

**Improving Traffic Safety Analysis
Capabilities for Local Communities in
the Kansas City Area**

Final Report

**For
Mid-America Regional Council
and
Kansas Department of Transportation**

MRI Project No. 110590

April 2008

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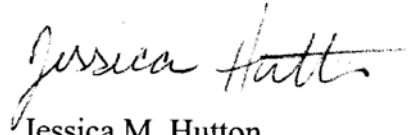
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Preface

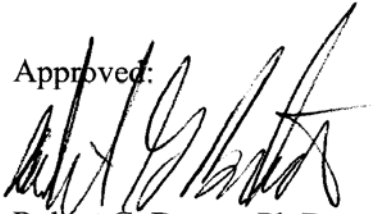
This final report is submitted to the Mid-America Regional Council (MARC) in accordance with the terms of the research contract Midwest Research Institute (MRI) performed for MARC, entitled *Improving Traffic Safety Analysis Capabilities for Local Communities in the Kansas City Area*. This final report was prepared by Ms. Jessica M. Hutton and Ms. Ingrid B. Potts of Midwest Research Institute.

MIDWEST RESEARCH INSTITUTE



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Section 1.

Introduction

Each year, 42,000 people lose their lives in traffic crashes in the United States. In 2004, 459 of those fatalities occurred on Kansas roads and 217 people died in crashes in the Kansas City region (including both Missouri and Kansas fatalities). In 2006, Kansas' Strategic Highway Safety Plan set a goal of reducing fatalities to less than 400 by 2008 and less than 365 by 2010. They also identified a disabling injury reduction goal of fewer than 1,600 by 2008 and fewer than 1,400 by 2010 from the 1,860 that occurred in 2004.

“Destination: Safe,” Kansas City’s regional highway safety coalition between MARC, the Missouri and Kansas Departments of Transportation (DOTs), and the Missouri and Kansas Highway Patrols developed the *Kansas City Regional Transportation Safety Blueprint*, modeled after the state strategic highway safety plans that were being developed. The Blueprint sets a regional fatality reduction goal of reducing fatalities to fewer than 204 by 2008 from the average of approximately 232 deaths per year from 2000 to 2004. Approximately 65 percent of all crashes and 44 percent of fatal crashes in the region occur on local roadways, so there is a strong need to focus traffic safety efforts on programs at the local level.

The Blueprint identifies six priority areas for safety funding and safety improvements in the Kansas City region. One of the priority areas is regional transportation safety data, and two strategies listed in this focus area are:

- Explore additional opportunities for local input about the use, accuracy, and timeliness of crash data
- Continue to use crash data to identify new improvement projects, including nontraditional, noninfrastructure strategies

These strategies are based on the principle that accurate and timely crash data is needed to effectively identify and address safety issues on all public roads. The availability of good safety data and the conduct of thorough safety analyses result in better allocation of safety funds to address existing safety problems and potentially prevent future crashes.

Substantial crash, traffic volume, and speed data are collected and analyzed at the state level, but since over a fourth of all fatal crashes occur on roadways off the state system, there is a strong need to equip local decision makers with accurate, timely data. Statewide crash data is typically maintained by state DOTs and state highway patrols, but the data is not necessarily made available to or utilized by local communities. Improved collaboration between state and local highway agencies in crash data sharing and crash data analyses would help local communities identify locations that need safety improvements and determine the types of improvements that are needed at those locations. The data could also be used more effectively to identify areas in need of

targeted enforcement to reduce specific safety problems such as speeding and impaired driving.

1.1 Background

In early 2006, MoDOT funds became available through “Destination: Safe” to fund safety projects on the Missouri side of Kansas City planning area. The Midwest Research Institute (MRI) and the Mid-America Regional Council (MARC) jointly submitted a proposal for a project to address the traffic safety and analysis capabilities of local communities in MoDOT’s Kansas City District, which overlaps with MARC’s planning region. The objectives of the project were to (1) assess safety data and analysis needs of local communities through mail-back surveys and a safety needs workshop and (2) recommend data collection and analysis improvements at the local level. MoDOT accepted the proposal and the project was completed in the summer of 2007.

