

D.12 BRICK LEDGES

The attachment of brick, stone, or other traditional masonry finishes to PolySteel walls are generally required to be supported by a brick ledge, combined with “ties” that mechanically attach to the wall and are integrated with the mortar used in assembling the finished veneer. As discussed earlier, brick ties can be screwed directly into the attachment stud for a secure anchor to the finishing system. There are many methods you can use to create a structurally secure and stable brick ledge that is integral to your PolySteel wall. We recommend two approaches to constructing this type of ledge, both of which require the following:

1. Locate the top of the brick ledge to be constructed and snap a chalk line to mark the location. When stepping the brick ledge, be mindful of the coursing requirements of the veneer being used.
2. From the chalk line, cut a hole, or window, in the forms holding the ledge, 4” wide and 8.5” tall, every 12 inches on center, in the center of each vertical core, which will allow the concrete to flow into the ledge. Do not allow cut foam pieces to fall into the wall.
3. Install or construct brick ledge large enough to accommodate the required air gap behind the veneer, and bear the weight of the exterior finish material.
4. Install rebar stirrups to connect the ledge to the wall.
 - a. If there is no horizontal rebar in the wall at the ledge location, connect a #3 rebar stirrup, formed at the proper angles and intervals, as indicated in [Figure 4.8](#) and [Figure 4.9](#) below, and secure it to the vertical rebar in the wall and the horizontal rebar in the brick ledge, These stirrups should be pre-fabricated to the proper dimensions to speed overall installation. Be sure to locate the horizontal rebar in the ledge such that it will have the concrete coverage required.
 - b. When horizontal rebar is in place directly behind the wall at the location of the ledge, simply secure the stirrups to the horizontal bar at the required intervals.
 - c. If there is no vertical or horizontal rebar at the ledge location, which may occur in a step foundation, you can place and secure a horizontal rebar dowel inside the wall across the form ties on either side of the window, as a placeholder for the stirrup.
5. Install bracing sufficient to support the additional load and imbalance of the concrete in the brick ledge, as it will have a tendency to lean outward.
6. Place concrete into the wall up to, or just past, the level of the brick ledge, making sure that the concrete flows out into the ledge and is well-consolidated around the rebar. Trowel the top of the ledge smooth.
7. You may continue placing concrete in the wall after the ledge has had a chance to set up (about 1 hour).

D.12 BRICK LEDGES (continued)

D.12.1 FOAM BRICK LEDGE FORM

Figure 4.8 illustrates an expanded polystyrene (EPS) brick ledge cut to the shape required for a 4" concrete ledge with 1" of foam for a 4" brick veneer, stacked as high as 25 vertical feet. This pre-cut material is generally available from your PolySteel Dealer. It generally comes in 4 to 8-foot sections. A brick ledge can be designed in any size, but must be engineered for the load required. The use of a foam brick ledge improves the insulation of the entire wall, provides for a uniform surface to waterproof, and unlimited design flexibility.

1. Apply a foam adhesive to the contact surface of the brick ledge and press the ledge material to the surface of the PolySteel wall. Temporarily secure it in place with a 2" screw into the attachment studs with a 2" plastic washer.
2. Secure the top of the ledge every 24" with 7"-10" long screw attached directly to the steel attachment stud. If you locate the screw at least 2 inches below the top grade of the ledge, the screw can be used as a resting and tie point for the horizontal rebar in the ledge.
3. The brick veneer should be placed flush with, or slightly extended over, the foam edge of the ledge for proper ventilation and drainage.

