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Early Entry Sawed Portland Cement Concrete Transverse Joint Ends	Final Report, 9-97 to 4-03

5. AUTHOR(S)	6. PERFORMING ORGANIZATION ADDRESS
Robert Steffes Assistant to the Research Engineer BJ Siljenberg Materials Research	Iowa Department of Transportation Office of Materials 800 Lincoln Way Ames, Iowa 50010

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Des Moines Construction
Flynn Co. Inc.
Office of Materials

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8. ABSTRACT

Experiments with early entry light sawing of Portland cement concrete (PCC) contraction joints began in Iowa in 1989. Since that time, changes in early sawing equipment have occurred as well as changes in specifications for sawing. The option to use early sawing for transverse contraction joints was specified in 1992. A problem happening occasionally with early sawing was the break out of some of the concrete around the end of the joint as the saw blade approached the edge of the slab. To prevent this, it was proposed that the sawing would terminate approximately ½" to ¾" before the edge of the slab, creating a "short joint". This procedure would also leave a concrete "dam" to prevent the run-out and waste of the hot liquid joint sealant onto the shoulder. It would also eliminate the need for the labor and material for applying a duct tape dam at the open ends of each sawed joint to stop hot liquid sealant run-out.

Agreements were made with the contractor to apply the "short joint" technique for 1 day of paving. The evaluation and results are compared with an adjoining control section.

The research found no negative aspects from sawing the "short joint". Three specific findings were noted. They are the following:

1) No joint end "blow-out" spalls of concrete occurred.
2) The need for the duct tape dam to stop liquid sealant overflow was eliminated.
3) Joint end corner spalls appear to be caused mainly by construction shouldering operations equipment.

The "short joint" sawing technique can be routinely applied to early entry sawed transverse contraction joints with expectations of only positive results.

9. KEY WORDS	10. NO. OF PAGES
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