Bridges and Structures	??April 9, 2001?? ??
All Employees	521.1
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Substructure Design-MM No. 6 (Pier Cap Design, Shear Stirrup Spacing)

Shear Stirrup Spacing

There has been some confusion in the office about what to use for maximum shear stirrup spacing in Pier Caps. Currently when calculating the maximum shear spacing, AASHTO specifications 8.15.5.3.8 and 8.19.3 provide a maximum spacing of d/2, 24 inches (600 mm) or d/4, 12 inches (300 mm) based on the concrete shear stress.

Current specifications on temperature and shrinkage (AASHTO 8.20) limit the maximum reinforcement to no.4 at 18 inches (no. 15 at 450 mm). The current AASHTO LRFD spec. 5.10.8 limits the maximum temperature and shrinkage spacing to 18 inches (450 mm) for any exposed surface with components less than 48 inches (1200 mm) thick.

Based on this information for temperature and shrinkage steel and discussions with the policy group, limit the maximum spacing to 18 inches (450 mm) for shear stirrups.