



Illinois Department of Transportation

Memorandum

To: ALL BRIDGE DESIGNERS 06.1
From: Ralph E. Anderson *Ralph E. Anderson*
Subject: Structural Concrete Repair
Date: March 16, 2006

The policies of this memorandum were developed from the recommendations of an FHWA/IDOT process review for structural concrete repair and input from the Industry. A new Guide Bridge Special Provision (GBSP #53) entitled "Structural Repair of Concrete" was developed and shall replace the previous GBSP #1 "Formed Concrete Repair" and GBSP #3 "High Performance Shotcrete". Additionally, the following two new pay items were developed: Structural Repair of Concrete ≤ 5 inches and Structural Repair of Concrete > 5 inches. Some of the significant improvements include:

1. Tightened and clarified material requirements.
2. Tightened curing and quality control for shotcrete.
3. Updated shotcrete specifications per industry guide specifications.
4. Unified removal and surface preparation requirements for both formed concrete and shotcrete methods.
5. Repair method determined by the contractor and according to the four rules listed in the specification.

Temporary shoring and cribbing should be considered and accounted for with the appropriate pay item when one of the following three conditions is anticipated during structural concrete repair:

1. Concrete removal may exceed 6 inches in depth or $\frac{1}{4}$ the cross section of a structural member.
2. More than half of the vertical column reinforcement may be exposed at a given cross section.
3. More than 6 consecutive rebar may be exposed.

The type of repair described in the new GBSP #53, "Structural Repair of Concrete" is not intended for repair of prestressed concrete members.

The new GBSP 53 may be found on the IDOT web site. Designers are encouraged to implement this new special provision on all applicable projects which have not been let; however, all applicable projects beginning with the August 4, 2006 letting shall utilize this special provision.