Recognizing the positive reception the Missouri project had from regional and state safety advocates, and in an effort to continue the project with the communities on the Kansas side of the region, MARC submitted an application to KDOT for federal Accelerating Safety Activities Program (ASAP) funding in late 2007. The Kansas project was set up to be nearly identical to the Missouri project, so that results could be easily compared and grouped for the region, but the experience of the Missouri project led to some minor changes in the survey and workshop questions. The contracts were signed and work began in December 2007, and was completed in March 2008.

1.2 Purpose and Objectives

The purpose of the project was to identify ways to improve crash data availability and analysis capabilities for local communities in the Kansas City area. The objectives of the study were to (1) conduct an assessment of safety data and analysis needs of local communities and (2) make recommendation for improving data and analysis at the local level.

The results of the study are intended specifically for use by transportation and safety officials at MARC, KDOT, and at local communities in the Kansas City area. However, it is expected that the issues reported by local jurisdictions are representative of what communities throughout the state are experiencing and the suggestions provided in this report are applicable to many communities outside the Kansas City region.

1.3 Research Overview and Report Organization

The research included both written surveys and a one-day workshop targeted at law enforcement officers and public works professionals in many of the local communities in the Kansas City region. Results from the surveys were used to develop an agenda and

outline for discussion during the workshop. The workshop used a format of open discussion facilitated by the project team. The project team held a debriefing meeting following the workshop to compare notes, discuss the main themes brought out in the surveys and workshop, and identify possible short and long-term solutions and tools for better safety data analysis at the local level.

This report summarizes the safety data and analysis needs identified through the surveys and workshop and presents suggestions for improved data collecting, sharing and analysis. Section 2 of the report presents the results of the survey. It includes a list of the local communities receiving the survey, basic characteristics of the respondents, and an overview of the responses to each question. A copy of the survey can be found in the Appendix. Section 3 presents an overview of the workshop, including the discussion topics covered and key themes brought out in the discussion. Section 4 presents a summary of the data and analysis needs identified, barriers to thorough data collection and analysis, and recommendations of potential short-term and long-term tools, programs and policies that KDOT, MARC, and the participants themselves could implement to improve data collection, maintenance and analysis at the local level. Section 4 of this may be read first as an overview of what is described in more detail in Sections 2 and 3 if the reader desires a briefer analysis of the findings.

Section 2. Surveys

This section presents a summary of the responses of local agencies to the survey questionnaire, which is presented in Appendix A. The questionnaire addresses crash data and safety analysis capabilities at the local level. Below, the responses to each of the survey questions are detailed and briefly discussed. Section 4 of this report provides a summary of the main themes that were uncovered by the survey and workshop, and may be read first as an overview of what is described in more detail here and in Section 3 if the reader desires a briefer analysis of the findings.

2.1 Survey Recipients

The survey questionnaire was sent to law enforcement officers, public works or traffic engineering officials, and select public health officials in cities and counties on the Kansas side of MARC’s planning region. A map of the region is shown below in Figure 1. Kansas Counties in MARC’s planning region include Johnson, Leavenworth, Miami and Wyandotte. The survey was distributed by email to contacts provided by MARC as well as to members of the Kansas City chapter of the American Public Works Association. Hard copies of the survey were also distributed at an *Operation: Impact* meeting, which is a monthly meeting of local law enforcement officers, and a Kansas Surface Transportation and Bridge Committee meeting of Kansas public works directors, both held at MARC. The distribution lists included officials from the following cities and counties (with population shown in parenthesis) in Kansas:

Table 1. List of Survey Recipients

Survey recipient	County	Population
Basehor	Leavenworth	2,238
Bonner Springs	Wyandotte	6,768
De Soto	Johnson	4,561
Edgerton	Johnson	1,440
Edwardsville	Wyandotte	4,146
Fairway	Johnson	3,952
Fontana	Miami	149
Gardner	Johnson	9,396
Kansas City, KS	Wyandotte	146,866
Lake Quivira	Johnson/Wyandotte	932
Lansing	Leavenworth	9,199
Leavenworth	Leavenworth	35,420
Leawood	Johnson	27,656
Lenexa	Johnson	40,238
Louisburg	Johnson	2,576
Merriam	Johnson	11,008
Mission	Johnson	9,727

Table 1. List of Survey Recipients (Continued)

