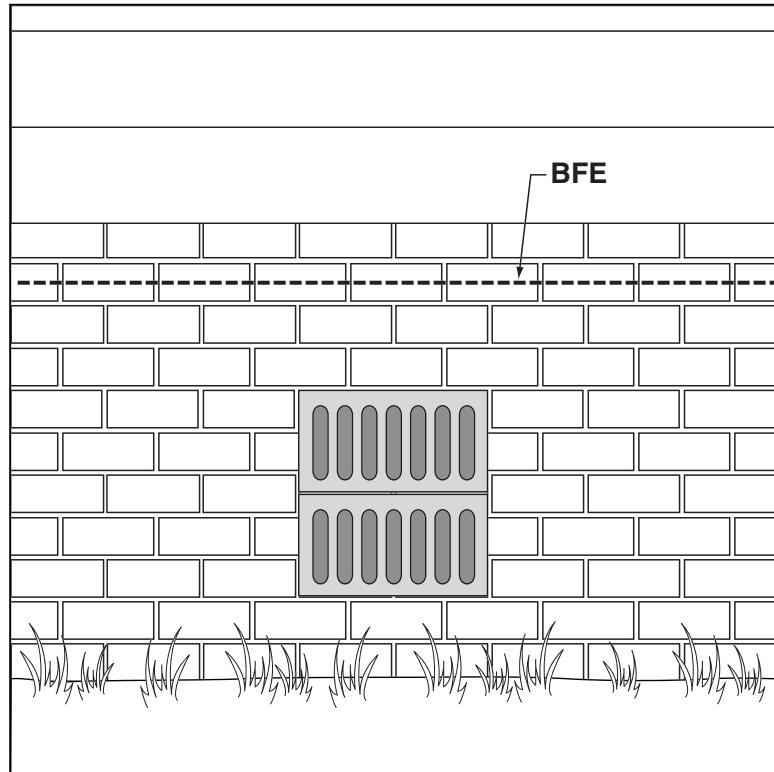


Figure 13. Stacked vents inserted in large openings must be below the BFE



Depth of water 1 foot or less

Some FIRMs show mapped SFHAs where the depth of water will be 1-foot deep or shallower. Although the difference in water depth between the outside and inside of the enclosure under a building in these areas will not exceed 1 foot during the base flood, the NFIP regulations require openings.

There are at least two solutions to this situation. The first is to elevate the floor of the enclosure the necessary height so that it is at or above the BFE and there is no need for openings. The second solution is to install openings, taking care to ensure that all of the necessary open area is below the BFE (otherwise the openings will not function as intended). This can be accomplished by positioning the bottom of the openings at or very close to grade, rather than the maximum of 1 foot above grade. In addition to complying with the regulations, the walls will not experience excessive differential hydrostatic pressure when floodwaters rise higher than the BFE.

Non-Engineered Openings and Engineered Openings

The NFIP regulations identify alternatives to provide sufficient size and number of openings to allow for the automatic entry and exit of floodwaters. This section describes how this level of performance can be satisfied by use of:

- Non-engineered openings (or covers and devices) that meet the prescriptive requirement to provide 1 square inch of net open area for each square foot of enclosed area (as