

GROUP B - CODE AMENDMENT FORM – 2018

AMENDMENT NO.: _____

COMMITTEE: Structural

CODE SECTION: IBC 1905.1.7, ACI 318 chapter 7

PROPOSER: Clark County

PROPOSAL: Add a new exception #4 for CMU fence and retaining walls in IBC 1905.1.7

IBC 1905.1.7

14.1.4.1 – Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows:

- a. Structural plain concrete basement, foundation or other walls below the base as defined in ASCE 7 are permitted in detached one- and two-family dwellings three stories or less in height constructed with stud-bearing walls. In dwellings assigned to Seismic Design Category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall be not less than 7 ½ inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 14.6.1.
- b. Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

Exception: in detached one- and two-family dwellings three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.

- c. Plain concrete footings supporting walls are permitted, provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. For footings that exceed 8 inches (203 mm) in thickness, a minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exceptions:

1. In Seismic Design Categories A, B and C, detached one- and two-family dwellings three stories or less in height constructed with stud-bearing walls are permitted to have plain concrete footings without longitudinal reinforcement.
2. For foundation systems consisting of a plain concrete footing and a plain concrete stemwall, a minimum of one bar shall be provided at the top of the stemwall and at the bottom of the footing.
3. Where a slab on ground is cast monolithically with the footing, one No. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.

4. In Seismic Design Categories A, B, C, and D cantilevered masonry screen walls less than or equal to 6'-0" in height are permitted to have plain concrete foundations with a minimum of two continuous No. 4 reinforcing bars in the longitudinal direction. Wall heights shall be measured from the top of foundation to the top of wall.

JUSTIFICATION:

A recent interpretational change and/or new enforcement of this code provision in Clark County has stopped a number of walls in residential construction from moving forward under previous design standard. This amendment is intended to provide consistency in regional interpretation and application of the code.

This proposed amendment is limited in scope and provides direction to the local jurisdictions on how to apply the ACI 318 plain concrete provisions with some minimum requirements. The 2 #4 bars would meet the minimum steel requirements for many 6 foot block walls with a centered foundation designed with a geotechnical report (up to 9" thick by 1'-10" wide). It would be just shy of the minimum reinforcement for a typical eccentric configuration (L shape).

COST IMPACT:

COMMITTEE ACTION:

Boulder City	Clark County	Henderson	Las Vegas	Mesquite	Pahrump	North Las Vegas	CC School District	Industry		
								1	2	3
DNV	Y	Y	Y	DNV	DNV	Y	DNV	Y	Y	Y

RESULT:

STEERING COMMITTEE RECOMMENDATIONS: Proposal passes 7-0.