Survey recipient	County	Population
Olathe	Johnson	92,962
Osawatomie	Miami	4,645
Overland Park	Johnson	149,080
Paola	Miami	5,011
Prairie Village	Johnson	22,072
Roeland Park	Johnson	6,817
Shawnee	Johnson	47,996
Spring Hill	Johnson/Miami	2,727
Tonganoxie	Leavenworth	2,728
Westwood	Johnson	378
Johnson County	—	516,731
Leavenworth County	—	73,628
Miami County	—	30,900
Unified Government of Wyandotte County/Kansas City, KS	—	155,509

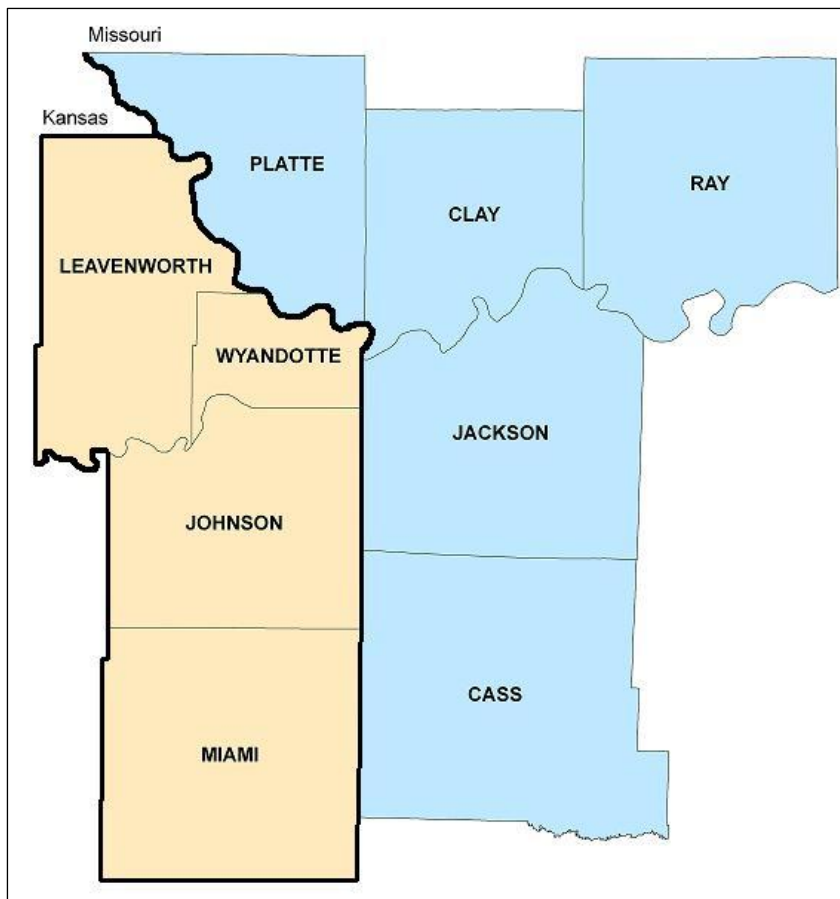


Figure 1. Counties in the Mid-America Regional Council's Planning Region

It is difficult to know exactly how many people received surveys, since there was some overlap in those who received emails by the different distribution lists and those who attended meetings where hard copies were distributed. Also, some of the email addresses that were listed in the contact information we used were no longer valid. In the case of email address failures, we tried to find new contact information through agency websites and other means. For all valid email addresses from which no response was received, a reminder email was sent about a week after the first email. Responses were returned to us by email, fax, and standard mail in the two-week period following the initial distribution of the survey.

2.2 Respondent Characteristics

Table 2 summarizes the number of surveys completed and returned. One respondent indicated that she represented both the police department and the public works department; her responses were categorized as public works, since her title indicated that she works for the traffic engineering department. Of the 18 surveys, 14 were completed by cities and four were completed by counties. The survey from one of the counties was completed by a representative from the Public Health department,¹ who uses crash data for safety initiatives.

In addition to the 18 returned surveys, two public works directors did not complete a survey, but responded by email to indicate they do not use or have access to any crash data. These responses came from one small community (population of about 1,500) and one medium sized community (population of about 22,000).

Responses were received from 12 different cities and all 4 counties in the region, representing a range of community sizes, from small and rural to large and urban. Only two cities returned completed surveys from both the public works department and the police department, which made it impossible to look for consistency in responses between the two departments. However, the diversity of responses was helpful in looking for trends and difference across a large number of communities with different characteristics.

