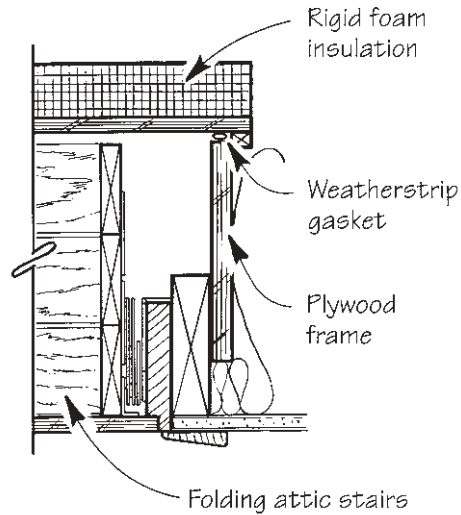
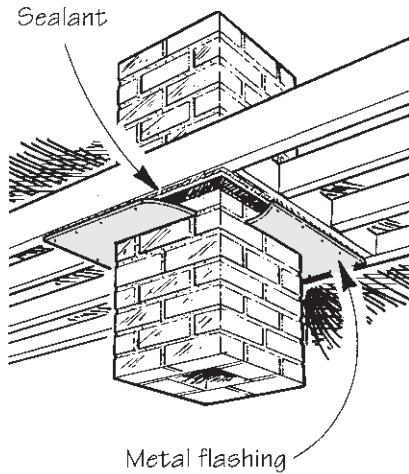


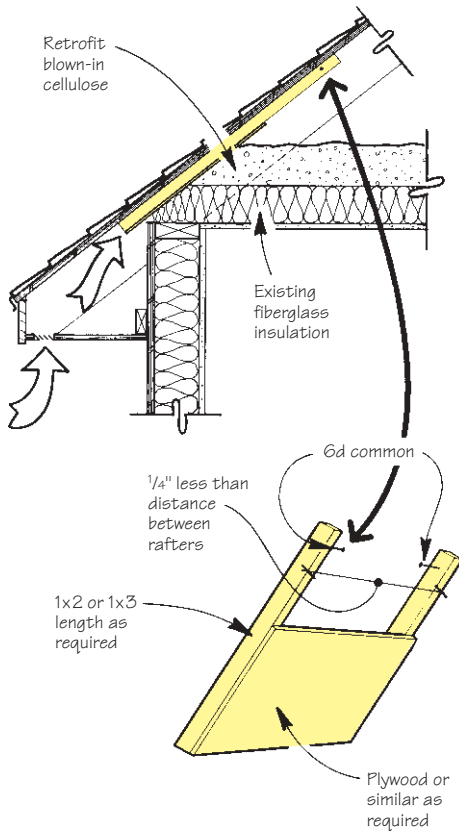
# ENERGY-TIGHT FRAMING

## Tight Ceiling Penetrations



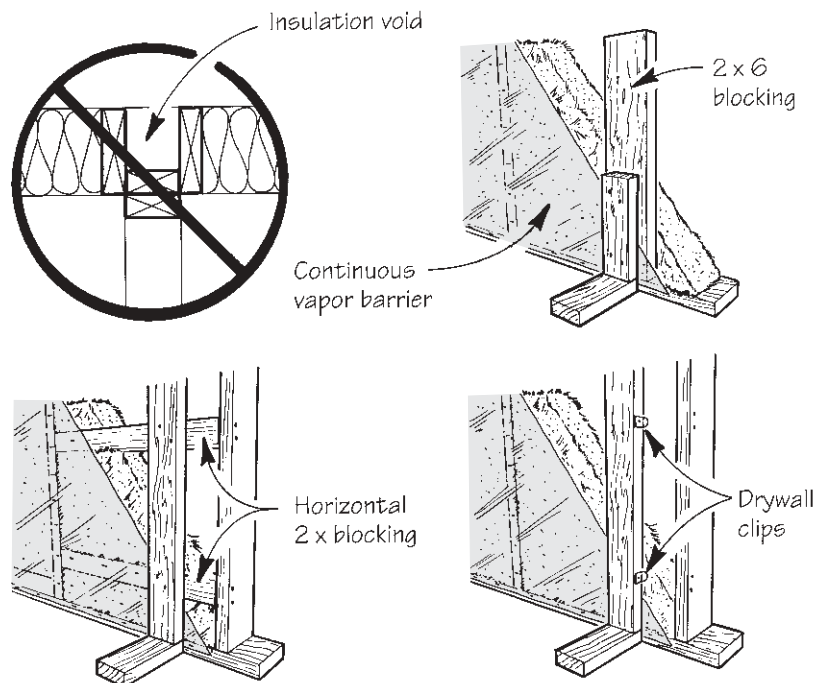
Sealing around the chimney (left) and the attic hatch (right) are critical for preventing heat loss and keeping moisture-laden air out of the attic. (*Focus on Energy*, 4/96)

