Session 2: The Fundamentals of Work Zone Activity Data

September 11, 2018
Topics

• Defining Work Zone Activity Data (WZAD)
• WZAD and Transportation Systems Management and Operations (TSMO)
• WZAD and Work Zone Life Cycle Stages
• WZAD Use Categories
• User Groups
What is WZAD?

Digital data on when, where, and how work zones are deployed
What WZAD is and is Not…

**WZAD Is…**
- Identification attributes
- Location attributes
- Time attributes

**WZAD Is Not…**
- Design documents
- Procurement documents
- Crash or other safety data
- Traffic and speed data
- Law enforcement data

WZAD is not inclusive of all work zone data
WZAD and TSMO

• Common space and dedicated resources for collecting, sharing, and using WZAD

• Integration and efficiency throughout work zone life cycle

• Common agency WZAD goal

- TSMO
  - Optimization of existing infrastructure
  - Multimodal, intermodal, and cross-jurisdictional
  - Security, Safety, Reliability, Improvements
  - Capacity Preservation
WZAD Over the WZ Life Cycle

Planning and Design

- Data: Approximate location, scheduling, impacts
- Uses: Route planning, project coordination, resource allocation

Post Work Zone Evaluation

- Data: Archived information on work zone activity
- Uses: Analytics, performance measurement

Real Time Operations

- Data: Instantaneous configuration
- Uses: Alerts, situational awareness
Use Categories of WZAD

1. Work Zone Planning and Project Coordination
2. Work Zone Impact Analyses
3. Construction and Maintenance Contract Monitoring
4. Real-time System Management and Traveler Information Provision
5. Safety and Mobility Performance Measurement
6. Law Enforcement and Emergency Service Providers
7. CAV Hardware Needs and System Readiness
Use Categories of WZAD

WZ Planning and Project Coordination

- Planned work on a route, corridor, or network
- Used to reduce collective effects on traveling public
- Strategic sequencing of multiple work zones
- Day-to-day activities of multiple work zones

WZ Impact Analyses

- Estimate safety and mobility impacts for planned activities
- Determine appropriate mitigation strategies
Use Categories of WZAD

Construction and Maintenance Contract Monitoring

• Track compliance with specifications and policies

Real Time System Mgmt. and Traveler Info Provision

• Real-time system management
• Consumable by 3rd party information providers, travelers, and freight haulers
Use Categories of WZAD

Safety and Mobility Performance Measurement
- Determine actual safety and mobility effects
- Determine effect of specific work zone polices, design features, and mitigation strategies
- Defines where and when exposure, mobility, and safety data should be extracted

Law Enforcement and Emergency Service Providers
- Collaborate with law enforcement
- Provide documentation support

CAV Hardware Needs and System Readiness
- Inform CAV of the presence of work zones
WZAD User Groups

Internal Agency Stakeholders
- WZ Planning and Coordination
- Roadway Design and Engineering
- WZ Data Systems
- Construction and Maintenance Managers
- External Coordination
- TMC and Traveler Info
- WZ Performance and Impact Analysis

External Stakeholders
- Regional Partner Agencies
- Construction and Maintenance Contractors
- 3rd Party Traveler Info
- Utilities and Law Enforcement
- Travelers and Freight Haulers
- CAVs
- State and Federal Agencies