
Standard Practice for Collecting the Transverse Pavement Profile

AASHTO Designation: R 88-18 (2022)¹

Technically Revised: 2018

Reviewed but Not Updated: 2022

Technical Subcommittee: 5a, Pavement Measurement



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1. SCOPE

- 1.1. This practice outlines a method for collecting pavement transverse profile, including its relationship to a level horizontal reference in pavement surfaces utilizing automated measurement devices. The profile can subsequently be used to quantify cross slope and pavement distresses such as transverse deformation, rut characteristics, water entrapment, or edge drop-off. Detailed specifications are not included for equipment or instruments used to make the measurements. Equipment that can be adequately validated to meet the functionality stipulated herein is considered acceptable. The goal is to achieve a standardized data set that supports a wide variety of interpretation methods to characterize pavement transverse profile characteristics in order to capture properties of engineering significance, without unduly restricting innovative methods.
- 1.2. This standard addresses data collection utilizing a measurement device traveling at or near the posted speed limit.
- 1.3. *This practice does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations related to and prior to its use.*

2. TERMINOLOGY

- 2.1. *Definitions:*
- 2.1.1. *report interval*—the travel distance between the reported data.
- 2.1.2. *transverse profile*—vertical deviations of the pavement surface from a level horizontal reference perpendicular to the lane direction of travel.
- 2.1.3. *transverse measurement width*—distance between the first and last measurement points in the transverse profile.
- 2.1.4. *vertical measurement resolution*—the smallest distance of measurement in the vertical axis stored by the measure device.
- 2.1.5. *vertical measurement accuracy*—the difference between the vertical distance reported by the measuring device and a standard reference measurement.