## CODE

all sections occurs with factored L applied simultaneously to all panels.

- **6.4.3.3** For loading conditions other than those defined in 6.4.3.1 or 6.4.3.2, it shall be permitted to assume (a) and (b):
  - (a) Maximum positive  $M_u$  near midspan of panel occurs with 75 percent of factored L on the panel and alternate panels
  - (b) Maximum negative  $M_u$  at a support occurs with 75 percent of factored L on adjacent panels only

## 6.5—Simplified method of analysis for nonprestressed continuous beams and one-way slabs

- **6.5.1** It shall be permitted to calculate  $M_u$  and  $V_u$  due to gravity loads in accordance with this section for continuous beams and one-way slabs satisfying (a) through (e):
  - (a) Members are prismatic
  - (b) Loads are uniformly distributed
  - (c)  $L \leq 3D$
  - (d) There are at least two spans
  - (e) The longer of two adjacent spans does not exceed the shorter by more than 20 percent
- **6.5.2**  $M_u$  due to gravity loads shall be calculated in accordance with Table 6.5.2.

## COMMENTARY

R6.4.3.3 The use of only 75 percent of the full factored live load for maximum moment loading patterns is based on the fact that maximum negative and maximum positive live load moments cannot occur simultaneously and that redistribution of maximum moments is thus possible before failure occurs. This procedure, in effect, permits some local overstress under the full factored live load if it is distributed in the prescribed manner, but still ensures that the design strength of the slab system after redistribution of moment is not less than that required to resist the full factored dead and live loads on all panels.

## R6.5—Simplified method of analysis for nonprestressed continuous beams and one-way slabs

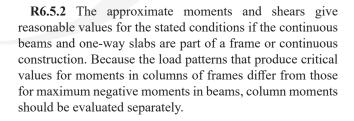


Table 6.5.2—Approximate moments for nonprestressed continuous beams and one-way slabs

Moment	Location	Condition	$M_u$
Positive	End span	Discontinuous end integral with support	$w_u \ell_n^2 / 14$
		Discontinuous end unrestrained	$w_u \ell_n^2 / 11$
	Interior spans	All	$w_u \ell_n^2 / 16$
	Interior face of exterior support	Member built integrally with supporting spandrel beam	$w_u \ell_n^2/24$
Negative <sup>[1]</sup>		Member built integrally with supporting column	$w_u \ell_n^2 / 16$
	Exterior face of first interior support	Two spans	$w_u \ell_n^2/9$
		More than two spans	$w_u \ell_n^2 / 10$
	Face of other supports	All	$w_u \ell_n^2 / 11$
	Face of all supports satisfying (a) or (b)	(a) slabs with spans not exceeding 3 m (b) beams where ratio of sum of column stiffnesses to beam stiffness exceeds 8 at each end of span	$w_u \ell_n^2/12$

<sup>[1]</sup> To calculate negative moments,  $\ell_n$  shall be the average of the adjacent clear span lengths.