## Retrofit Baffles



For retrofits, you can fashion baffles from strapping and thin plywood. The strapping extensions form handles to slip the baffle into place, and provide a convenient place to nail. (*"Defeating Ice Dams,"* 5/88)

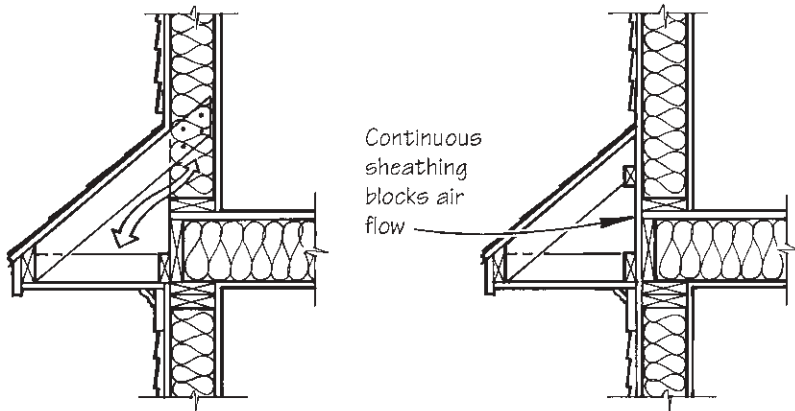
## Improved Partition Catches



Conventional partition catches (top left) allow air leakage into stud cavities and conductive heat loss. Use details that allow for a continuous vapor barrier and insulation. (*Focus on Energy*, 4/96)

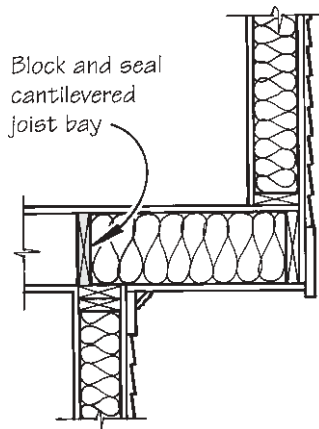
# COMMON THERMAL BYPASSES

## Eyebrow Roofs



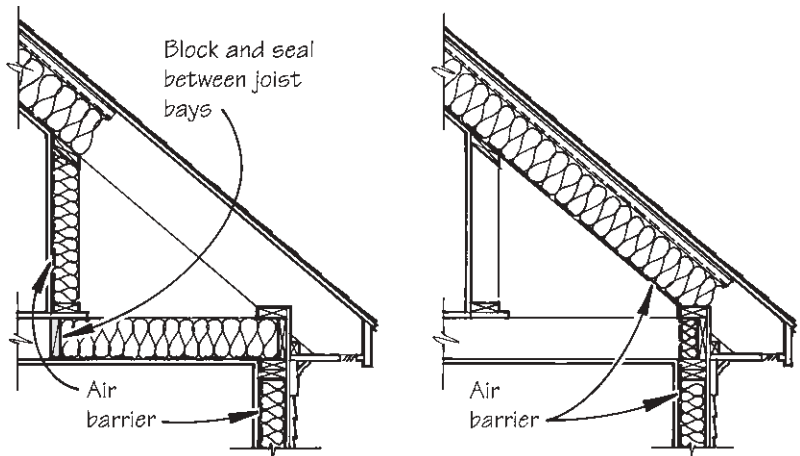
Eyebrow roofs, if built wrong (left), can allow cold air to penetrate exterior walls and leak out the ends of the building. When building an eyebrow roof on a shed dormer, sheathe the exterior wall first, then attach the rafter tails to a ledger (right). (“Air-Sealing the Story-and-a-Half,” 8/95)

## Cantilevers



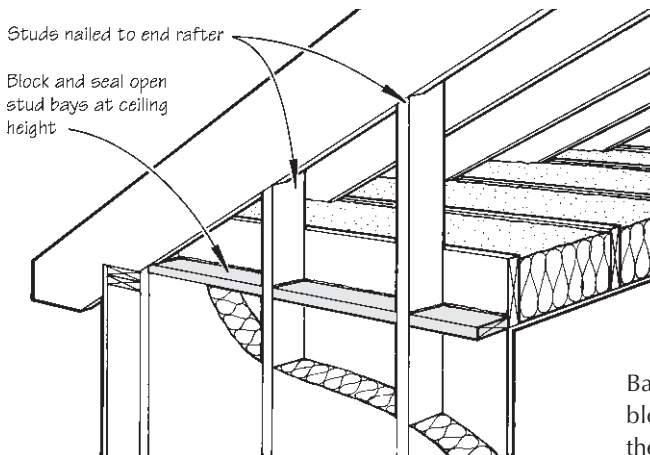
Cantilevers can cause convective heat loss unless an air block is added in the joist bay above the first-story top plate. (“Air-Sealing the Story-and-a-Half,” 8/95)

