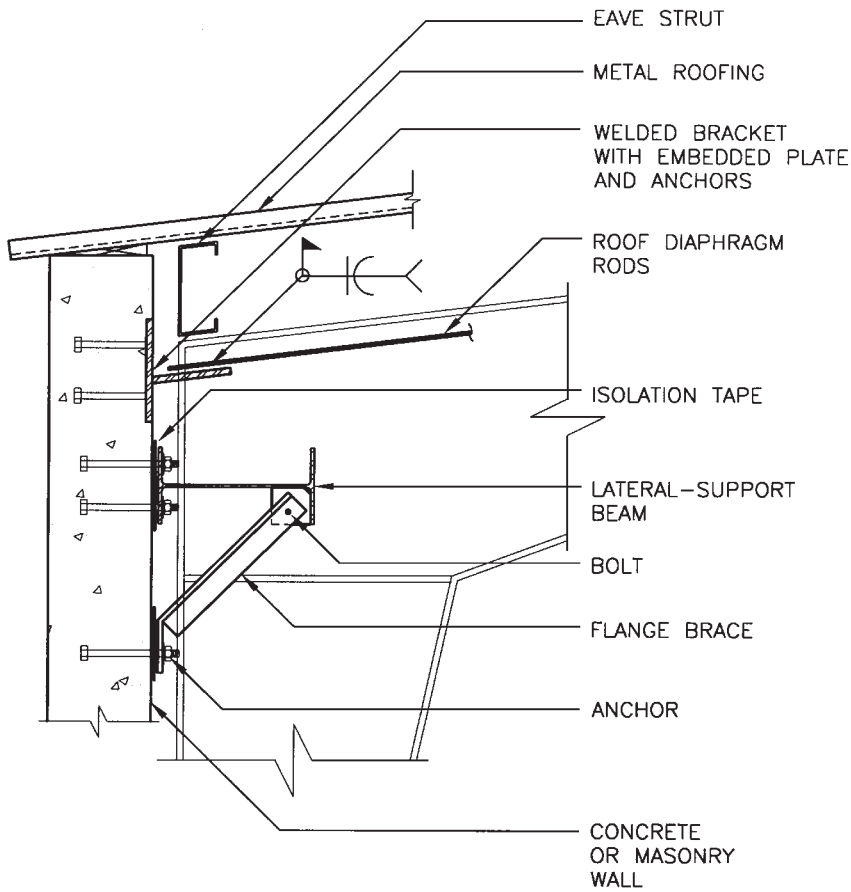

FIGURE 7.23 Wide-flange girt placed behind vertically spanning concrete or masonry wall. Note the flange brace and the bracket for diaphragm attachment.

flange width is insufficient for direct bolting or when the flange area reduction by the bolt holes is to be avoided. The clip angles should also be used when the hard wall has a joint at the column centerline; otherwise, the bolts would be placed too close to the joint edges. The interior column flange is braced in the usual manner—by a pair of flange brace angles bolted to the hard wall. An isolation tape, paint, or mastic is needed to separate the steel from direct contact with masonry or concrete. Alternatively, the exterior column flange should be kept at least 1 in away from the wall (Fig. 7.24*b*).

As the manufacturer's details similar to Fig. 7.24 typically state, the attachment to the hard wall is made "by others." The steel frame is normally erected well before the masonry or concrete, and by the time the wall is in place, the steel erectors are probably long gone from the site. Still, it is extremely important to verify that all the required frame-to-wall connections are actually made—and made by experienced personnel, preferably by the steel erectors called back for this work. If the flange bracing is forgotten or installed incorrectly, the frame columns could become dangerously overstressed under load.

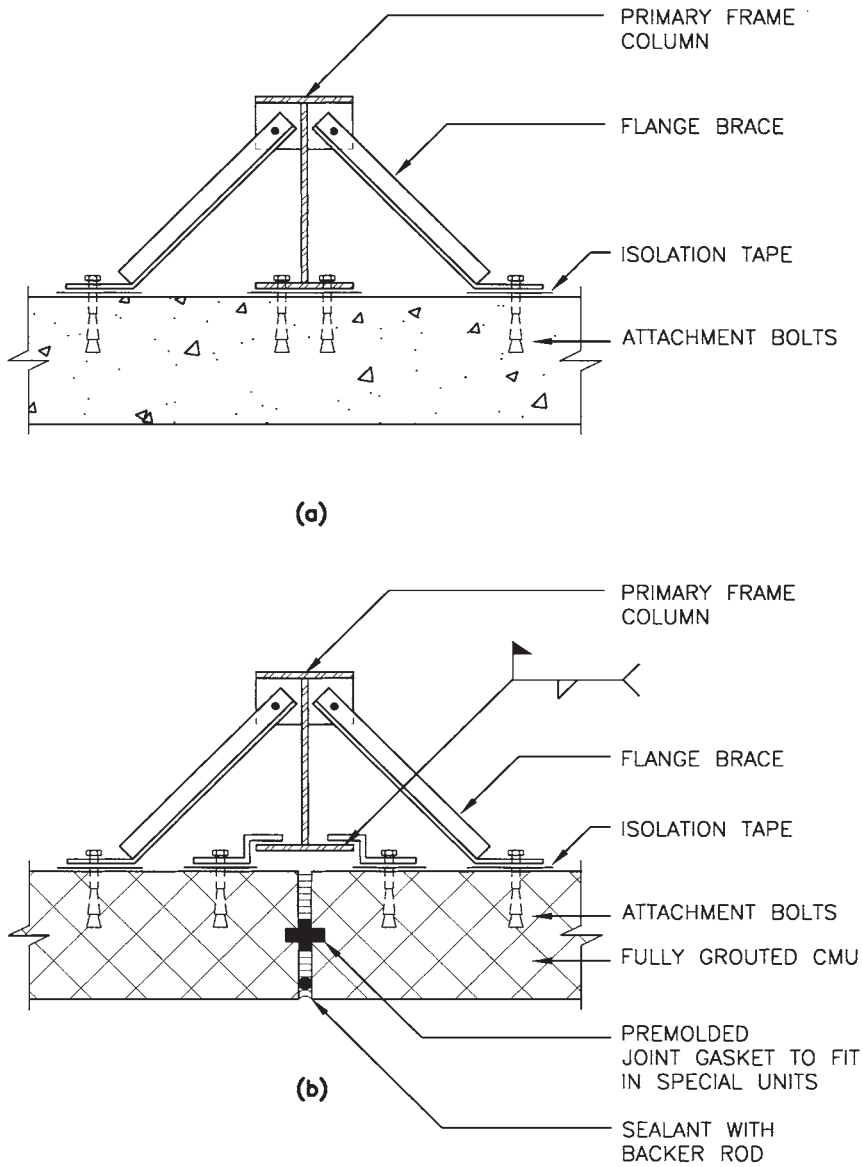

FIGURE 7.24 Column flange bracing details for hard walls. (*a*) At concrete walls without joints at columns; (*b*) at CMU walls with joints.