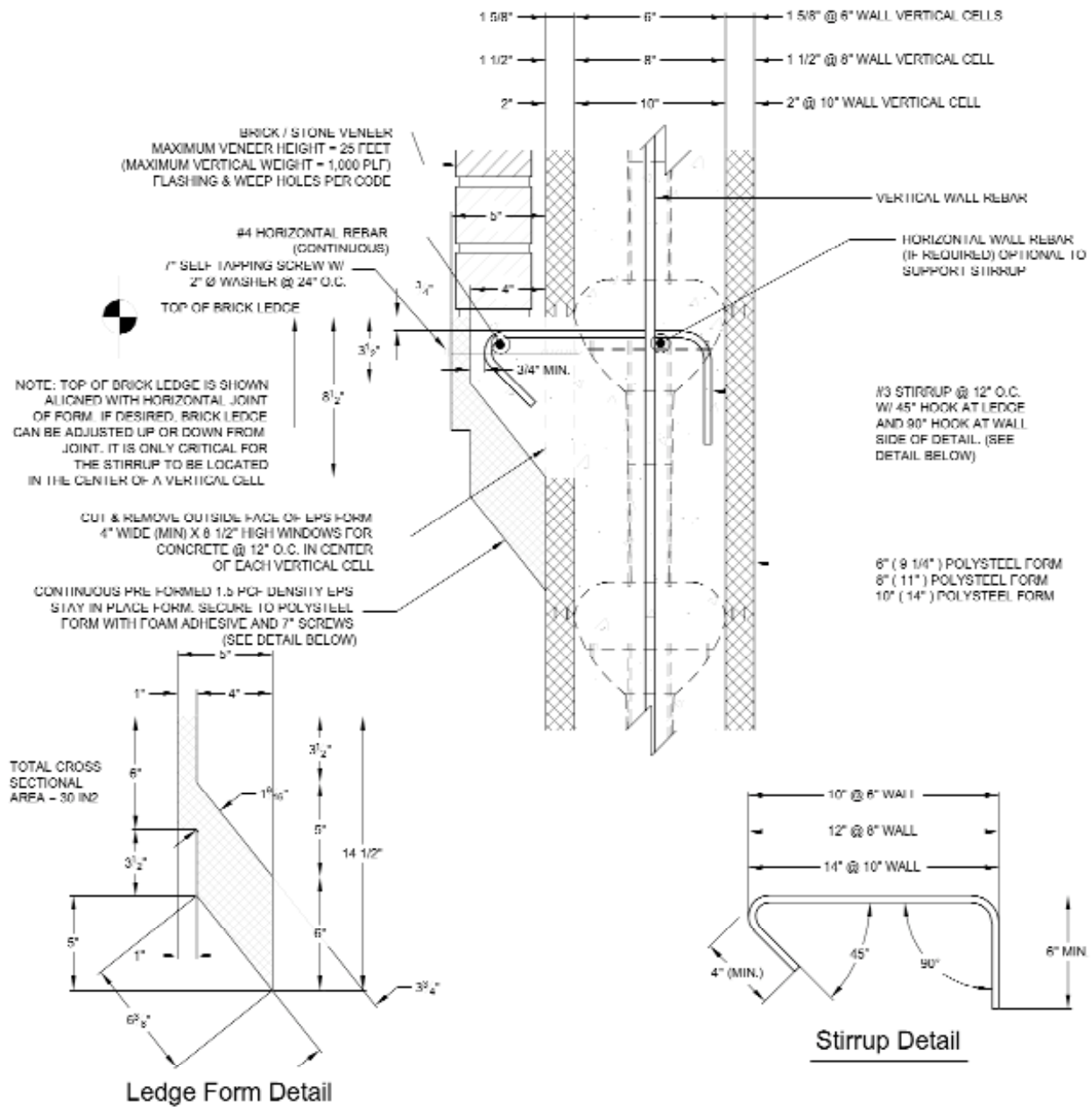


FOAM BRICK LEDGE

D.12 BRICK LEDGES

D.12.1 FOAM BRICK LEDGE FORM (continued).

FIGURE 4.8 FOAM BRICK LEDGE FORM



D.12 BRICK LEDGES (continued)

D.12.2 REUSABLE BRICK LEDGE FORM

Figure 4.9 illustrates a galvanized steel reusable brick ledge form for a 5" ledge that can be locally fabricated to the dimensions specified, and reused over and over again with consistent results. The reusable ledge is economical, durable, reliable, and provides all of the design flexibility of a modular forming system.

1. Construct the galvanized steel form per Figure 4.10, or the design dimensions required.
2. Attach the bottom of the steel ledge form to each of the attachment studs with 1-inch screws, and secure the top of the ledge form in place using the fabricated steel straps, screwed to the attachment studs.
3. The horizontal rebar can be secured in proper position by tying it to, and suspending it from, the straps at the top of the form.



