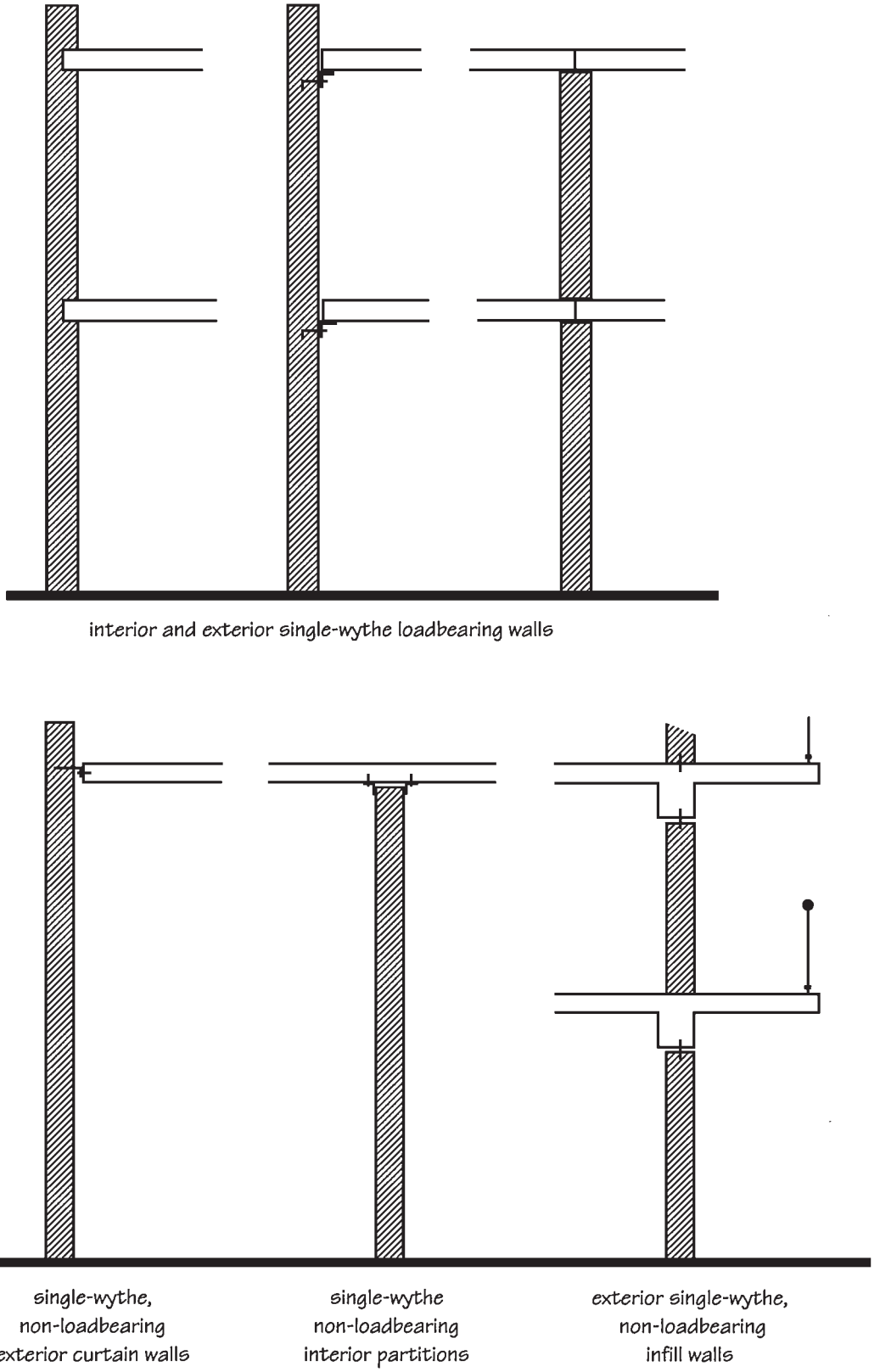

Figure 8-3 Loadbearing and non-loadbearing single-wythe walls.