Table 2. Number of Survey Responses by Agency Type

Agency type	City	County	Total
Public works departments	5	3	8
Police departments	9	0	9
Public health department	0	1	1
Total	14	4	18

¹ Since all but one survey were completed by either a public works or a police department, the tables presented in this section compare the responses between these two agencies only. However, the “total” column includes the response from the public health agency where appropriate.

Respondents were asked how long they had been in their current position. Their responses ranged from 1 to 31 years, with an average of 10.9 years for the police respondents and 11.8 years for the public works respondents. This indicates that, on average, respondents had substantial experience in their current position.

2.3 Crash Data

In Question 1, respondents were asked whether their city maintains a crash database for local roads. The majority of respondents reported that their agency maintains its own crash database. The three police departments who reported not keeping a crash database were from the smallest of the communities who returned surveys. The respondent from the county public health department also reported having access to crash data in his county. A follow-up question asked which agency maintains the crash database. The responses to these questions are summarized in Table 3.

Of the 15 surveys that reported having a crash database in the city, three indicated it was kept by public works, six indicated it was maintained by the police department, and five indicated that both departments kept the records. One did not indicate who maintained the reports.

Table 3. Agencies that Maintain a Crash Database

Agency maintaining database	Number of respondents by agency		
	Public works	Police	Total*
Public Works	2	0	3
Police	0	6	6
Both	5	0	5
Not specified	1	0	1
No database	0	3	3
Total number of respondents	8	9	18

* The total column also includes one public health agency response.

Questions 2 through 6 addressed the 15 agencies that indicated that their community maintains a crash database. These 15 agencies represent 9 cities and 4 counties.

In Question 2, respondents were asked whether their crash database is in electronic form, and 14 of the 15 agencies that reported having a database indicated that it was at least partially in electronic form, and formats included a commercial crash record database with report-generating software, Access databases, Excel spreadsheets, in-house database software, and GIS databases. In addition to an electronic format, many respondents stated that they also maintain hardcopies of the crash reports.

In Question 3, respondents were asked to describe how the location of a crash is identified (i.e., what location reference system, if any, is used?). A number of reference systems were cited, including:

- Distance to nearest cross street or landmark
- On Street/At Street
- Street name or street address
- Latitude/Longitude, GPS or GIS
- County-Local coordinate system and road segment

In Question 4, respondents were asked if their crash data was made available to anyone else. Their responses are summarized in Table 4. Several respondents indicated that crash data is made available upon request to any of the groups listed.

Table 4. Agencies/Persons to Whom Crash Data is Made Available

Crash data made available to:	Public works	Police	Total*
State DOT and/or their safety division/office	5	6	12
Highway patrol	4	1	5
Police officers	7	5	12
Local coalitions	4	2	7
Citizens	4	2	6
Traffic engineering	7	6	14
Local public works department	7	6	14

* The total column also includes one public health agency response.

In Question 6, respondents were asked to rate, on a scale of 1 to 10, how confident they are in the accuracy of the crash data for their city. Responses ranged from a rating of 3 to a rating of 10, with an average rating of 7.4. Public works officials had slightly more confidence in the accuracy of the crash reports (8.3) than the law enforcement officials (7.1). This may indicate that law enforcement officials—those who are collecting the data at the crash scene—are aware of potential inaccuracies in the crash reports that other data users may not be aware of. When asked what changes in data collection would improve confidence, responses included the following:

- Searchable databases with limited entry fields
- Better error checking
- More training for officers and data entry technicians
- Crash reports scanned into system, rather than manually entered
- GPS crash location
- Better coordination and information sharing with other agencies

- Decreasing lag time between when crash happens and when the report is entered into the system

In Question 7, respondents were asked if training is provided on how to collect crash data. Table 5 summarizes the responses to this question. Some of the respondents provided additional information, such as:

- Officers receive training in the Academy and in-service training updates when changes occur
- During Academy training, officers are trained on how to diagram an accident scene
- Data entry training is minimal, but enough to get the basic data entered
- Accident recreation and specialized training
- Some annual training

Table 5. Number of Cities that Provide Training on Crash Data Collection

Training provided?	Number of respondents		
	Public works	Police	Total
On collecting crash data	3	4	7
On entering reports into database	4	4	8
Total number of respondents	4	4	8

In Question 8, respondents were asked if their city collected crash data from other jurisdictions or agencies (i.e., from KDOT, state troopers, another city, or another county). Table 6 summarizes the responses to this question. Two police agencies reported that they receive crash data from the Kansas Highway Patrol; one county public works department indicated that they receive from the city information about crashes the city police responded to on rural secondary routes in the county; and four public works departments reported that they receive information from neighboring jurisdictions for crashes that happen near the boundary between the two cities or along corridors that go through multiple cities. The responding public health agency reported that it obtains data from a county highway safety coalition within the department, which uses crash data from KDOT as well as hospital discharge data from the Kansas Department of Health to determine priorities for public education, enforcement and engineering.

