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16. Abstract <p>D-cracking has long been a serious problem in the deterioration of concrete pavements in severe weather climates. After much research, the mechanics and variables involved in the destructive forces of concrete D-cracking are becoming known. This study focuses on these variables that include analysis of the cost effectiveness in using certain preventive measures to reduce premature deterioration of concrete pavement due to D-cracking. These variables will include aggregate source, cement source, joints, type of pavement, vapor barrier, cure, and subbase.</p> <p>A test road located on State Road (SR) 2 near Vermilion, Ohio was built in 1974 and 1975 with specific sections to investigate the role of subbase drainage systems, pavement joint design, subbase materials, joint sealant, different aggregate sources and size, different cements, types of cure, and joint spacing. In 1998 this field study was done on the Vermilion project to evaluate many of the factors that were initiated on the pavement.</p>		14. Sponsoring Agency Code	
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