## Knee Walls



When building knee walls, make sure that you place an effective air barrier on the warm side of the insulation. When the thermal boundary follows the knee wall — a tricky detail to get right — it’s especially important to install an air block between the joists directly below the knee wall (left). The author prefers to insulate between the rafters all the way to the outside walls, then install a continuous air barrier on the inside face of the rafters (right). (“Air-Sealing the Story-and-a-Half,” 8/95)

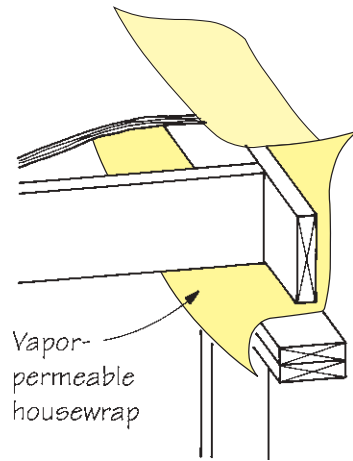
## Balloon-Framed Gables



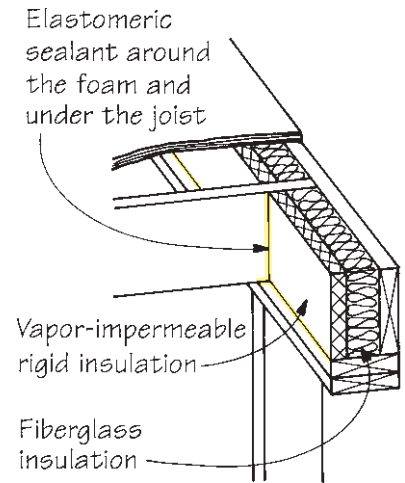
Balloon-framed exterior walls should always be blocked to prevent convective air movement into the attic. (“Air-Sealing the Story-and-a-Half,” 8/95)

# SEALING THE BAND JOIST

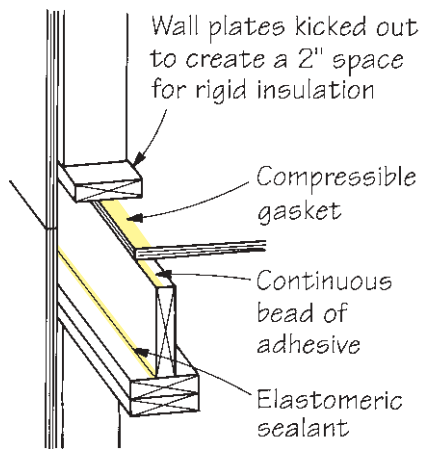
## Connector Strip



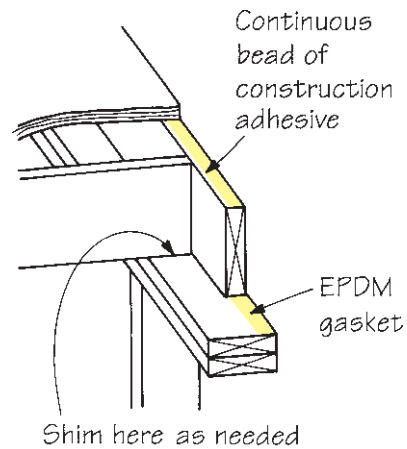
## Foam Squares



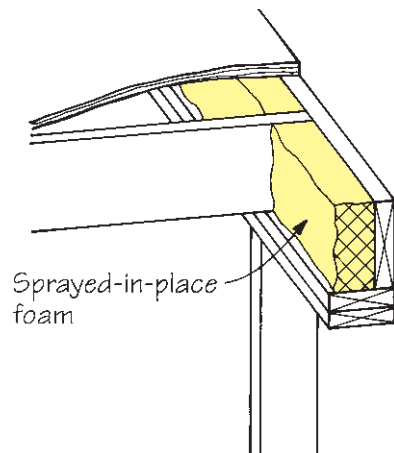
## Offset Plates



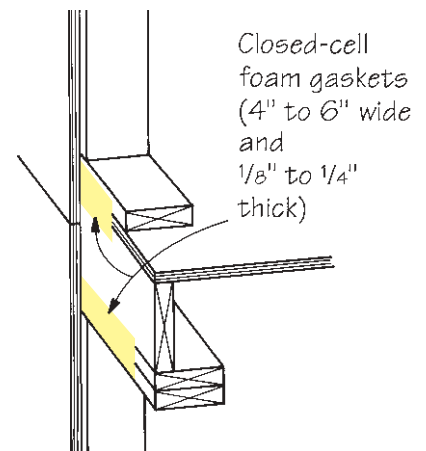
## Gasket and Adhesive



## Spray Foam



## Outside Gaskets



(Focus on Energy, 3/93)