Outline

• About Highway Transportation
• FHWA EAR Program Investments in Sensor Systems
• Interest in Passive Wireless Sensors for Highways
Highway Transportation

- Highway Infrastructure
  - Interconnected
  - Open access
  - Legacy elements

- Highway System Management
  - Multiple owners
  - Public & private responsibilities
  - Inspection routines
  - Maintenance routines
FHWA EAR Program

• Focus on high-risk, high payoff research
• Merit review is used to enhance the quality of research processes and results
• Research stakeholders are involved throughout
• Commitment to successful project handoff
Focus Areas

Breakthrough concepts in material science
Technology for assessing performance
Human behavior and travel choices
Connected highway system concepts
New technology and advanced policies for energy and resource conservation
Program Status

- 200+ Initial stage investigations
- Seven solicitations resulting in
  - 75 projects awarded; 36 ongoing
  - $72M federal, $26M match
- 8th closed April 2014
  - Topics: Structures NDE, Safety data, Freight data, Freight modeling
- 9th planned, not scheduled
Funded Research

• Very Low, Self-Powered Wireless Sensor Systems
  – Steel structures
  – Bridge bearings
  – Pavements
  – Water runoff quality
Future Systems

• From Asset Management to Resilient Systems
  – Construction, system management
  – Structures, pavements, geotechnical, hydrological, environment elements
Future Systems

• Highway Safety & Operations
  – Safety hardware
  – Geolocation
  – Infrastructure-vehicle communications
Thank You

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