METAL BRICK LEDGE INTALLED



METAL BRICK LEDGE POURED

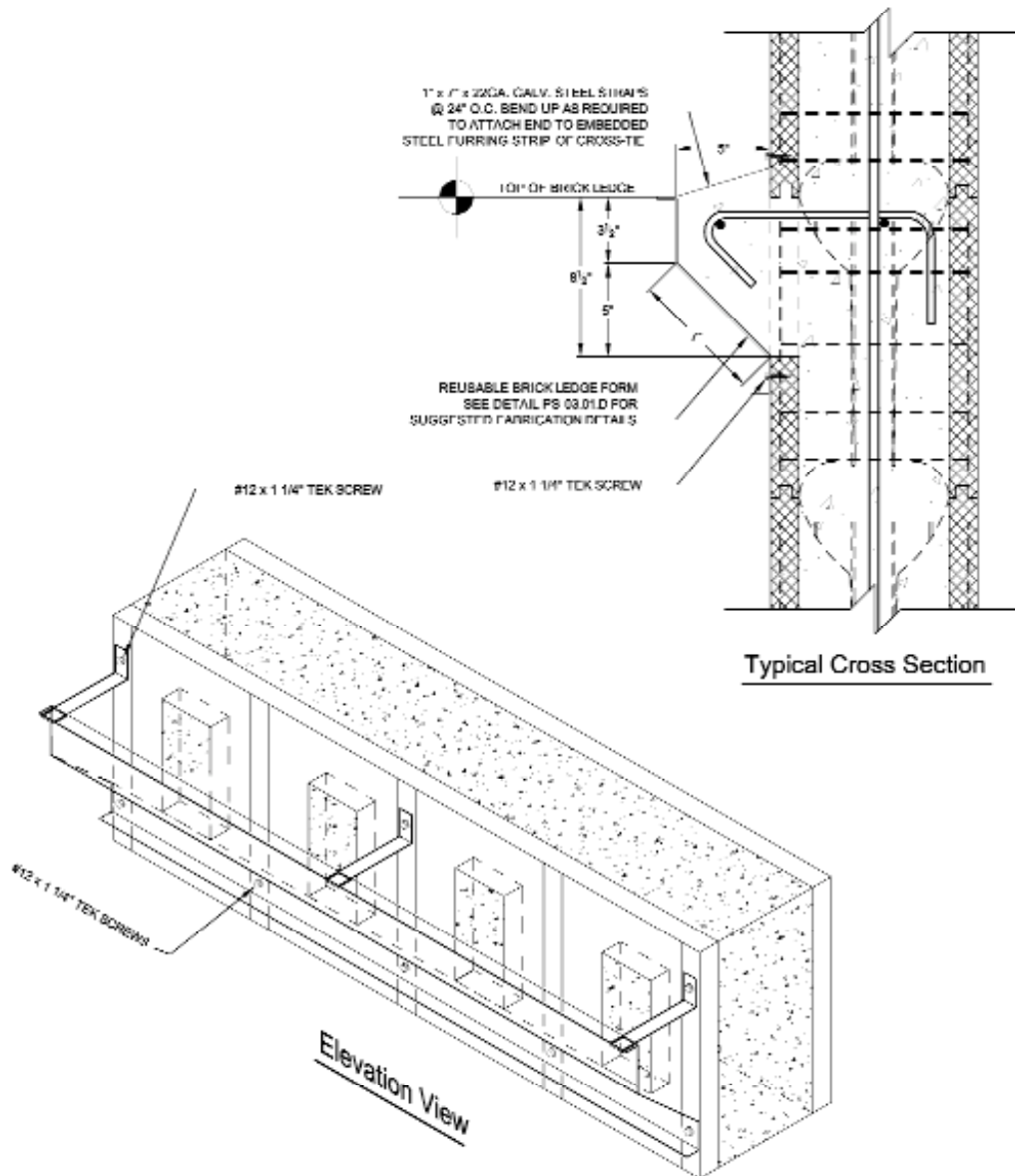


FINISHING METAL BRICK LEDGE

D.12 BRICK LEDGES

D.12.2 REUSABLE BRICK LEDGE FORM (continued).

