface Spline Panel Capacity (psf)" load chart - shown below.

Applications that use 8' panel widths at the gable end walls or the eave walls may have overhangs of up to 4' when the roof panel is installed parallel to the support wall as shown above in FIGURE 3. Four-foot overhangs of this type have load capacities equal to the loads indicated in the "Cantilevered Roof Panels Parallel to Support Wall – Surface Spline Panel Capacity (psf)" load chart - shown below.

Surface Spline Panels that span perpendicular to the support wall are capable of supporting 4' horizontal span overhangs, provided the panel extends back onto the roof a minimum of twice the distance of the overhang span. Refer to the load chart "Cantilevered Roof Panels Perpendicular to Support Wall (Figure 2) Panel Capacity-(psf)"- shown below.

In situations where increased loads are required, or where an overhang greater than 4' is desired, Enercept Roof SIPs that utilize double 2x's, LVL's or wood I-joists as the spline can be used. In these applications, the roof panels span perpendicular to the support wall and the panels extend back onto the roof to a support. These situations require that the panel extend back onto the roof a minimum distance of twice the length of the overhang. Double 2x's, LVL's or I-Joist splines used at a frequency of 2'o.c. or 4'o.c., as the attachment

spline between panels, can support overhangs of up to 6'. Refer to the load chart "Cantilevered Roof Panels Perpendicular to Support Wall (Figure 2) Panel Capacity-(psf)"- shown below.

Cantilevered Roof Panels Parallel to Support Wall – Surface Spline Panel Capacity (psf)		
Panel Core Thickness	Figure 1	Figure 3
	2' Maximum Cantilever	4' Maximum Cantilever
3 ½"	81*	41*
5 ½"	114*	57*
7 ¼"	149*	75*
9 ¼"	161*	81*
11 1/4	166*	83*
* Value is less than the ultimate load divided by a safety factor of three.		

Cantilevered Roof Panels Perpendicular to Support Wall (Figure 2) Panel Capacity (psf)					
Panel Core Thickness	Surface Splined Panel	I-Joist, LVL's or Double 2x Splines at 4'o.c.		I-Joist, LVL's or Double 2x Splines at 2'o.c.	
	4' cantilever with minimum 8' back span	4' cantilever with minimum 8' back span	6' cantilever with minimum 12' back span	4' cantilever with minimum 8' back span	6' cantilever with minimum 12' back span
3 ½"	41*	53*	54*	81*	53*
5 ½"	57*	87*	67*	114*	87*
7 ¼"	75*	115*	84*	149*	115*
9 ¼"	81*	125*	91*	161*	125*
11 ¼"	83*	129*	93*	166*	129*
* Value is less than the ultimate load divided by a safety factor of three.					