SAFETY INVESTIGATION MANUAL
CHAPTER 5: SITE INVESTIGATIONS

Online Training

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Site Investigations

• Essential part of safety investigations
• Evaluates physical road and roadside conditions, traffic conditions, and road user characteristics
• In-person site visits beneficial for additional perspective
• Otherwise, Digital Video Log and Highway Inventory Reports suffice
General Data Collection

- Gather information on current conditions
- Wide variety of site features
- Develop condition diagram
  - Location of traffic control
  - Presence of sidewalks, bike lanes, etc.
  - Adjacent land use
- Table 1 in the Safety Investigations Manual (Ch 5.2) outlines general site investigation items
- Equipment checklist also available
Unique Site Features

• Crucial to identify
  • May contribute to safety concerns
  • Influence appropriate study types
• Examples include:
  • Schools
  • High pedestrian volumes
  • Railroad crossings

Schools and high pedestrian volumes present unique conditions
Crash Patterns to Data Needs and Countermeasures

• Diagnosis of crash patterns divided in four categories:
  • Intersection crashes
  • Mid-block crashes
  • Fixed object and run-off-road crashes
  • Environmental condition-related crashes

• With crash patterns, investigators can identify probable cause and determine general countermeasures

<table>
<thead>
<tr>
<th>Crash Pattern</th>
<th>Probable Cause</th>
<th>What to Document</th>
<th>General Countermeasures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sideswipe collisions at intersections</td>
<td>• Roadway design inadequate</td>
<td>• Number of lanes / lane widths / lane usage</td>
<td>• Improve pavement marking</td>
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<tr>
<td></td>
<td>• Poor visibility</td>
<td>• Location / description / measurement of median</td>
<td>• Increase curb radii</td>
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<tr>
<td></td>
<td>• Passing at intersection</td>
<td>• Shoulder type / width and condition</td>
<td>• Remove on-street parking near intersection</td>
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<td></td>
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<td>• Location and visibility of advance warning signs</td>
<td>• Install / improve directional signing</td>
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<td>• Roadway type and condition</td>
<td>• Restrict driveway access near intersection</td>
</tr>
</tbody>
</table>

Example investigation and diagnosis for intersection crashes
Signalized Intersections

- Additional information regarding countermeasures for signalized intersections
  - Flashing Yellow Arrow
  - Leading Pedestrian Intervals
  - Red clearance intervals
- Additional sources include:
  - ODOT suggested practices
  - Signalized Intersections Informational Guide
  - Urban Street Design Guide