

Stepped Foundations

1806.3 Stepped Foundations. The code requires that foundations for buildings be essentially level. This means that the bottom bearing surface, as well as the top of the foundation wall which supports the walls must be level. However, a slope of 1 vertical in 10 horizontal is permitted, but when the slope is steeper, the foundation is required to be stepped. The figure below schematically shows a stepped foundation. Although the code places no restriction on a stepped foundation except that the top and bottom surfaces be level, the figure shows a recommended overlap of the top of the foundation wall beyond the step in the founda-

tion to be larger than the vertical step in the foundation wall at that point. This recommendation is based on possible crack propagation at an angle of 45 degrees. In order to keep this effect to a minimum, it is also recommended that the height of each step in the foundation not to exceed 1 or 2 feet (305 or 610mm). Other measures to protect against cracking, such as special reinforcing details, would of course take care of the problem. However, a footing which has no engineering design and which is on competent soil materials most likely will not be reinforced.

