Overview

• Background on MIRE
• Next Steps in MIRE – MIRE MIS
• Lead Agency Program (LAP)
• Moving Forward
• Questions
What is MIRE?

- **Model Inventory of Roadway Elements**
- Listing of roadway and traffic elements critical to safety management
- Provides data dictionary – definition, attributes, etc
- Similar to Model Minimum Uniform Crash Criteria (MMUCC) but for roadway and traffic data.
What is the Role of MIRE?

• Provide the guidance needed to:
  – Improve roadway and traffic data inventories.
  – Define “good inventory data” and move toward the use of performance measures.
  – Support safety programs and safety information systems.
  – Support States’ Highway Safety Improvement Programs (HSIP).
Why MIRE?

- Will enable user to merge roadway and traffic data with crash data to enhance data analysis capabilities.

- Roadway and traffic data must be merged with crash data in order to:
  - **Develop** relationships of safety to roadway features and user exposure.
  - **Evaluate** the effectiveness of safety treatments.
  - Better **identify** location and characteristics of crashes.
  - Better **determine** appropriate countermeasures and strategies.
What is included in MIRE?

- 202 elements divided into three categories:
  - Roadway segments
  - Roadway alignments
  - Roadway junctions

- Each element includes:
  - Definition
  - List of attributes (coding)
  - Priority rating
  - How it relates to elements in HPMS and new safety tools (SafetyAnalyst, HSM)
  - Illustration
129. Intersecting Angle

**Definition:** The measurement in degrees of the smallest angle between any two legs of the intersection. This value will always be within a range of 0 to 90 degrees.

**Attributes:** Degrees

**Priority:** Critical

**HPMS/Tool Requirements:** HSM/IHSDM (Required)
Supplemental Databases

- Roadside fixed objects.
- Signs.
- Speed data.
- Automated enforcement devices.
- Land use elements related to safety.
- Bridge descriptors.
- Railroad grade-crossing descriptors.
- Safety improvements.
Benefits of MIRE

- Make it easier to collect, store, and use all types of data.
- Standardized coding
  - States can compare and analyze data across jurisdictions and across States.
- Crash, roadway, traffic data on same referencing system.
- Link safety data to non-safety data – include roadway and traffic data in analysis.
Benefits of MIRE – Beyond Safety

• Benefit for:
  – Decision Makers
  – Asset Management
  – Infrastructure
  – Operations
  – Maintenance

• Link with other data they might otherwise not have access to

• Better data, improved decision making.
MIRE Version 1.0 Report released in 2010

Available online at:
- FHWA Office of Safety website:
  http://safety.fhwa.dot.gov/tools/data_tools/dcmt.cfm
- MIRE website:
  http://www.mireinfo.org/

Hardcopies available
MIRE Website

- www.mireinfo.org
- Discussion Forum
- Webconference
- Presentations
- FAQs
- Resources
Next Steps

• Lead Agency Program (LAP)
• Develop and test MIRE Management Information System (MIRE MIS)
• Develop Data Collection Guidebook
MIRE MIS LAP Effort

- Purpose
- Application process
- Lead agency support
MIRE MIS LAP Purpose

• Determine feasibility of collecting MIRE data, developing a Management Information System to improve safety.

• Provide support to Lead Agencies - collect MIRE data and incorporate into safety program.
MIRE MIS LAP Application Process

- Agencies selected by FHWA through application process
- States determined where their inventories are deficient and what elements they are in most need of
MIRE MIS LAP Support

- Collect data
- Develop new data management information system or integrate into existing system
- Incorporate data into problem identification/prioritization processes
- Develop performance metrics
- Document results
MIRE MIS Lead Agencies

- **New Hampshire**
  - Conference call: April ‘11
  - Site Meeting: May ‘11
- **Goal:**
  Intersection Data for Safety Analyst

- **Washington State**
  - Conference call: May ‘11
  - Site Meeting: June ‘11
- **Goals:**
  - Intersection Data for Safety Analyst
  - Intersection inventory for HSIS
Purpose for Site Visit

• Finalize elements
• Potential data collection methods
• Status of data systems and current data analysis tools/methods
• Implications of integrating additional data
• Next steps in moving forward with LAP
Results of Initial Site Visit

• Statewide base GIS layer crucial for initial development of node layer to identify/locate intersections statewide

• Priority of elements, roadways, and of what to collect on what roadways

• Investigate using video logs, Google street view, etc. and manually enter data into a GIS interface
Results of Initial Site Visit

• Testing alternative methods of data collection
  – LIDAR, etc.

• Collecting traffic counts on local roads is an issue

• Additional research
  – Influence area of an intersection
  – Modeling traffic counts for safety analyses
Moving Forward

• Develop individual work plans for data collection for New Hampshire and Washington
• States review and approve work plans
• Begin data collection
Contact Information

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Questions