



Indiana's Approach to Transportation Safety Planning

Project Background

The Federal Highway Administration (FHWA) Offices of Safety and Planning, in coordination with FHWA Division Offices and several Departments of Transportation (DOT), conducted a series of workshops to assist state DOTs, regional planning organizations, and local representatives in integrating safety into the transportation planning process. The purpose of these events was to discuss the basic elements of transportation planning and strategies to integrate safety into this process; learn about national and state-specific tools and resources; share practices and identify challenges; and identify key takeaways (strategies) that organizations could use to make improvements and help achieve a zero deaths goal. The effort involved a pre-workshop webinar to identify each state's safety planning priorities, workshops, follow-up technical assistance webinars, and finally a peer exchange with all the participating states to share successful practices among the states and broaden collaboration.

In Indiana, the Indiana Department of Transportation (INDOT) was joined by nearly 50 safety stakeholders from the Metropolitan Planning Organizations (MPOs), Councils of Governments (COGs), Regional Planning Commissions (RPCs), local governments, the Local Technical Assistance Program (LTAP), the Department of Health, and other stakeholders at a virtual workshop in June 2020 to discuss ways to improve safety integration into Indiana's transportation planning process. The effort, sponsored by FHWA through its Indiana Division Office, involved a pre-workshop webinar, a workshop, and a follow up technical assistance webinar. Due to the pandemic, all events were held virtually.

Indiana's Transportation Safety Planning Highlights

The Transportation Safety Planning Workshops helped identify ways to improve safety integration and to foster a safety-focused community of practice among INDOT, MPOs, RPCs, COGs, FHWA, and others. This community will continue working together in the future to improve safety expertise at the state, regional, and local levels. Some of the transportation safety planning strengths in Indiana include the following:

- Data improvements have been made through an update of the data reporting tool, ARIES 6, which will make it easier for enforcement officers to report crash locations which will greatly increase location accuracy. Other improvements include latitude and longitude on each report, and the use of Esri mapping which integrates with INDOT's mile marker and ramp data.
- Several counties in the state have developed or are developing local road safety plans (LRSPs) with more underway. One reason these plans are successful is that they received strong support from county public officials. Visuals and infographics were used to illustrate the data and highlight the problems, such as crash trees, which break down crashes into more progressively detailed categories, and heat maps. The development process varies – many local agencies used their staff while others hired consultants to assist in developing their LRSPs. The counties with the plans are using them to make strategic investments in the network and yield positive safety results.

Indiana's Notable Practices in Transportation Safety Planning

Safety Management System

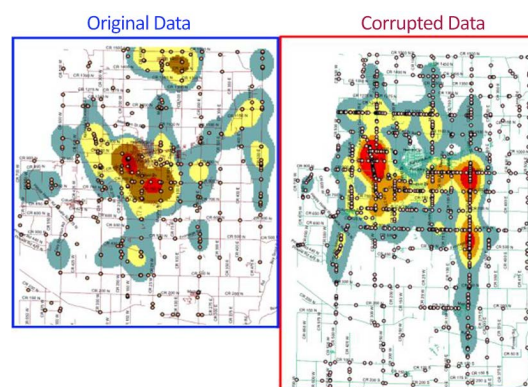
One of the MPOs is implementing a safety management system (SMS), which ensures all opportunities to improve safety (i.e., law enforcement, highway planning, design, construction, maintenance, and operation) are identified, considered, and implemented. The goal is to prevent crashes before they occur by

implementing low-cost “systemic” improvements at similar locations within the system. Safety performance measures have been established for the number and rate of fatalities and serious injuries and for the number of non-motorized fatalities and serious injuries.

Improving Data Accuracy

The Indiana LTAP funded the development of the [Crash Location Improvement Program](#) (CLIP) by the Center for Road Safety (CRS) to significantly reduce the error of crash locations on reported crashes (see inset graphic). INDOT worked with the CRS to upgrade the CLIP software for use as part of their annual Network Safety Screen process, resulting in a more accurate identification of locations with elevated crash risk.

In the Indianapolis area, the MPO hired a consultant to help clean up the locational accuracy of the data in their eight-county region. The data was used in 2019 for road safety audits for intersection safety studies. It was also used for their Pedestrian and Bike Plans and has been made available to the public on a [crash dashboard](#) on their website. Data from crashes in local areas were also used to develop the LRSPs in conjunction with other available data such as traffic volumes, asset management data (guardrail, signs, etc.), and roadway characteristics (lane width, roadside hazards, driveway density).



Source: Indiana Local Technical Assistance Program

Prioritization Process

The Evansville MPO’s prioritization process determines what projects to prioritize and assigns points on the potential to improve safety which is based on calculated crash costs. They also use the [Road Hazard Analysis Tool](#) (RoadHAT) that evaluates crash hazards for road sections and intersections. Some of the factors that were considered to improve safety included increasing sidewalks, separating bicycle/pedestrian facilities from vehicles, bus shelters, and accessibility improvements. They also performed limited network screening to help local agencies.

Next Steps for Transportation Safety Planning in Indiana

Participants in the Indiana workshop identified several opportunities to pursue in the future. Following is a list of high-level next steps the state is planning on conducting as they work toward greater safety integration into the transportation planning process.

- **Local jurisdictions** - Learn more about engaging local jurisdictions in safety planning activities.
- **Data visualization** - Utilize more data visualization techniques.
- **Law enforcement** - Coordinate more with law enforcement agencies.
- **Systemic analysis** - Move toward more systemic analysis.
- **Crash locations** - Work to further improve crash locations.
- **Safety analysis** - Incorporate results of safety analysis into transportation plans.
- **Resources** - Learn more about available resources.