Table 6. Number of Cities that Obtain Crash Data from Another Jurisdiction/Agency

Crash data obtained from other jurisdiction/agency?	Number of respondents		
	Public works	Police	Total
Yes	5	2	7
No	3	7	10
Total number of respondents	8	9	17

Respondents were asked if their agency planned to make significant changes or upgrades to their crash record management system in the next five years. Two police agencies and three public works agencies indicated that they were. One public agency reported that they were currently in the process of making changes to their system.

2.4 Safety Data Analysis

In Question 9, respondents were asked whether their city analyzes crash data. As shown in Table 7, most public works respondents indicated that crash data is analyzed, while only about half of the law enforcement agencies reported crash data analysis. When asked to identify what types of analyses are being conducted, respondents listed the following:

- Public health looks for crash causes
- Accident frequency at specific locations
- Hazardous accident locations compared over time
- Crash frequency and causes for planning and in response to citizen concerns
- Accident summaries for recurring intersection and parked car accidents
- Analyze data for engineering improvements and enforcement targeting
- Location, severity and correctable features for signing and geometric improvement projects
- Accident summaries for annual report

Table 7. Number of Cities that Analyze Crash Data

Perform analysis of crash data?	Number of respondents		
	Public works	Police	Total*
Yes	7	4	12
No	1	5	6
Total number of respondents	8	9	18

* The total column also includes one public health agency response.

Few respondents indicated which agency does the analysis. Of those who did, the general response was that the public works department analyzes crash records for engineering improvements, and law enforcement analyzes them for targeted enforcement programs. Both groups indicated that analysis is performed as a response to citizen concerns. When asked if the agency would consider analyzing crash data (or extending the analysis that is already being conducted) if it were more readily available, seven police, and six public works officials, as well as the public health official, reported that they would.

Question 12 asked what types of help agencies might be interested in obtaining. Table 8 lists the types of help that were listed in the question and the number of respondents who indicated they would be interested in that kind of help with their crash records and safety analysis. In general, most of the respondents seemed very receptive to accepting a variety of help. The police were most interested in identifying locations for safety improvement and identifying crash causation patterns, while the public works officials indicated that they would like help with identifying countermeasures and causation patterns, as well as with database management and crash analysis methods. Three public works respondents made comments in the space provided on the survey for “other” types of help, which were:

- Manpower is the issue, not crash analysis capabilities
- Migration of data from SQL server accident database to ArcView GIS mapping
- Identifying problem areas that need attention

Table 8. Types of Analysis for Which Agencies Would Like Help

Type of help:	Public works	Police	Total*
Identify problem crash types	4	6	11
Identifying appropriate countermeasures	5	6	12
Coding/Interpreting the crash report	4	4	8
Implementing new crash analysis software	3	5	8
Identifying crash causation patterns	5	7	13
Identifying locations for safety improvement	4	8	13
Database management	5	5	11
Crash analysis methods	5	6	11

* The total column includes one public health agency response, where applicable.

Question 13 asked if agencies would be interested in an analysis tool if it were available to them at no cost. The responses are shown in Table 9.

Table 9. Number of Agencies Interested in Analysis Tool

Interested in analysis tool?	Number of respondents		
	Public works	Police	Total*
Yes	7	9	17
No	1	0	1
Total number of respondents	8	9	18

* The total column includes one public health agency response.

In Question 14, respondents were asked whether their city currently has any software for crash data analysis. Their responses are summarized in Table 10. From the results, it appears that public works departments are much more likely than police departments to

analyze crash data with a software tool. The respondents that indicated they do use software to analyze crash data identified the following software tools:

- Intergraph, I/LEADS police records reporting software
- GBA Master Series Accident Module
- ArcView GIS
- In-house software for entering and mapping accidents
- Versadex, Access database

Table 10. Number of Agencies that Use Software to Analyze Crash Data

Agency uses crash data analysis software?	Number of respondents		
	Public works	Police	Total*
Yes	6	1	7
No	2	8	11
Total number of respondents	4	10	18

* The total column includes one public health agency response.