FIGURE 4.9 REUSABLE BRICK LEDGE FORM



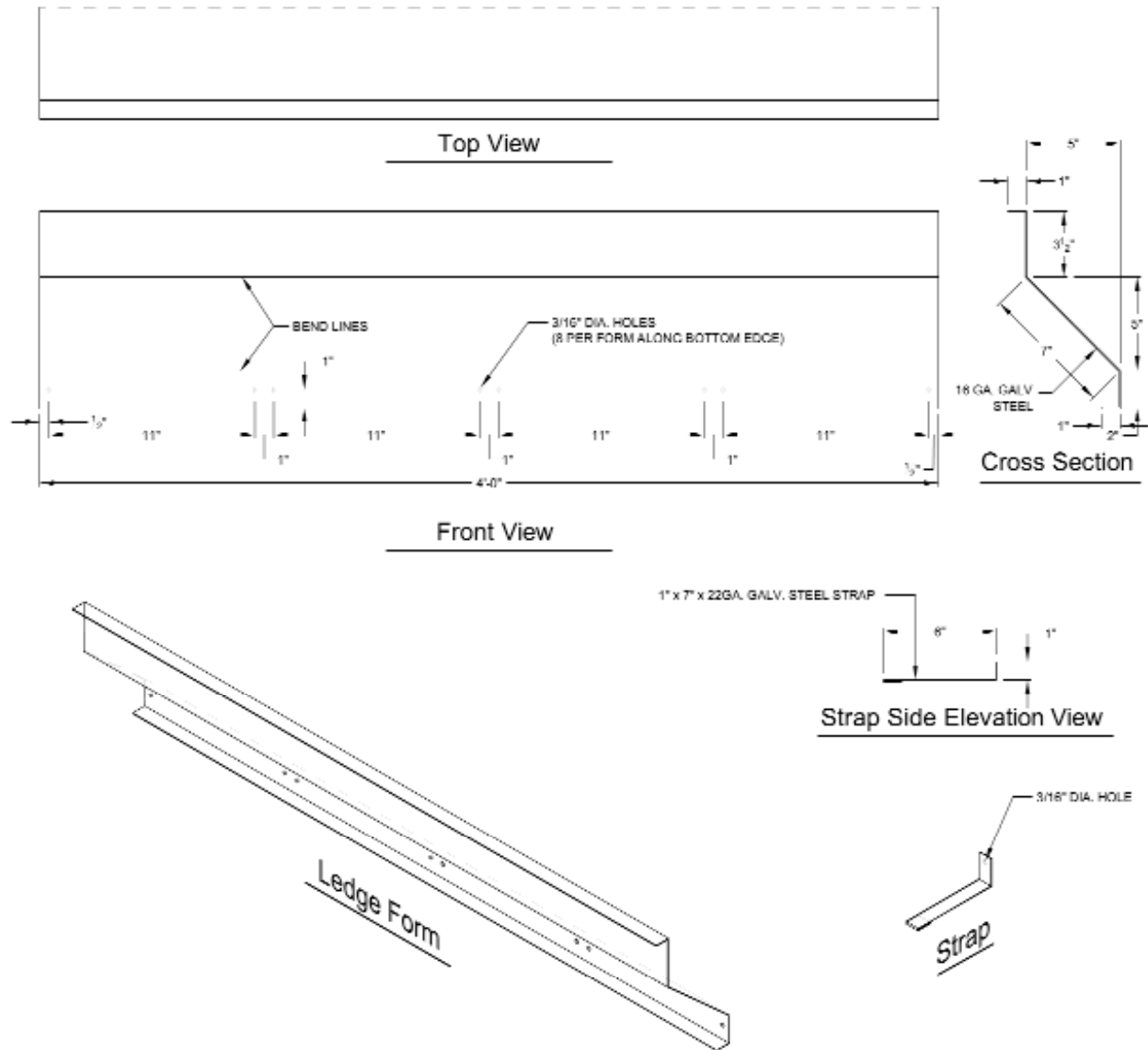
Reusable Brick Ledge Form Detail

Scale: 1 1/2" = 1'-0"

D.12 BRICK LEDGES

D.12.2 REUSABLE BRICK LEDGE FORM (continued).

FIGURE 4.10 REUSABLE BRICK LEDGE FORM FABRICATION DETAILS



Reusable Brick Ledge Form Fabrication Details

Scale: 1 1/2" = 1'-0"