Moment and shear coefficient ,ACI code method 8-3

For non-pre-stressed concrete

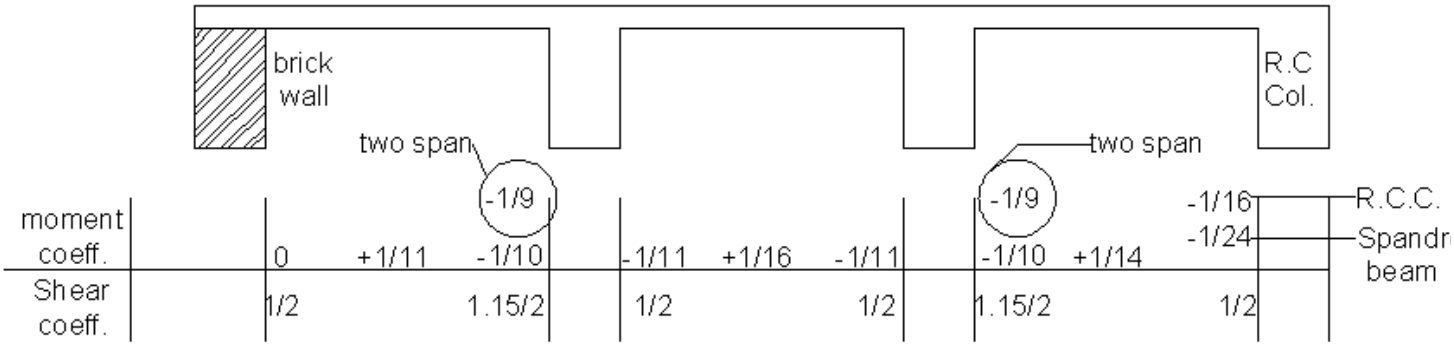
For continuous beam and one way slabs

Conditions

1. There are two or more span.
2. Spans are approximately equal with larger of two adjacent spans not greater than the shorter by more than (20%)
3. Loads are uniformly distributed
4. Unit live load not exceeding three times unit dead load
5. Members are prismatic

$M \quad Wu \quad coeff,$

$Wu \quad coeff$



8.3.3 — As an alternate to frame analysis, the following approximate moments and shears shall be permitted for design of continuous beams and one-way slabs (slabs reinforced to resist flexural stresses in only one direction), provided:

(a) There are two or more spans;

(b) Spans are approximately equal, with the larger of two adjacent spans not greater than the shorter by more than 20 percent;

(c) Loads are uniformly distributed;

(d) Unfactored live load, L, does not exceed three times unfactored dead load, D; and

(e) Members are prismatic.

For calculating negative moments, ℓ_n is taken as the average of the adjacent clear span lengths.

Positive moment	
End spans	
Discontinuous end unrestrained	$w_u \ell_n^2/11$
Discontinuous end integral with support	$w_u \ell_n^2/14$
Interior spans	$w_u \ell_n^2/16$
Negative moments at exterior face of first interior support	
Two spans	$w_u \ell_n^2/9$
More than two spans	$w_u \ell_n^2/10$
Negative moment at other faces of interior supports	$w_u \ell_n^2/11$
Negative moment at face of all supports for	
Slabs with spans not exceeding 3 m; and beams where ratio of sum of column stiffnesses to beam stiffness exceeds eight at each end of the span	$w_u \ell_n^2/12$
Negative moment at interior face of exterior support for members built integrally with supports	
Where support is spandrel beam	$w_u \ell_n^2/24$
Where support is a column	$w_u \ell_n^2/16$
Shear in end members at face of first interior support	$1.15\ w_u \ell_n/2$
Shear at face of all other supports	$w_u \ell_n/2$