

## INTEROFFICE MEMORANDUM

Date: XXXXXX, 2000

**TO:** Mr. Allan Holmes, State Construction Engineer

**FROM:** Edward T. Fain, Bridge Engineer

**SUBJECT:** Cracked Pile Repair, Bridge No. 00000

**Job 000000**

**Job Name**

**Location**

**XXXX County**

As requested, we have reviewed the attached Contractor's proposal to repair the cracked piles in Bents 5 & 6.

In general, cracks in concrete piles may qualify for repair with an approved epoxy provided that, if multiple cracks are present, they are no closer together than the width of the pile. Piles with cracks less than a pile width apart must be cut off and built up or otherwise remedied according to Subsection 805.06 of the Standard Specifications. The maximum crack size for which an epoxy repair system may be considered is ¼ inch unless the epoxy manufacturer recommends a smaller limit. A structural review of the pile is required to determine the suitability of an epoxy repair.

Our comments after structural review of this specific proposal are as follows:

- The piles qualify for an epoxy repair with the proposed product, Hilti CI 060 EP.
- The epoxy must be applied according to the manufacturer's directions.
- The driving of repaired piles must be given careful inspection by experienced personnel to insure that, should a repair fail, it is detected.
- If the epoxy repair fails, or if additional cracking occurs, a second epoxy repair will not be allowed.

If the above specific conditions are met, the repair will satisfy the structural requirements of the bridge. A copy of the Hilti installation instructions for the proposed CI 060 EP Crack Injection System is attached.

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Attachments