



CRITERIA FOR CONTROLLING CRACKING IN REINFORCED CONCRETE MASONRY WALLS

		Crack Control Coefficient in/in (mm/mm)	
Maximum wall panel dimensions	length, ft (m)	0.0010 25 (7.62)	0.0015 20 (6.10)
	length / height ratio	2 1/2	2
Minimum horizontal		0.0007	0.0007

1.  $A_s$  = cross-sectional area of steel, in.<sup>2</sup>/ft (mm<sup>2</sup>/m).  
 $A_n$  = net cross-sectional area of masonry, in.<sup>2</sup>/ft (mm<sup>2</sup>/m).
2. Maximum wall panel dimension criteria need not apply for walls with a minimum horizontal reinforcement area,  $A_s$  of 0.002 times the net cross sectional area of the masonry,  $A_n$ .
3. The minimum horizontal reinforcement ratio criteria need not apply for walls with a length not exceeding on half the maximum length values shown above.
4. CCC's less than 0.0010 may be available in some areas and spacing could be adjusted accordingly for this as well.
5. This criteria is based on an analytical study over a wide geographical area with wide temperature and material property variations. Control joint spacing may be adjusted up or down based on local experience.
6. As shrinkage is related to moisture content, consider using the higher crack control coefficient for masonry units that are wet from lack of protection while stored on the jobsite.
7. Maximum linear shrinkage = 0.00065

THIS DETAIL AS SHOWN IS INTENDED TO ILLUSTRATE A GENERAL CONCEPT OR METHOD OF CONSTRUCTION. DETAILS THAT SHOW DIFFERENT OR MODIFIED CONCEPTS OR METHODS CAN BE OF EQUAL VALIDITY AND SHOULD NOT BE EXCLUDED FROM CONSIDERATION. THIS DETAIL SHALL NOT BE USED FOR CONSTRUCTION WITHOUT THE APPROVAL AND SIGNATURE OF A LICENSED DESIGN PROFESSIONAL. THE PERSON USING THIS DETAIL SHALL BE RESPONSIBLE FOR ITS COMPLETE DESIGN AND PROPER APPLICATION.

**FIGURE 5 SUGGESTED LOCATIONS AND SPACING FOR CONTROL JOINTS IN CMU WALLS**