SAFETY INVESTIGATION MANUAL
CHAPTER 3: OVERVIEW OF DATA TYPES AND SOURCES

Online Training

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Data Types and Sources

• Several types of data required for safety investigations
  • In-Office and Field Data
• Several sources and tools available
• 5 basic elements of information:
  • Highway name, number, and milepost
  • Functional class and rural, urban or suburban character
  • Current traffic volume characteristics
  • Crash data
  • Roadway Geometry and Design
Functional Class

- Rural or Urban designation
  - Interstate
  - Other Freeway & Expressway
  - Other Principal Arterial
  - Minor Arterial
  - Major Collector
  - Minor Collector
  - Local

- List of all Oregon highway functional class available
  - *Functional Classification and National Highway System Status of Oregon Highways*

Oregon interstate and local road examples
Traffic Volumes

- Key input for safety investigation process
- Collected by the Transportation Systems Monitoring (TSM) Unit
  - Traffic counts available on ODOT’s Traffic Counting webpage.

- Minor approach volumes often required
  - If unavailable, develop best estimates
  - Consult TPAU for possible methodologies
Crash Data

- Crash data collected by ODOT’s Crash Analysis and Reporting (CAR) unit
  - Crash Data System and Crash Coding Manual are key tools
  - Vehicle, driver, passenger information
  - Crash summary, severity, location, date, time, weather, etc.
  - Available by year, location, vehicle direction, characteristics, or comprehensive reports

Crash database schematic
Crash Data

• Crashes coded first by injury severity
  • Five-point KABCO scale
• GIS tools available for visualization
  • Oregon Traffic Data Explorer
• Safety Priority Index System (SPIS)
  • Methodology for screening highway network for identify investigation sites
  • Scored on 3 years of data and considers crash frequency, rate, and severity
Roadway Geometry and Design

• Highway Inventory Reports
  • Lane Report
  • Vertical Grade Report
  • Horizontal Curve Report
• TransGIS
• Digital Video Log
• Google Maps
• As-Built Plans
Other Data Sources

• Several other data sources may be beneficial:
  • Recent newspaper and related media
  • Mobile LIDAR Point Cloud Data
  • Local police agency input and/or reports
  • Maintenance records and/or input
  • Blueprint for Urban Design (BUD)
  • Transportation Safety Action Plan (TSAP)
  • All Roads Transportation Safety (ARTS)
  • ODOT Safety Implementation Plans
  • Regional Integrated Transportation Information System
Field Data

• Additional information regarding site visits described in Chapter 5

• Condition diagrams
  • Drawing of location with dimensions
  • Traffic control devices
  • Adjacent land use
  • Pavement type
  • Date and time of visit