

February 24, 2011

## **Technical Bulletin**

For embed conditions that involve a concrete spall at *Hardy Frame*<sup>®</sup> anchors, we recommend installing one or more # 3 (minimum) rebar "hairpins" secured with a concrete adhesive<sup>(1)</sup> to provide additional lateral support and to pin the patch material to the existing concrete. The upper-most hairpin should be located approximately 2-inches from the top of concrete with additional hairpins at 4-inches OC for cases where the spall extends more than 6-inches vertically.

For spall conditions at curbs, the hairpin should penetrate a minimum of 4 inches and at slab conditions the penetration should be no less than the minimum required by the epoxy manufacturer.

After hairpin installation, the recommended material for patching the spall area is 5,000 psi (minimum) non-shrink grout. When possible it is recommended the *Hardy Frame*<sup>®</sup> Panel or Brace Frame be installed above a nut and washer, with the top of washer flush with the top of concrete, in order to transfer compression loads axially down the anchor instead of applying these forces to the area compromised by the spall.

For further questions or help please contact us at 800-754-3030.

(1) Installation to be per the epoxy manufacturers instructions.

