

## Safety Data Support to Local Public Agencies



The Illinois Department of Transportation (IDOT) is committed to reducing the number of fatalities on Illinois roadways. To this end, the IDOT Bureau of Safety Engineering, which was initially created in 2004, develops, implements, and manages a multi-faceted program to reduce traffic-related deaths and injuries in the State of Illinois. As part of this mission, IDOT addresses traffic safety needs on both State-owned roads and roads owned by local public agencies (LPAs). Because local public roads constitute approximately 125,000 of the 145,000 centerline roadway miles in Illinois, improving local road safety is a major priority for IDOT.

One key component of improving safety on local roads is enhancing the safety data capabilities of LPAs and IDOT District Offices. IDOT's Bureaus of Safety Engineering and Local Roads and Streets offer safety analysis tools, provide safety data training and technical assistance, and promote local access to crash and roadway data.

### IDOT Support to LPAs

#### **Safety Analysis and Highway Safety Improvement Program Funding:**

The IDOT Bureau of Local Roads and Streets solicits candidate applications for [Highway Safety Improvement Program](#) (HSIP) funding on an annual basis. IDOT sets aside 20 percent of its total HSIP funding to local roads.

To initiate the Illinois HSIP application process, counties, townships, and municipalities

complete IDOT's HSIP Benefit-Cost Tool, which helps IDOT and LPAs determine whether a project is an appropriate and cost effective use of HSIP funding (see Figure 1). The tool provides a quick and accurate evaluation of highway safety improvement proposals using input data such as average annual daily traffic, crash severity data, and proposed countermeasures. The tool automatically calculates the benefit/cost ratio of the proposed project. HSIP applications are then reviewed by IDOT district staff and

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IDOT's Central Safety Committee. During this stage of the process, IDOT reviews and tests the benefit-cost case submitted by LPAs. If the applications are suitable, IDOT approves the projects and establishes joint funding agreements with the LPAs. By using the benefit-cost tool, IDOT is able to select and prioritize local road safety projects that have demonstrated a favorable benefit/cost ratio and a high likelihood of success.

#### **Training:**

The IDOT Bureau of Safety Engineering provides training on the Highway Safety Manual (HSM) directly to the nine District Offices in the State. IDOT conducts statewide

two-day HSM training courses for IDOT districts and LPAs, as well as a one-day course at the Illinois Traffic Engineering and Safety Conference focused on LPAs. During these courses, IDOT addresses questions and concerns from the district staff in order to help the districts grapple with real-life examples. As a result of these training sessions, each of the nine District Offices has a safety engineer familiar with the HSM. In many districts, highway design staff are also engaged in the use of the HSM on local roads. Local familiarity with the HSM promotes the use of the predictive method to estimate crash frequency and severity, which supports informed decisionmaking throughout the project development process, including the selection of alternative roadway designs.

#### **Technical Assistance:**

The IDOT Bureau of Safety Engineering also offers direct technical assistance to support safety programs and safety data analysis at the local level. Regarding safety data technical support, IDOT is working with the American Association of State Highway and Transportation Officials (AASHTO) to offer contractor-provided service for consultation and support to assist LPAs and IDOT districts in preparing data and using [AASHTOWare](#)

## Illinois Safety Data Decisionmaking Noteworthy Practice

[SafetyAnalyst™](#).<sup>1</sup> Through this program, an AASHTO contractor holds weekly sessions in which IDOT staff call in and ask questions on Safety Analyst™. IDOT covers the cost of this technical assistance as well as the cost of the Safety Analyst™ software itself.

Beyond safety data, each District Office has a Bureau of Local Roads and Streets that works with counties and LPAs on safety planning efforts, including applying for HSIP funding. IDOT also provides road safety reviews and assessments at no charge.

As a result of these technical assistance efforts, IDOT enjoys a close working relationship with county engineers throughout the State. This relationship allows IDOT to support LPAs and help them make measurable improvements to the safety of local roads in the State.

### **Data Sharing:**

IDOT endeavors to provide timely and detailed data to all agencies in need of safety-related information. All segments of IDOT use safety data provided by the Bureau of Safety Engineering for various programs. Through the Bureau of Local Roads and Streets, IDOT communicates safety data to counties and other LPAs.

IDOT has been using an Excel-based application known as Safety Data Mart since 2007. The application was developed by IDOT's Information Technology Office. The primary goal of the Safety Data Mart is to provide authorized users a central, easy-to-access source of information on roadway safety issues to identify the state's safety problems, manage safety countermeasures, and

evaluate safety programs. Any potential user of the Safety Data Mart, including members of the general public, may request access to the application. Once enrolled, users have access to a number of crash data analysis tools, including interactive reports, *ad hoc* crash data reporting, and an interactive map. The intended users of this application include public officials, street safety advocates, and LPAs.

In 2013 IDOT also began working to develop a new Safety Portal that will provide LPAs with improved access to crash data in Illinois. The Safety Portal will integrate many different data sources, including the Safety Data Mart, and allow users to query data through a Microsoft Excel interface. The Safety Portal will provide better and timelier data than other existing tools in Illinois; because the Safety Portal will be hosted on an external website, it will provide mechanisms for LPAs to correct crash information. Like the Safety Data Mart, the Safety Portal will help improve safety on local roads by allowing counties to identify safety problems, select potential countermeasures, and prepare for HSIP projects. IDOT is currently determining how the Safety Portal can meet local needs while also addressing data sensitivity issues. IDOT expects to complete the Safety Portal by fall 2014.

### **Benefits**

IDOT is working to reduce the number of deaths and serious injuries due to crashes on Illinois' local roads. By promoting the use of the HSIP Benefit-Cost Tool, IDOT ensures that the HSIP project selection process makes the most economical use of limited safety funding. Through the use of improved safety data sharing abilities, Illinois has improved its

project submittal process; safety projects are submitted more quickly than ever before. IDOT's technical assistance and data-sharing efforts allow the agency to support Illinois' counties as they program projects to improve the safety of local roads in the State. Overall, IDOT has seen a transition from reactive safety projects to a more proactive approach that considers common contributing factors to roadway safety.

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### **Additional Resources**

[IDOT Benefit-Cost Tool](#)

[IDOT Benefit-Cost Tool Users Manual](#)

[IDOT Safety Data Mart for External Users](#)

[FHWA Case Study: \*Development of Safety Performance Functions for Network Screening in Illinois\*](#)

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<sup>1</sup>AASHTOWare Safety Analyst™ is a set of software tools available through AASHTO that supports highway safety management at state and local highway agencies.