

How to Conduct a Crash Study



Crash studies help to identify safety issues on roads. To conduct a thorough study, consider all aspects of the roadway. The steps are summarized below.

Identify sites

Good crash records help to identify locations with a crash history. Intersections and roads with very high traffic volumes are typically high-crash locations. Crash data helps one to put the information into context. Look at traffic volumes to analyze crash rates, crashes rate are often normalized by the exposure (the number of vehicles entering the intersection or traversing the roadway segment). One drawback is that one or two crashes on a very low volume road may show up as the location with the highest crash rate.

Or, one may compare crash rates on similar road types. Compare the crash rate of two-lane highways with other two-lane highways. Comparing similar roads helps one to form a more reasonable comparison. Therefore, roads with the highest safety ratio get the highest priority.

Citizen complaints, or a recent high-profile crash, may create the need to conduct a safety study. Use caution as this is a reactive, rather than proactive, approach to selecting sites for evaluation.

Characterize crash experience

Identify crash sites to evaluate, then collect and begin to analyze the data. Crash summaries may be pulled from a crash records system or a stack of reports. Determine the types of crash types that are occurring. Are there common factors? For instance, are there a high number of left-turning crashes, night crashes, or wet weather crashes? Do crashes seem to occur at a particular time of day? Preparing a collision diagram is often helpful to answer these questions.

Characterize field conditions

Spend time in the field observing traffic. This is an important and useful part of the process. Common types of crashes identified by data may be obvious in the field. For instance, if night crashes are frequent, observe the area at night. Take photographs. Use aerial photos or a scale drawing of the site for note taking.

Additional traffic data or studies may be necessary to try to quantify some field conditions. For instance, turning movement counts and speeds may to assist to understand field conditions.

Identify contributing factors

After analyzing the data and conducting a field study, identify crash contributing factors, and develop a list of countermeasures to mitigate them. Resources to identify potential countermeasures include Institute of Transportation Engineers's (ITE) Traffic Engineering Handbook and the National Cooperative Highway Research Program (NCHRP) 500 report series.

Assess countermeasures

After developing the list of potential countermeasures, evaluate, and prioritize them. Consider

several questions:

- Are there any limits or constraints that impact the practicality or usefulness of the countermeasure?
- Do any proposed countermeasures conflict with any other countermeasure?
- Would one countermeasure proposed for one type of crash create a possible negative impact on another crash type?
- Are there combined effects of the potential countermeasures that may be undesirable?
- What is the expected crash reduction for this countermeasure?

After answering these questions, assess the proposed countermeasures offering the greatest benefit. This may lead to developing short-term and long-term improvements as some countermeasures may be completed quickly. Other countermeasures may require time and money before implementation. Some short-term countermeasures may be implemented as an interim fix until the longer-term

improvements are constructed.

Implement countermeasures

The final step is to implement chosen countermeasures and monitor their effectiveness. It often takes years to obtain meaningful crash data after improvements are made, so expect a long-term monitoring period.

This is a systematic approach to crash studies. Although it is a time-consuming process requiring significant resources, the process should reduce the frequency and severity of traffic crashes.

Source:

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The Truth About the Value of Training



When budgets are tight many agencies consider cutting their training budget. It's not crucial spending, right? Wrong! Training affects employees and the department. Well-trained employees require less supervision, perform better, and develop a can-do attitude--saving additional time and money.

Training improves job satisfaction and increases productivity. It helps to strengthen and cement agency loyalty and job commitment. The chance to develop skills and learn new ones increases employee motivation.

Training reduces turnover. Studies indicate a lack of training is the leading cause of employee turnover. Agencies offering good training programs provide employees with an opportunity to gain necessary skills and improve existing skills--especially important to retain the best employees and attracting new ones.

Training rewards long time employees and aids in recruiting. Employees and potential employees understand that success on the job is related to gaining new skills and developing skills. Training is critical to organizational success.

Source

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