In Question 15, respondents were asked to describe the types of analyses they would be interested in conducting that were not already being done. The majority of the responses came from respondents representing police departments. Responses included:

- Geographic mapping of crashes
- Crash breakdown and restraint use by race/ethnicity
- High crash areas
- Types of injuries
- Traffic patterns
- Crash type
- Crash severity
- Crash causation
- Traffic data for areas of new development and growth
- Anything available

In Question 16, respondents were asked to list the contributing factors they would be interested in investigating. Responses included:

- All
- Prescription drugs
- Alcohol/drug use
- Cell phone (voice, text, email)
- Eating
- Grooming
- Reading
- Passengers
- Teen involvement
- Roadway engineering/geometry

- Traffic controls
- Traffic congestion
- Speed
- Enforcement measure used
- Red light running
- Merging issues
- Road conditions
- Weather conditions
- Speed zoning
- Distraction/inattention
- Sight distance limitations

In Question 17, respondents were asked what types of locations (e.g., roadway segments, intersections, etc) they would be interested in investigating. Their responses included:

- Intersections (11)
- Corridors (5)
- School zones (3)
- New development (2)
- Construction areas (1)
- High accident locations (1)
- Old Infrastructure (1)
- Residential areas (1)
- Work Zones (1)
- All (3)

In Question 18, respondents were asked if their agency maintains a database of roadway characteristics data or traffic volume data. The results are shown below in Table 11. All of the respondents from public works departments indicated that they do keep databases with roadway characteristics and traffic volumes. Only two police agencies reported keeping roadway characteristics data, and two reported keeping ADT data; however, six respondents from police agencies indicated that they would be interested in developing or gaining access to these types of databases.

Table 11. Number of Agencies that Maintain Roadway Characteristics and ADT Data

Maintain database?	Number of respondents		
	Public works	Police	Total
Roadway characteristics inventory	8	2	10
Traffic volume data (ADT)	8	2	10

Respondents were then asked to elaborate on how the data is collected and stored, how often it is updated, and how it is used to identify potential locations for safety improvements. Their responses are as follows:

From Police Agencies

- Our Geographic Information Systems (GIS) department maintains a centerline file with some information, other information is held in other areas of public works.
- I believe that this data is gathered by our Public Works department but I am not familiar with exactly how it is being used.
- Unknown

From Public Works Agencies

- ADTs are taken on a three year cycle and stored in an excel spreadsheet. Our pavement management system updates at least once/year. It's in a Stantech (Foxpro) database.
- ADT is collected from the State Traffic Count Map. KDOT updates their map every 3 years.
- Stored in county GIS
- All sets of information are stored electronically, but separately and by different departments. Information is not yet unified into the GIS.
- Roadway inventory is done on an annual basis, and stored in an Access database. ADT's are collected on a bi-annual basis, and they are stored in an Access database. Yes, this information is used to identify potential safety improvements.
- The traffic count data is stored in a Microsoft SQL server database and is mapped using ESRI ArcSDE using Microsoft SQL server. Roadway inventory data is stored and mapped using the same software
- This information is contained within the City's mapping, primarily maintained by Johnson county AIMS.
- ArcMap, HDM, Petra, Jamar, Excel; We update ADTs and roadway characteristics throughout the year; Yes, we use this data to identify potential locations for safety improvements.

Finally, Respondents were invited to provide any additional comments for observations. Responses included:

- We would like to use recent data to analyze patterns. Computer crash reports could immediately update an online database, eliminating the 1 to 2 year lag for data entry. (public health)

- New tools are great but if they are in no fashion automated and require voluminous duplication of data entry is unlikely that we could participate. (police department)
- The problems with our accident reports are two-fold. GPS coordinates for crashes would fix the problem with crash locations. A KDOT standard for electronic report filing and KDOT allowance to submit electronic forms to them would enable PD to file reports electronically initially and then share those electronic copies with Public Works. Significant staff time is spent by both agencies retyping data into databases. (public works department)

Section 3. Workshop

This section presents a summary of a one-day workshop held at the Olathe office of the Kansas Highway Patrol (KHP) on February 29, 2008, to document current safety data availability, current uses of available data, and safety analysis needs that are not being met in the Kansas City area. The discussion regarding each of the workshop agenda topics is detailed below. Section 4 of this report provides a summary of the main themes that were uncovered by the survey and workshop, and may be read first as an overview of what is described in more detail here and in Section 2 if the reader desires a briefer analysis of the findings.

