

**COURSE NUMBER**

FHWA-NHI-131100

COURSE TITLE

Pavement Smoothness: Use of Inertial Profiler Measurements for Construction Quality Control

Studies have shown that roughness is one of the biggest priorities of highway users. Additional studies have shown that pavements that are built smooth stay smoother longer and provide a longer pavement life. Most State highway agencies (SHAs) have some type of smoothness specification that is used to evaluate the smoothness of newly constructed or rehabilitated pavements during acceptance testing. Many agencies also have incentives or disincentives for new construction and rehabilitation, which are based on pavement smoothness.

Increasingly these agencies are turning to inertial profilers as the most reliable instrument for construction acceptance testing and verifying pavement smoothness. The intent of this course is to train inertial profiler operators in the basics of performing construction acceptance testing and to train those reviewing the data to comprehend how those data were obtained and what they represent in order to build smoother riding roadways.

The course has been developed to be delivered in a single day of instructor-led training. In order to keep the instructor-led portion of the training to a single day, the training includes two hours of independent study that should be completed prior to attending the instructor-led session.

OUTCOMES

Upon completion of the course, participants will be able to:

- Perform checks of the inertial profiler components to identify that the equipment is in proper working order.
- Determine the impact of current surface and environmental conditions on data collection.
- Collect profile data using appropriate operating techniques.
- Calculate a smoothness index using appropriate data processing techniques and computational procedures for use in construction quality control and specification compliance.
- Identify what features in a collected profile are manifested in a smoothness or roughness index.

TARGET AUDIENCE

The course was designed for an audience directly involved in the use of inertial profilers and the application of the data obtained from inertial profilers. This includes State and contractor road profiler operators who perform data collection, initial processing, and reporting of smoothness data. Paving superintendents, project engineers, pavement engineers, and inspectors who are performing data analysis, quality control, and acceptance will also benefit from this course. Ideally, each session of the course will include a mixture of State and contractor personnel, including those who collect data, those performing data processing, and those making decisions based upon data. **ASSUMED TRAINING COMPETENCIES** The participants should have a basic understanding of how to operate a computer including turning it on and off, running programs, and saving data.

TRAINING LEVEL: Intermediate

FEE: 2013: \$300 Per Person; 2014: N/A

LENGTH: 1 DAYS (CEU: .6 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 30

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