

## The Louisiana Department of Transportation and Development's Local Agency Data Collection Effort

The Louisiana Department of Transportation and Development (LADOTD) recognizes the importance of data-driven operations, design, and safety decisionmaking on both State and local roadways. The State's Strategic Highway Safety Plan (SHSPs) encourages the use of safety data analysis tools that make use of quality crash, roadway, and traffic data to improve safety outcomes. In an attempt to streamline the data collection process and reduce costs, LADOTD has encouraged local agencies and metropolitan planning organizations (MPOs) to join a larger statewide data collection effort.

### The Case for Local Data

In 2010, LADOTD initiated a multi-year effort to collect roadway inventory data on all public roads in Louisiana. LADOTD began this effort in response to the strong need for roadway data and in anticipation of future requirements for data collection, such as those included in the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21). The agency decided to collect all of the Fundamental Data Elements (FDE) – a subset of the Model Inventory of Roadway Elements (MIRE) identified

by FHWA as necessary to enhance safety analyses on all public roads in preparation of a State's SHSP. LADOTD plans to use the FDE to help develop and refine State-specific Safety Performance Functions (SPFs) to support the agency's use of Vision

*“LADOTD provides reduced data-collection costs to local agencies, while also ensuring the consistency of local roadway data collected in the State.”*

Zero Suite.<sup>1</sup>

Notably, LADOTD decided to collect all the MIRE FDE on all public roads in a single unified effort. As a result, LADOTD has been able to ensure the consistency of the roadway inventory data collected while also lowering the unit cost of data collection. Roadway safety has been identified as a top priority at LADOTD and, as a result, upper-level managers have supported this effort in recognition

<sup>1</sup> Vision Zero Suite is a risk assessment tool from DiExSys, LLC



of the value of roadway data for safety analysis.

### Integrated Data Collection Efforts

As part of this local data collection effort, the Department has also taken steps to allow local agencies to add on additional data elements at reduced costs. While LADOTD is collecting the MIRE FDE, including the number of lanes, sidewalks, turn lanes, and type of intersections, there is a large set of additional data elements that LADOTD allows local agencies, MPOs, and parishes to collect at an additional cost.

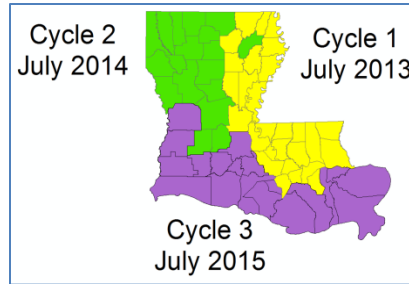
LADOTD contracted with Fugro Roadware in 2013 to collect data, including right-of-way videolog and asset inventory on all public roads, in three two-year cycles (see Figure 1). In addition to making the data available to local agencies at no cost, the contract allows for local agencies to collect additional data elements at a reduced fee (typically 10 percent off published rates). Additional data areas available for collection include pavement condition (distress and profile), geometric data, additional

## Louisiana Safety Data Decisionmaking Noteworthy Practice

roadway assets, pavement management system implementation, ground penetrating radar for pavement layer type and thickness information, coring, falling weight deflectometer for structural testing, and friction testing. Access to these additional data elements and services allows for greater confidence in the analyses that support local agencies' decisionmaking on maintenance and other issues. In addition to the initial data collection services, LADOTD's contractor is offering ongoing support and analysis as well. This data collection effort is expected to last until 2016.

### Data Collection at the Baton Rouge Metropolitan Planning Organization

The Baton Rouge Metropolitan Planning Organization (BRMPO) is one of the first MPOs in the State to enter a data collection contract with Fugro Roadway in connection with LADOTD's MIRE FDE effort. The BRMPO plans to collect condition and other asset data on local roads, including pavement distress types, severity, and extent; traffic and street signs; utility poles; and pavement markings. This data will support the development of a regional Pavement Management System (PMS) for the roughly 4,000 center-line mile non-State system roadway miles in the MPO's five-county jurisdiction. BRMPO anticipates that the PMS will improve and streamline maintenance and rehabilitation practices by supporting consistent, cost-effective, and data-driven pavement preservation decisions.



By taking advantage of LADOTD's existing contract with Fugro and thus avoiding mobilization fees, BRMPO

**Figure 1: Roadway data collection cycles.** (Courtesy of LADOTD)

estimates that it will save approximately 46 percent in total cost for the data collection. BRMPO has allocated a budget of \$520,000 for this program, of which the MPO is contributing 80 percent from its metropolitan planning (PL) funds. However, BRMPO is also using a 20 percent match from its constituent agencies to fund the effort. Because of the large cost savings in comparison to collecting this data through a separate contract, BRMPO was able to present the business case for this investment to its local entities.

In addition to the data-driven pavement preservation benefits that will result from the new PMS, BRMPO also plans to provide a web-based dashboard to local agencies in its jurisdiction to view analysis results and increase the usability of attribute data. Based upon the success of this effort, BRMPO anticipates that other MPOs and agencies in the State will follow a similar approach to data collection during future rounds of the on-going LADOTD MIRE FDE collection process. In the future, local agencies may also be able to use this

data collection method to support the use of safety tools.

### Benefits

LADOTD provides reduced data-collection costs to local agencies, while also ensuring the consistency of local roadway data collected in the State. A number of local agencies have engaged in additional collection efforts for new pavement preservation projects, updated municipal basemaps, general asset management programs, and a full pavement management system. Programs such as predictive safety analysis or metropolitan pavement management systems require reliable data on local roads, and without LADOTD's support of the local data collection effort, many agencies would have been unable to afford the cost of collecting such data.

By reducing barriers to local data collection, LADOTD is supporting an enhanced understanding of local roads and their safety issues. Given that 73 percent of roadways in Louisiana are owned and maintained by local agencies, this expansion in data collection has the potential to make a large impact on roadway safety in the State.

---

### Additional Resources

[LADOTD Strategic Highway Safety Plan](#)

[FHWA's Fundamental Data Elements](#)