



## Clark County Department of Building & Fire Prevention

4701 West Russell Road • Las Vegas NV 89118

(702) 455-3000 • Fax (702) 221-0630

<b>Division:</b>	<b>Building Division</b>	<b>Policy &amp; Procedure:</b>	<b>BD-CI-220</b>
<b>Subject:</b>	<b>CMU FENCE AND RETAINING WALLS</b>	<b>Effective Date:</b>	<b>03/04/2021</b>
<b>Code:</b>	<b>IBC 1905.1.7, ACI 318 Chapter 14.1.4</b>	<b>Revised Date:</b>	<b>03/04/2021</b>

### A. CODE REQUIREMENT

**IBC 1905.1.7, ACI 318, Section 14.1.4.** Delete ACI 318 Section 14.1.4 and replace with the following:

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 (2438mm), 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.

**B. INTERPRETATION**

Add Exception 4. to 14.1.4 (c) as follows:

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.

**C. RATIONALE**

This interpretation is intended to provide consistency in regional interpretation and application of the code and was developed by the Southern Nevada Building Official's Structural Committee.

This proposed interpretation clarifies how Clark County Building & Fire Prevention will apply the ACI 318 plain concrete provisions with some minimum requirements.

**Prepared By:** Building Division

**Date Prepared:** 2021

**Revision History:**

Title	Revision/Approved Date	Effective Date
CMU Fence and Retaining Walls BD-CI-220	03/04/2021	03/04/2021

**Reviewed by:**

N/A  
Vacant  
Engineering Manager

Werner Hellmer  
Werner Hellmer, P.E.  
Manage of Plans Exam.

Zach Gharibian  
Zach Gharibian  
ACET Manager

Matthew Brewer  
Matthew Brewer  
Manager of Inspections

Danny Horvat  
Danny Horvat  
Assistant Fire Chief

Wayne Dailey  
Wayne Dailey  
Assistant Fire Chief

Ofelia Monje  
Ofelia Monje  
Senior Management Analyst

Amara Vigil  
Amara Vigil  
Senior Management Analyst

Samuel D. Palmer  
Samuel D. Palmer, P.E. C.B.O  
Assistant Director

James Gerren  
James Gerren, P.E. C.B.O  
Assistant Director

**Approved by:**

Jerome A. Stueve  
Jerome A. Stueve, P.E.  
Director/Building & Fire Official