

IOWA DEPARTMENT OF TRANSPORTATION

To Office Bridges and Structures Date March 1, 2008
Attention All Employees Ref No. 521.1
From Gary Novey
Office Bridges and Structures
Subject MM No. 192 (LRFD office guidelines for temperature and shrinkage reinforcing in pier footings)

Questions about the use of temperature and shrinkage steel on deep concrete members (specifically footings) when designed by the AASHTO LRFD specifications have been raised recently. The questions were in regard to the need for surface reinforcing on the sides of pier footings and if this reinforcing should be provided. The key issue is at what thickness should footings be defined as “mass concrete”.

Based on our experience with thicker footings, footings over 5 ft shall be defined as “mass concrete”. This continues a policy that was started with Methods Memo No. 3. Therefore, continue the Office’s policy of using reinforcing in the top of the footings for thickness of 5 foot or less where uplift is a problem. For large footings that are greater than 5 ft thick, check with your section leader or me to see if temperature and shrinkage requirements need to be met along the sides and top of the footing and if additional mass concrete notes need to be included in the plans.

If you have any questions on the updated sheets, check with me.

GAN/dgb/bj