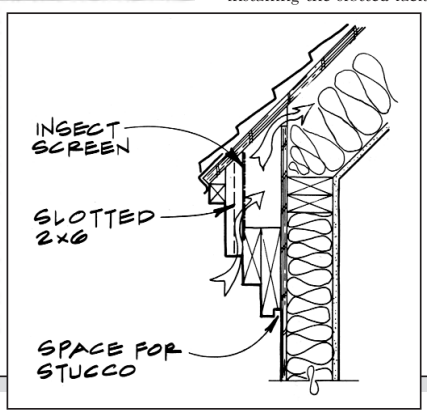
DETAIL

VENTILATION INNOVATIONS

Compiled by Clayton DeKorne

Most codes require crawlspace ventilation to reduce moisture-related decay. And all require that roofs be ventilated to prevent moisture from accumulating in the insulation and to ward off ice dams. In some situations, however, such as on a steep roof or a low foundation wall, providing adequate ventilation is difficult. Here are two innovative approaches to ventilating these problem areas.

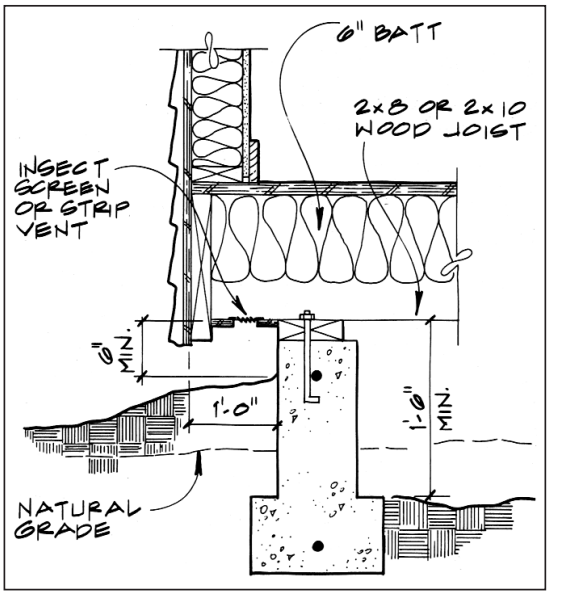


Steep roof ventilation. A standard rule of thumb for roof ventilation calls for one square foot of open vent area for every 300 square feet of ceiling when a ceiling vapor barrier is used. Without a vapor barrier, twice this amount of ventilation is needed. For most roofs, balanced soffit and ridge vents offer the best way to provide effective roof ventilation. But when the roof is very steep, there is not enough overhang for conventional soffit vents.

Bob Gramp, a builder in Bloomington, Ill., solved this problem with a dentil-type facia molding that he used to ventilate the roof of a large dormer. To create vent spaces he cut $^{3}/_{4}$x$^{3}/_{4}$-inch dados into the back of 2x6 redwood to form intermittent slots. Additional 2x redwood facia boards provide nailing along the lower edge of the slotted facia and steps down toward the wall. Before installing the slotted facia board, he covered the back of it with screen to keep out insects.

Hidden crawlspace ventilation. The ventilation standards adopted by most codes haven't changed much in the last 40 years and are pretty specific: a rectangular crawlspace needs at least four vents placed as high as possible on the foundation wall and located no more than 3 feet from each corner. If a plastic ground cover is used, at least one square foot of open vent area is needed for every 1,500 square feet of floor area. This means that at least one louvered 8x16-inch vent must be used for every 360 square feet of crawlspace. Without a ground cover, the ventilation area must be at least twice this amount.

Larry Kasparowitz, an architect in Pacifica, Calif., designed this hidden crawlspace vent to comply with ventilation requirements without interrupting the foundation wall. Instead of unattractive aluminum vents, a distinctive shadow line is created along the perimeter of the building by cantilevering the floor joists a short distance over the mudsill. The underside of the overhanging joists is then treated much like a conventional soffit, using plywood and continuous soffit vent or insect screen.



Building Details Wanted

Do you have a building detail—rough or finish, interior or exterior—that works well for you and might be a help to others? If so, please send us a readable drawing along with a brief written description of the technique. Send your ideas, along with name, address, and phone number, to JLC Details, RR#2 Box 146, Richmond, VT 05477.