4.1.2.4 CONCENTRATED LOAD

In addition to the previous verification, the National Building Code of Canada cl.4.1.5.10 (1) requires consideration of a minimum concentrated load to be applied over an area of $750\ mm$ x $750\ mm$. The magnitude of the load depends on the occupancy. This loading does not need to beconsidered to act simultaneously with the specified uniform live load.

The intensity of concentrated loads on slabs is reduced due to lateral distribution. One of the accepted methods of calculating the "effective slab width" which is used by Hambro actually appears in Section 317 of the British Standard Code of Practice CP114 and is reproduced in fig. 5. Note that the amount of lateral distribution increases as the load moves closer to mid-span, and reaches a maximum of $0.3L$ to each side; the effective slab width resisting the load is a maximum of load $width + 0.6L$.

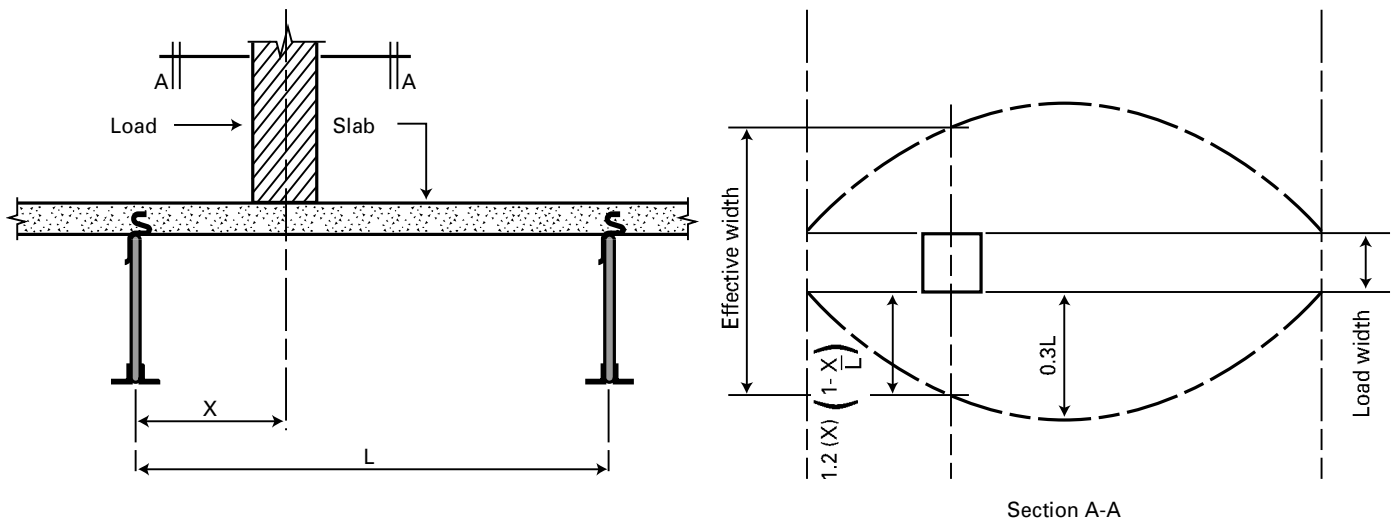An abbreviated summary of the calculations is shown in tables 6 and 7.

Fig. 5
Lateral Distribution of Concentrated Loads