14.4.5.4 Deep Flexural Members

Add the following new Section 3.3.4.2.7 to TMS 402/ACI 530/ASCE 5:

3.3.4.2.7 Deep Flexural Member Detailing. *Flexural members with overall-depth-to-clear-span ratio greater than 2/5 for continuous spans or 4/5 for simple spans shall be detailed in accordance with this section.*

3.3.4.2.7.1 *Minimum flexural tension reinforcement shall conform to Section 3.3.4.3.2.*

3.3.4.2.7.2 *Uniformly distributed horizontal and vertical reinforcement shall be provided throughout the length and depth of deep flexural members such that the reinforcement ratios in both directions are at least 0.001. Distributed flexural reinforcement is to be included in the determination of the actual reinforcement ratios.*

14.4.5.5 Walls with Factored Axial Stress Greater Than 0.05 f'_m

Add the following exception following the second paragraph of Section 3.3.5.3 of TMS 402/ACI 530/ASCE 5:

EXCEPTION: *A nominal thickness of 4 in. (102 mm) is permitted where load-bearing reinforced hollow clay unit masonry walls satisfy all of the following conditions.*

1. *The maximum unsupported height-to-thickness or length-to-thickness ratios do not exceed 27.*
2. *The net area unit strength exceeds 8,000 psi (55 MPa).*
3. *Units are laid in running bond.*
4. *Bar sizes do not exceed No. 4 (13 mm).*
5. *There are no more than two bars or one splice in a cell.*
6. *Joints are not raked.*

14.4.5.6 Shear Keys

Add the following new Section 3.3.6.6 to TMS 402/ACI 530/ASCE 5:

3.3.6.11 Shear Keys. *The surface of concrete upon which a special reinforced masonry shear wall is constructed shall have a minimum surface roughness of 1/8 in. (3 mm). Shear keys are required where the calculated tensile strain in vertical reinforcement from in-plane loads exceeds the yield strain under load combinations that include seismic forces based on an* R *factor equal to 1.5. Shear keys that satisfy the following requirements shall be placed at the interface between the wall and the foundation.*

1. *The width of the keys shall be at least equal to the width of the grout space.*
2. *The depth of the keys shall be at least 1.5 in. (38 mm).*
3. *The length of the key shall be at least 6 in. (152 mm).*
4. *The spacing between keys shall be at least equal to the length of the key.*
5. *The cumulative length of all keys at each end of the shear wall shall be at least 10 percent of the length of the shear wall (20 percent total).*
6. *At least 6 in. (150 mm) of a shear key shall be placed within 16 in. (406 mm) of each end of the wall.*
7. *Each key and the grout space above each key in the first course of masonry shall be grouted solid.*

14.4.6 Modifications to Chapter 6 of TMS 402/ACI 530/ASCE 5

14.4.6.1 Corrugated Sheet Metal Anchors

Add Section 6.2.2.10.1 to TMS 402/ACI 530/ASCE 5 as follows:

6.2.2.10.1 *Provide continuous single wire joint reinforcement of wire size W1.7 (MW11) at a maximum spacing of 18 in. (457 mm) on center vertically. Mechanically attach anchors to the joint reinforcement with clips or hooks. Corrugated sheet metal anchors shall not be used.*

14.4.7 Modifications to TMS 602/ACI 530.1/ASCE 6

14.4.7.1 Construction Procedures

Add the following new Article 3.5 I to TMS 602/ACI 530.1/ASCE 6:

3.5 I. *Construction procedures or admixtures shall be used to facilitate placement and control shrinkage of grout.*

14.5 WOOD

Structures, including foundations, constructed of wood to resist seismic loads shall be designed and detailed in accordance with this standard including the references and additional requirements provided in this section.

14.5.1 Reference Documents

The quality, testing, design, and construction of members and their fastenings in wood systems that resist seismic forces shall conform to the requirements of the applicable following reference documents,:

1. AF&PA NDS
2. AF&PA SDPWS