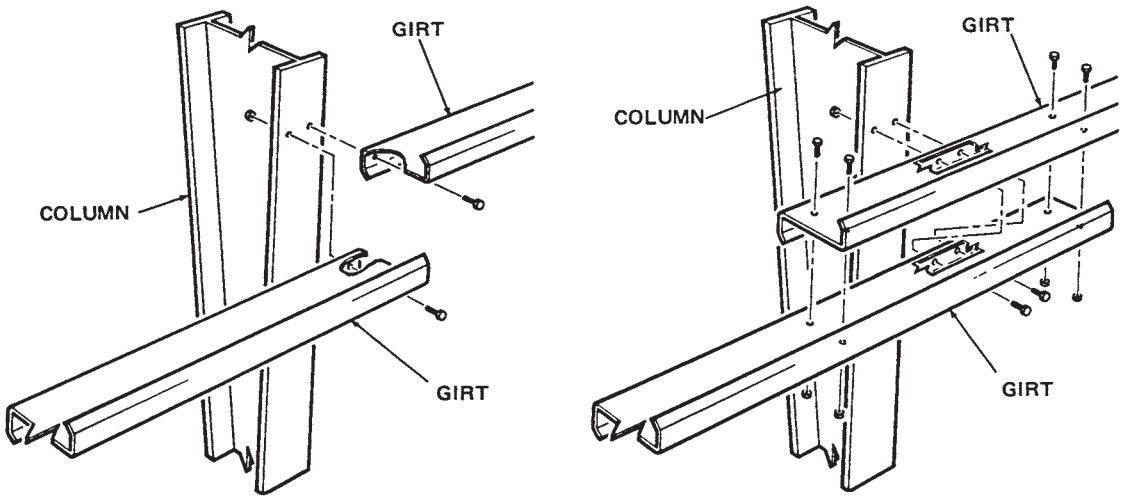

FIGURE 16.6 Details of girt installation (bypass girts are shown): (*a*) simple-span girt directly bolted to column; (*b*) continuous-span girts lapped and bolted to column at the same time. (*Butler Manufacturing Co.*)

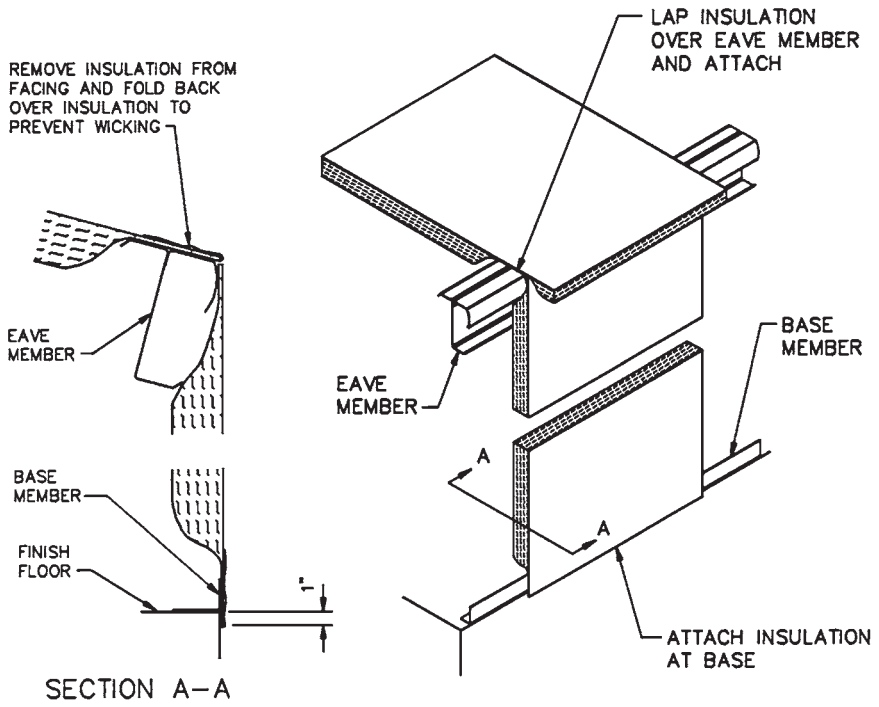

FIGURE 16.7 Insulation detail at eave and base. (*VP Buildings.*)

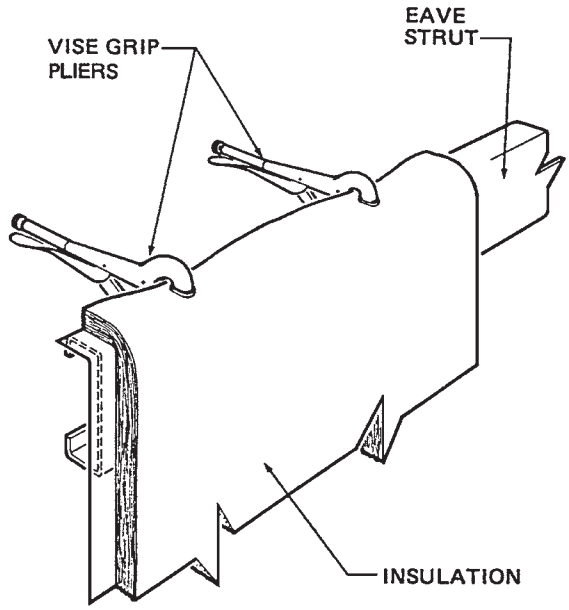

FIGURE 16.8 Temporary attachment of fiberglass wall insulation to eave strut. (*Butler Manufacturing Co.*)

16.6 INSTALLATION OF ROOF AND WALL PANELS

Whether roof or wall panels are installed first is a matter of the erector's preference. We slightly favor erecting roof first to allow for any interior finish work to begin and to improve the roof diaphragm action in the partially constructed building (Fig. 16.9).

Installation of roof panels usually starts at one of the endwalls chosen to allow for panel placement in the direction opposite to the prevailing winds; this sequence is intended to decrease the chances of wind-blown water intrusion into the panel sidelaps. The process begins with the roof panels being lifted in bundles by crane and placed directly above the main frames. Each purlin supporting the bundles receives a piece of snug-fitting wood blocking between its top flange and the frame rafter to protect the purlin from distortion.

The roof panels are laid down from eave to ridge or from lower to higher eave, without fastening. At the ridge line, the panels are held back the distance specified in the manufacturer's details. After further adjustments for the recommended panel endlap splices and low-eave overhang distances, sealants are added if required, and the roofing is fastened down. The action then shifts to the next line of panels, which are installed in a similar fashion, except that the panel seams must now be formed, either by hand or by a mechanical seamer.

One common occurrence during installation of ribbed metal roofing is "growing" and "shrinkage" of the panel width. The erectors can inadvertently make the panel width grow by stepping on the ribs and partially flattening them. Conversely, they may end up shrinking the width by not applying enough pressure while bringing the roofing in contact with the purlins. Such dimensional changes for each panel are small, but the cumulative error may be large enough to be noticeable. A special template or a spacer are useful in such circumstances.[6]

Stepping on the panel ribs is strongly discouraged by the manufacturers, as is walking on partially attached or unattached panels. The safe way to walk on a fully fastened roof is to step on walk boards laid in the panels' flat areas and spanning between the purlins. To prevent slippage, the walk