Gable End Wall Bracing
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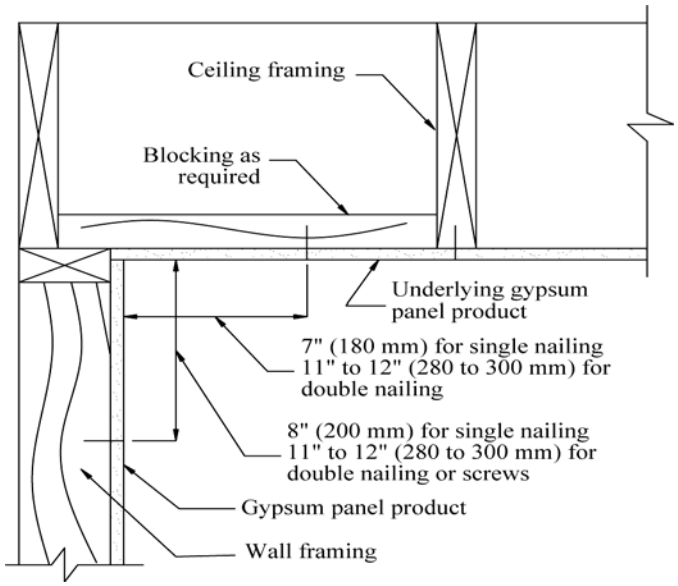
Does the gable end wall really get 'braced' by the ceiling diaphragm? We have all seen the details on construction contract documents, industry standard details, BCSI and other locations. The ceiling drywall is supposed to act as the diaphragm providing permanent bracing to the bottom chord of our trusses. Does that diaphragm extend to the exterior wall if there is no perimeter nailing? The question is…does that ceiling drywall REALLY act to support, restrain or brace the top of the exterior wall if there are no fasteners installed? What detail is common in your market?

The Gypsum Association publishes many helpful literature pieces, from design manuals to marketing documents. Perhaps the one most widely used is GA-216-13, *Application and Finishing of Gypsum Panel Products* (affectionately known as the drywall hanger's bible). This guide is often referenced in contract documents for the application of drywall finishes. One of the details that I see misused most often is the fastening of the drywall at the gable end wall.



This GA detail is the same whether the framing above the wall is parallel or perpendicular to the wall framing. Do you notice where the first fastener is in regards to the inside face of the wall? Seven inches is the recommended distance (actually, not more than 7" if you read the associated text). The only way that a fastener can be placed at 7" is if there has been the "Blocking as required" placed between the gable end frame and the first parallel truss adjacent to it. How often is the "Blocking as required" being replaced with a drywall backer (2x4 or 2x6) attached to the top of the gable end wall and run parallel to it? How often is that being done in your market? How often is the first fastener actually out at the first truss? What is supporting the top of the wall/bottom of the gable end frame if the "Blocking as required" isn't there, the taped drywall joint? What then happens when there is wind pressure (either positive or negative) acting on the entire end wall? Is the drywall joint failure the fault of the truss manufacturer? Of course not, but will you need to fight to prove it? You bet!

BCSI, the industry's Building Component Safety Information, in Section B-3 Permanent Restraint/Bracing, addresses this very subject in Figure B3-33.

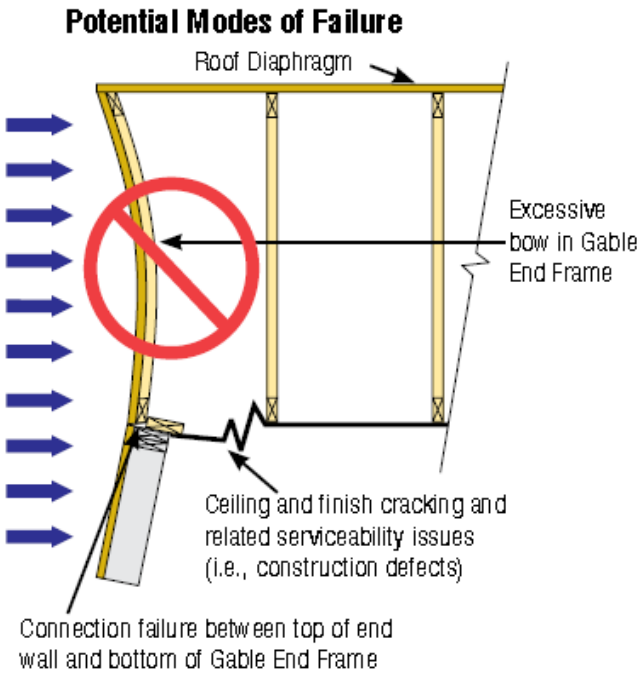


FIGURE B3-33

Potential solutions are indicated in figures B3-35 and B3-38 as shown below.

