

Sheet-metal enclosures

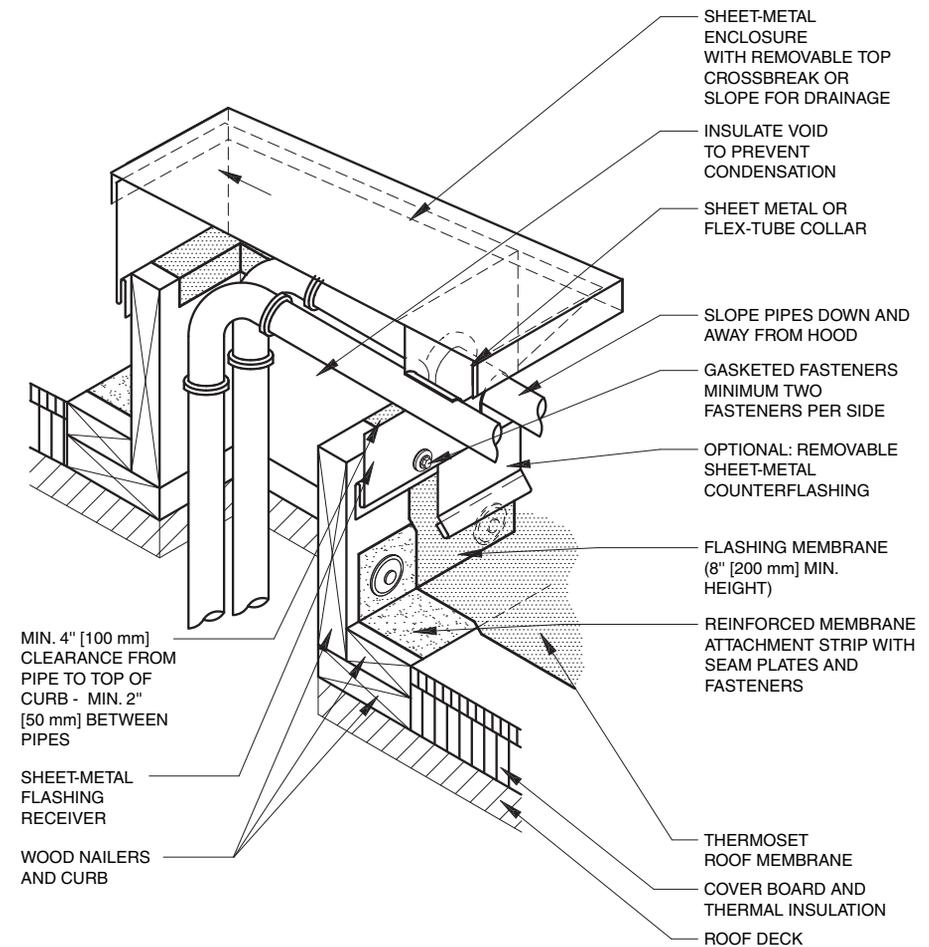
by James R. Kirby, AIA

When building owners and roofing professionals provide weatherproofing for piping through roof decks, pipes that penetrate roof systems often are not grouped in single locations, creating the need for multiple locations of penetration flashings, such as site-fabricated flashings and pitch pockets. However, this is not NRCA's preferred method and results in an excessive number of roof system penetrations (see "Penetration pockets," April issue, page 62).

Instead, NRCA recommends a method that leads to reduction of penetrations. Building owners and roofing professionals should be aware of a seldom-used method of providing weatherproofing for piping through roof decks: a curb and sheet-metal enclosure.

The NRCA Roofing and Waterproofing Manual, Fifth Edition, includes Detail TS-16, "Sheet Metal Enclosure for Piping Through Roof Deck." The detail provides a method of reducing multiple site-fabricated flashings and/or pitch pockets by grouping several pipes in a single location, reducing the overall number of penetrations through the roof membrane. To improve weatherproofing, the vertical pipes are turned horizontally and exit the side of the sheet-metal cover at a slight downward angle to reduce the possibility of water penetration.

The manual's fifth edition detail enhances the version in the manual's fourth edition by adding a removable cover that extends over the location where the pipes exit the sheet-metal cover. The cover allows access for inspection and maintenance, and the extension provides



Detail TS-16 from *The NRCA Roofing and Waterproofing Manual, Fifth Edition*.

additional protection against water penetration where the pipes exit the sheet-metal cover. An additional enhancement is the sheet-metal sides extend vertically from the curb, which eliminates the possibility for standing water at the base of the sheet-metal cover. *The NRCA Roofing and Waterproofing Manual, Fourth Edition*, version has stepped sheet-metal sides that could hold water.

Grouping pipes and providing a single roof system penetration should

be determined during the design phase of a construction project. The issue should be discussed at pre-bid and pre-job meetings with the designer, general contractor, mechanical contractor and roofing contractor. This provides a contractor the opportunity to implement the detail without making detail changes during a project. 🔄 ⚙️ 🛠️

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