Table 10 Bending moment coefficients for two-way spanning rectangular slabs

Type of panel and moments considered	Short-span coefficients β_{sx} Values of l_y/l_x			Long-span coefficients β_{sy} for all values of l_y/l_x
	1.0	1.25	1.5	
1 Interior panels				
Negative moment at continuous edge	0.031	0.044	0.053	0.032
Positive moment at midspan	0.024	0.034	0.040	0.024
2 One short edge discontinuous				
Negative moment at continuous edge	0.039	0.050	0.058	0.037
Positive moment at midspan	0.029	0.038	0.043	0.028
3 One long edge discontinuous				
Negative moment at continuous edge	0.039	0.059	0.073	0.037
Positive moment at midspan	0.030	0.045	0.055	0.028
4 Two adjacent edges discontinuous				
Negative moment at continuous edge	0.047	0.066	0.078	0.045
Positive moment at midspan	0.036	0.049	0.059	0.034

The distribution of the reactions of two-way slabs on to their supports can be derived from Fig. 3.

4.2.3.4 Flat slabs

If a flat slab has at least three spans in each direction and the ratio of the longest span to the shortest does not exceed 1.2, the maximum values of the bending moments and shear forces may be obtained from Table 11.

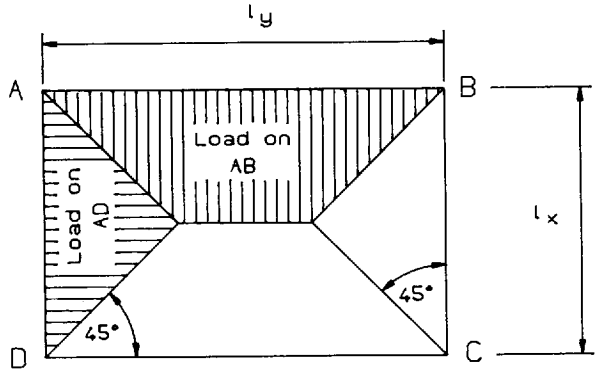
Where the conditions above do not apply, bending moments in flat slabs have to be obtained by frame analysis (see subsection 4.3). A single load case may be applicable subject to satisfying the conditions in clause 4.2.3.1. The structure should then be considered as being divided longitudinally and transversely into frames consisting of columns and strips of slab. The width of slab contributing to the effective stiffness should be the full width of the panel. The stiffening effects of drops and column heads may be ignored for the analysis but need to be taken into account when considering the distribution of reinforcement.

Table 11 Bending moment and shear force coefficients for flat slab panels of three or more equal spans

	Outer support		Near middle of end span	At first interior support	At middle of interior span(s)	At internal supports
	column	wall				
moment	$-0.040Fl$*	$-0.02Fl$	$0.083Fl$†	$-0.063Fl$	$0.071Fl$	$-0.055Fl$
shear	$0.45F$	$0.4F$	—	$0.6F$	—	$0.5F$
total column moments	$0.040Fl$	—	—	$0.022Fl$	—	$0.022Fl$

where F is the total design ultimate load on a panel bounded by four columns and l is the effective span.

*These moments may have to be reduced to be consistent with the capacity to transfer moments to the columns. The midspan moments † must then be increased correspondingly.



Notes

1. The reactions shown apply when all edges are continuous (or discontinuous)
2. When one edge is discontinuous, the reactions on all continuous edges should be increased by 10% and the reaction on the discontinuous edge may be reduced by 20%.
3. When adjacent edges are discontinuous, the reactions should be adjusted for elastic shear considering each span separately.

3 Distribution of reactions from two-way slabs on to supports