

Technical Tip

Hard-Coat Stucco/Adhered Stone over ZIP System Sheathing

ZIP System® sheathing is a wood structural panel with a built-in, protective overlay that eliminates the need for building wrap or roofing felt. It is code recognized in ICC-ES ESR 1474 as an alternate to the water-resistive barrier required in Chapter 14 of the IBC and Chapter 7 of the IRC and satisfies the requirements for air barriers as defined in the ICC International Energy Conservation Code.

Building code requires that an additional water-resistive barrier with a performance equivalent to grade D building paper or an intervening nonwater-absorbing layer or designed drainage space be installed prior to the application of hard-coat stucco or adhered stone (*Section R703.6.3 in the International Residential Code (IRC)*). This code requirement is typically satisfied by adding one layer of #15 felt or using a paper-backed lath on top of the ZIP System sheathing. In a two-layer system, the first layer performs as the water-resistive barrier. The second (exterior) layer performs as an intervening barrier, creating a “bond break” between the stucco and water-resistive barrier. The purpose of the additional layer is to maintain the integrity of the drainage plain by preventing mortar from obstructing the wall’s ability to properly drain.

Minimum Panel Thickness - APA Recommendations

In order to ensure that the stucco exterior finish will be uniform and smooth in appearance, wood-structural panels should be stiff and dimensionally stable. In the APA document “Installation of Stucco Exterior Finish Over Wood Structural Panel Wall Sheathing” (*APA – Form No. Q370*), APA provides thickness recommendations for panels used as a substrate for exterior stucco. These recommendations are based off of panel orientation and stud spacing to help minimize the risk of stress fractures in brittle finishes like hard-coat stucco.

Table 1: APA Installation of Stucco Exterior Finish Over Wood Structural Panel Wall Sheathing

Stud Spacing	Panel Orientation	Min. Thickness	Min. Span Rating
16" o.c.	Horizontal	5/16"	20/0
		5/16"	Wall 24
		3/8"	24/0
	Vertical	7/16" - Structural 1 Rated ^a	24/16
		15/32"	32/16
24" oc	Horizontal	7/16"	24/16
	Vertical	19/32"	40/20

^a 7/16" thick, long-length (4'x9', 4'x10') ZIP System sheathing panels are stamped with a Structural I panel grade. Also, Structural I 7/16" (4'x8') ZIP System sheathing panels may be available by special order.

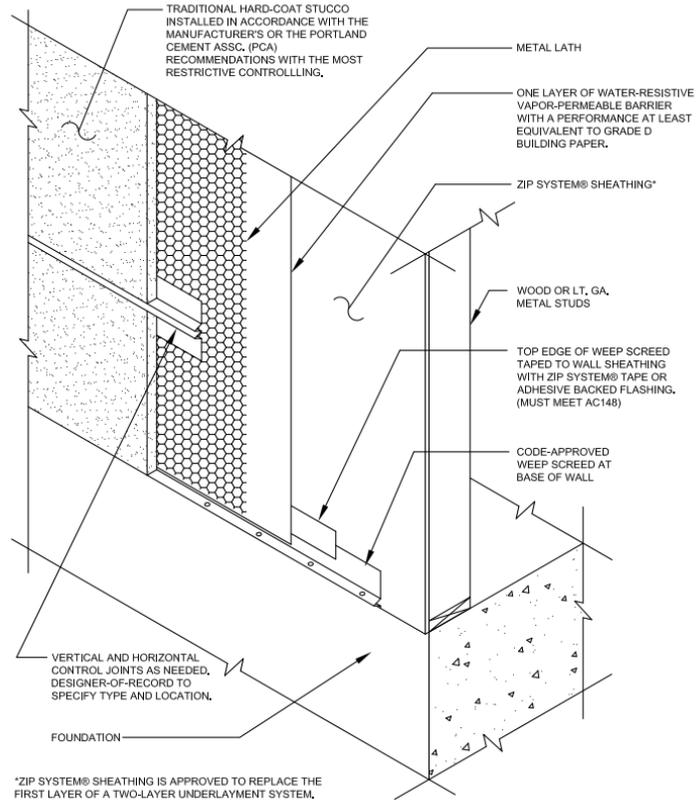


Figure 1: Hard-Coat Stucco over ZIP System Sheathing (Typical)

Drainage Medium (Optional – Not Required)

As a best construction practice (not required), Huber Engineered Woods recommends installing an 1/8" drainage gap between the second (exterior) layer and the ZIP System sheathing. This physical gap promotes maximum drying and drainage of any water that gets behind the exterior stucco. Please note that the 2009 International Building Code (IBC) does not require the use of drainage gaps. However, it is recommended and considered a best practice among many water-proofing professional and building scientists. For proper rainscreen/drainage gap product installation, follow manufacturer's guidelines. For best practice options, please see our [hard-coat stucco details](#).

Please visit www.zipsystem.com or contact our technical services department at 1-800-933-9220 Ext. 2716 with any questions or comments.