

Bridges and Structures

March 21, 2001

All Employees

521.3

Gary Novey

Bridges and Structures

Bridge Substructure Design-MM No. 16 (Use of Higher Strength Concrete).

In situations where the design depths of pier caps and footings are beyond limits suggested because of longer bridge spans or special situations, consideration can be given to increasing the concrete strength for the pier concrete. Consider using structural concrete with a minimum 28 day compressive strength ( $f'c$ ) of 5000 psi.

For these situations the designer shall work with the office of Materials to develop a special provision for the project to address the concrete mix design. In addition, the designer shall place the following note under the "DESIGN STRESSES" heading on the notes and quantities sheet and under the "PIER NOTES" on the pier detail sheet. A similar note shall be placed in the "estimate reference information" under the "Structural Concrete (Bridge)" bid item which addresses the quantity of the higher strength concrete.

All pier concrete shall meet a 28 day design strength of  $f'c = 5000$  psi (35 Mpa).

Check with your section leader for approval to use the higher strength concrete.