

Integrating Highway Safety and Asset Management

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Data

- *If a picture is worth a thousand words, then surely a “piece” of data is worth at least half that.*

Safety: Hungry for Data





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help

Safety and Asset Management

- Both the Safety and Asset Management communities are using data
- Safety Community needs Data from the Asset Management Community

Safety Analysis Tools

- **Highway Safety Manual (HSM)**- Provides analytical tools and techniques for quantifying the potential effects on crashes as a result of decisions made in planning, design, operations, and maintenance.

Tools supporting HSM:

- **SafetyAnalyst-**
 - HSM Part B
- **Interactive Highway Safety Design Model**
 - HSM Part C

Data Requirements

- Site characteristics (i.e., inventory data)
 - Roadway segments
 - Intersections
 - Ramps
- Crash data
- Traffic data



- Typical data collected about assets
 - Hardware: signs, guardrail, etc.
 - Pavement type: concrete or asphalt
 - Pavement condition



Examples of Key Data

Roadway characteristics and geometrics

- Number of Lanes
- Width of Lanes
- Presence of Shoulders/Type
- Width of Shoulders
- Horizontal and Vertical Alignment
- Area (Rural/Urban)

Data coded by Location

Segment data

- Area type (rural/urban)
- Number of through traffic lanes (by direction)
- Width of lanes
- Presence of shoulders/width of shoulders
- Presence of median (divided/undivided)
- Alignment data
- Roadside barriers

Intersection data

- Intersection location (linkable to accident data)
- Number of intersection legs
- Type of traffic control
- Major-road ADT (vehicles/day)
- Minor-road ADT (vehicles/day)

Assessment of Twenty Three States: Data Gaps

- Certain Geometrics (Horizontal and Vertical Alignment Data, Details on Medians)
- Intersections
- Interchanges
- ADT for minor roads
- Data for local roads





Government Accountability Report

November 2008, Highway Safety Improvement Program (HSIP) Recommendations for Executive Action:

- (1) Define which roadway inventory data elements a state needs to meet federal requirements for HSIP
- (2) Set a deadline for states to finalize development of the required roadway inventory data
- (3) Require states to submit schedules to FHWA for achieving compliance with this requirement

Draft surface transportation reauthorization bill introduced

- Not later than 18 months after the date of enactment of this Act, the Secretary shall –
 - (1) Define the roadway inventory data elements that a State will need to comply with section 148
 - (2) Set a deadline for States to develop such roadway inventory data elements; and
 - (3) Require each State to submit to the Secretary a schedule for achieving compliance with such section

Why we are here?

- Discuss strategies to meet the **data** requirements of the safety analysis tools
- Learn how Safety can help the Asset Management community