FHWA Weigh-in-Motion Pocket Guide

2018 Highway Information Seminar (HIS)
Steven Jessberger
Travel Monitoring and Surveys Section
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FHWA WIM Pocket Guide Overview

• Purpose: Assist highway agencies with WIM program operations.
• Developed using best WIM practices with input from the WIM expert panel and FHWA.

• Includes:
  • Quick references for full scope of WIM-related topics.
  • Practical advice, instructions, and illustrations.

• Contains:
  • Pocket size books, web accessible PDF and appendices, and instructional videos.
WIM Expert Panel Members

- Richard Bush - Virginia DOT, Traffic Engineering Division
- Benjamin Craig – NV DOT, Vehicle Size & Weight Program Manager
- Christ Dimitroplos – AZ DOT, Program Manager, WIM Program
- David Fifer – Oregon DOT, Motor Carrier Transportation Division
- Tom Foltz – MI DOT, Electronic Services
- Goro Sulijoadikusumo – HI DOT, Highways Planning
- Tedd Little – MT DOT, Transportation Planning Division
- Tony Niemi – WA DOT, Transportation Data, GIS & Modeling Office
- Stan Norikane – CalTrans, Traffic Operations, WIM
- Kent Taylor – NC DOT, Traffic Survey Group
- Ben Timerson – MN DOT, Program Manager Trans. Data & Analysis
- James Whitley – FDOT, Traffic Data Collection Manager
Comprehensive Details on WIM

• WIM Standards and Performance Requirements
• WIM Technology Review and Procurement Recommendations
• WIM Vendor Software and WIM Controllers desired functions
• WIM Program costs and costs per WIM site
• Factors Affecting WIM Technology Selection
• Factors Affecting WIM System Cost
• Equipment Longevity and Life-Cycle Costs
• WIM Sensor Arrays and Layouts
• Site Selection, design, installation, calibration, maintenance
• WIM Data QC Checks
• WIM Equipment Troubleshooting
• Supporting Documentation and Tools for WIM operation
FHWA WIM Pocket Guide Timeline

- Project initiated – June 2016
- FHWA WIM Expert Panel 2 day working meeting – Nov. 2016
- Panel response to Mail-in questionnaires – January 2017
- Guide 1st draft review – March 2017
- Guide 2nd draft review – November 2017
- Draft Video – January 2018
- Final Guide and video script review – April 2018
- FHWA WIM Guide publication – June 2018
- Final Video – June 2018
FHWA WIM Pocket Guide Format

• 3 parts/books, targeting different users:
  • To maintain pocket size (5” X 8”)
  • Concise, plain and easy to understand
  • Easily accessible in the field

• Also accessible on the web

https://www.fhwa.dot.gov/policyinformation/knowledgecenter/wim_guide/
FHWA WIM Pocket Guide Contents
Part 1 – WIM Technology, Data Acquisition, and Procurement Guide

• Topics covered:
  • Technology Selection
  • Data Acquisition
  • WIM Procurement

• Target audience:
  • WIM program manager
  • WIM program-level decision maker
FHWA WIM Pocket Guide Contents

Part 2 – WIM Site Selection, Design, and Installation Guide

• Topics covered:
  • WIM Site Selection
  • WIM Site Design
  • WIM Installation

• Target audience:
  • Engineer or senior WIM specialist, WIM site-level decisions
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Part 3 – WIM Maintenance and Calibration Guide

- Topics covered:
  - WIM and Calibration
  - WIM Maintenance

- Target audience:
  - Technician involved in WIM maintenance and calibration
FHWA WIM Pocket Guide Video Supplements

• 4 video supplements for WIM sensor installation
  • Polymer Piezo Sensor
  • Quartz Piezo Sensor
  • Bending Plate
  • Strip Strain Gauge Sensor

https://www.fhwa.dot.gov/policyinformation/index.cfm
FHWA WIM Pocket Guide Appendices

- **Appendix A** – Technical Report Documentation Page
- **Appendix B** – Acknowledgements
- **Appendix C** – WIM Procurement Resources
- **Appendix D** – WIM Site Design Resources
- **Appendix E** – Maintenance and Calibration Resources
- **Appendix F** – WIM Program Operation and Management Checklists

https://www.fhwa.dot.gov/policyinformation/index.cfm
Questions and Comments

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