

SHRP2 R06C Using Infrared and GPR Radar for Uniformity Measurements on New HMA Layers

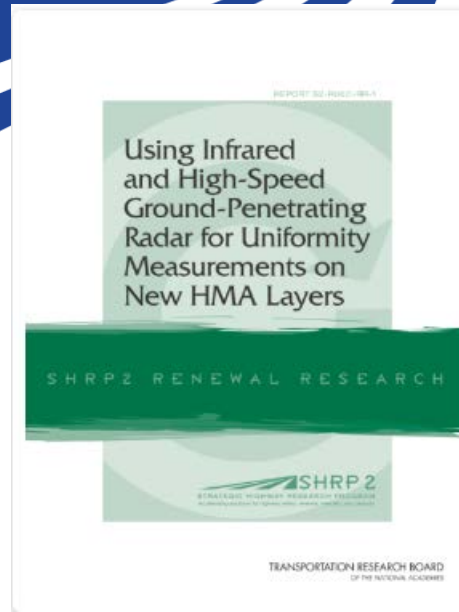
THE CHALLENGES



Localized **non-uniform** areas and joints fail prematurely. Random testing seldom catches problem.



Increased use of night paving makes inspection more difficult.



SHRP2 R06C Goal

Advance solutions to measure and quantify non-uniformity of asphalt mixture construction

Pavement Mounted Thermal Profiler (PMTTP)



Ground Penetrating Radar (GPR)



R06C GPR Implementation Highlights



- GPR Validation:
 - Testing protocols established by UMN.
 - 3 units fielding to MN, ME & NE and initial validation completed in 2016
 - Final Reports Released Oct 2017:
 - ✓ Test Protocol for the Rolling Density Meter
 - ✓ Non-destructive Eval. For Bituminous Compaction Uniformity Using Rolling Density

Additional Contract Support

MOD Approved for Additional Contract IA Support till Dec 31, 2018

- Includes 10 additional PMTP 4-hr workshops
- 5-ea 45-min PMTP presentations
- 2-ea 90-min Webinars (PMTTP and GPR RDM)
- 2-ea GPR RDM User-Group Peer Exchanges



FHWA Items of Interest:

- Shortfalls / Limitations
- Equipment Precision & Verification
- Technology Potential: QC? QA?
- Further Evaluation Needs
- Specification Needs
- Post SHRP2 Advancement Strategies



Special Thanks

- MN DOT
- AASHTO & ARA
- GSSI
- Guest DOTs