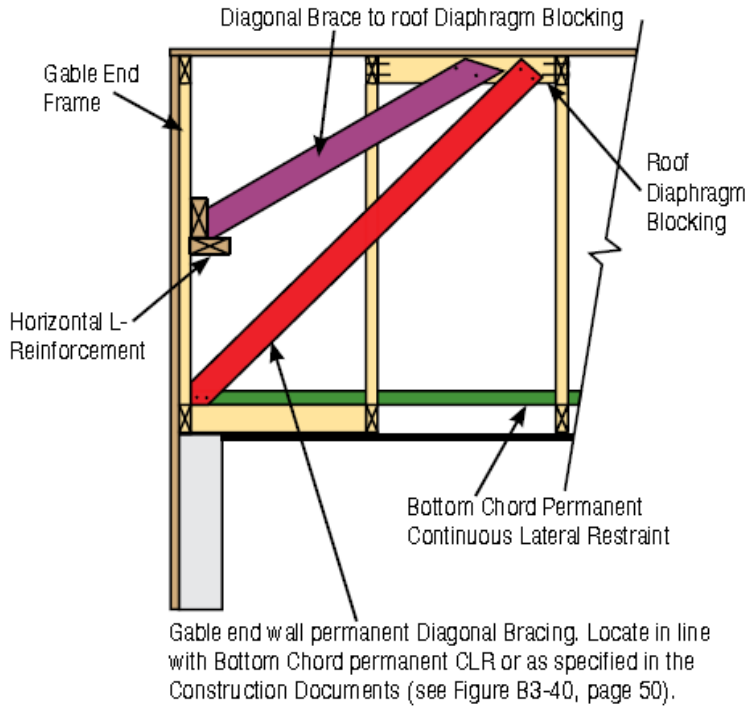


FIGURE B3-35

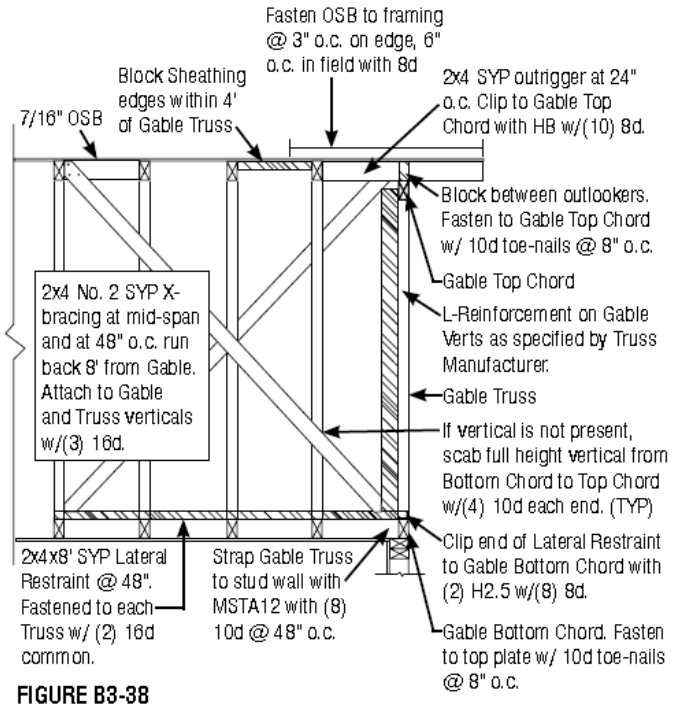


FIGURE B3-38

Note that in Figure B3-38, the lateral restraints being placed on the top edge of the bottom chord of the trusses is transferring the diaphragm capacity of the drywall ceiling out to the connection between the gable end frame and its bearing wall.

Using these standard industry details (or something similar) should be part of your company's best practices and your Jobsite Delivery Package. The minimal cost associated with providing them is negligible when compared to the litigation costs to prove that you've done nothing wrong in the first place.