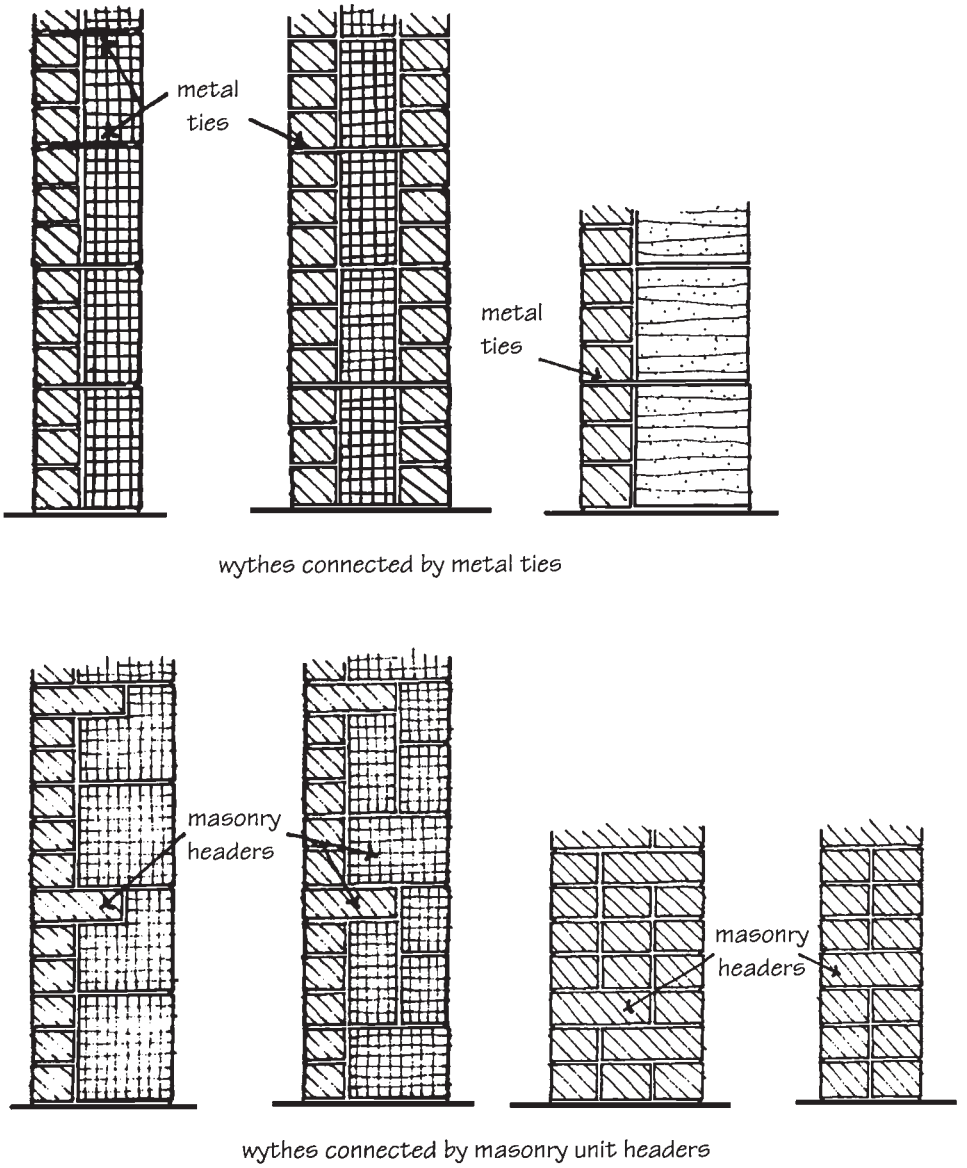

Figure 8-4 Masonry unit bonded and metal-tied masonry walls. (*From* Principles of Clay Masonry Construction, *Brick Industry Association, Reston, VA.*)

tion is the increased resistance to rain penetration which results from the physical separation of the inner and outer wythes. This separation also increases thermal resistance by providing a dead air space, and allows room for additional insulating materials if desired. The open cavity, when it is properly fitted with a system of flashing and weep holes, provides drainage for moisture which may penetrate the exterior or form as condensation within the cavity.

Both wythes of a cavity wall must resist wind loads and other lateral forces. Metal ties transfer these loads from one wythe to the other in tension and compression, and must be solidly bedded in the mortar joints in order to perform properly. Crimped ties with a water drip in the center should not be used, because the weakened plane created can cause buckling of the tie and ineffective load transfer.