TECHNICAL REPORT TITLE PAGE

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8. ABSTRACT

The Iowa Department of Transportation has been determining a present serviceability index (PSI) on the primary highway system since 1968. A CHLOE profilometer has been used as the standard for calibrating the Roadmeters that do the system survey. The current Roadmeter, an IJK Iowa DOT developed unit, is not considered an acceptable Roadmeter for determining the FHWA required International Roughness Index (IRI). Iowa purchased a commercial version of the South Dakota type profiler (SD Unit) to obtain IRI.

This study was undertaken to correlate the IRI to the IJK Roadmeter and retire the Roadmeter. One hundred forty-seven pavement management sections (IPMS) were tested in June and July 1991 with both units. Correlation coefficients and standard error of estimates were:

	r^2	Std. Error
PCC pavements	0.81	0.15
Composite pavements	0.71	0.18
ACC pavements	0.77	0.17

The correlation equations developed from this work will allow use of the IRI to predict the IJK Roadmeter response with sufficient accuracy. Trend analysis should also not be affected.

9. KEY WORDS Smoothness, Roughness, International Roughness Index Present Serviceability Index, South Dakota Profiler	10. NO. OF PAGES 26