The workshop was moderated by the two members of the project team from MRI, and the project team members from MARC were also in attendance. Representatives from the same local communities to whom the survey questionnaire was distributed were invited to participate in the workshop. As with the survey questionnaire, the invitation was sent to representatives from both law enforcement and public works. KDOT and Kansas Highway Patrol representatives were also invited to participate in the workshop.

A total of 14 participants attended the workshop, including four police officers, the KDOT highway safety engineer, the KHP public resource officer, a public health representative, and seven public works officials representing nine different cities and counties, as well as the State of Kansas. The public works officials included several engineering technicians who work directly with the data, a construction engineer, a traffic engineer, and a director of public works. The participants represented a diverse group of communities, both in population and in size, and brought a broad base of responsibilities and experience to the discussions. All were involved in collecting, maintaining, or using safety data to make or support transportation safety funding allocation decisions.

Topics for discussion generally followed the questions asked in the survey, but included a few additional focus areas, such as safety teams and safety goals. The agenda for the workshop is presented in Figure 2. While the project team attempted to generate at least some discussion on each of the agenda topics, the atmosphere was informal and participants were encouraged to talk about the safety data and analysis topics on which they had the strongest feelings or greatest concern. This format allowed the project team to document the safety data issues and needs as perceived by the local communities themselves.

The discussion generated by the participants at the workshop is summarized and organized according to the following themes: safety goals, safety teams, data access, crash data uses, data quality, and safety project funding. This organization represents the main themes on which workshop participants focused. Each theme is introduced with a list of the questions asked by the facilitators.

Safety Data and Analysis Needs Workshop Topics for Discussion	
1. Welcome and Introductions	Introduction of Facilitators and Participants Background of Study Objectives of Workshop
2. Roadway Safety	Stakeholders and Safety Teams Crash-Reduction Goals Priorities
3. Safety Data	Data Availability Data Collection Training Data Accuracy Uses for Safety Data
4. Data Analysis	Types of Analyses Training Software Tools Uses for Data Analyses
5. Wrap-up	Key Issues and Challenges Areas for Improvement

Figure 2. Agenda for Workshop

3.1 Safety Goals

Questions asked by the facilitators:

- Are you familiar with Kansas’ Strategic Highway Safety Plan or the Kansas City Regional Transportation Safety Blueprint?
- Does your jurisdiction have specific safety goals? If so, what are they, and if not, why not?
- Does your jurisdiction actively work toward using the strategies outlined in the Blueprint and aiding in reaching the fatality reduction goals?

Responses provided by participants:

Only the representatives from KDOT and KHP were familiar with the Strategic Highway Safety Plan and the Regional Blueprint. None of the participants from cities or counties were familiar with the plans, and reported that their agencies were not actively working toward implementing the strategies or achieving the goals outlined in them.

The questions did initiate an interesting discussion about the role that fatality or serious crash reduction goals play at the local level. Several participants, both from public works and from law enforcement, commented on the fact that it is difficult to try to reduce fatal crashes, because they are so infrequent and random in nature. It was acknowledged that patterns of fatalities or serious injuries might become apparent at the state and regional level, but that these patterns are not seen in individual communities. Participants commented that in some communities, there may be only a few fatalities one year, none the next, and then several in the following year, and that it would be hard to identify a clear reduction from one year to the next anyway.

When asked if considering serious crashes in addition to fatal crashes would make patterns easier to identify simply by increasing the total number of crashes being considered in any analysis that might be done, the police officers in the group commented that defining the level of injury of a crash is subjective, and that when reviewing the reports later, it is hard to determine which crashes were actually “serious”. One participant indicated that it would be helpful to be able to link crash records to hospital records in order to determine how serious the injuries actually were.

3.2 Safety Teams

Questions asked by the facilitators:

- In your jurisdiction, who makes decisions related to roadway safety?
- How much coordination exists between agencies (e.g., between law enforcement and public works, between communities, between city and KDOT)?
- What is the public’s role in roadway safety decisions?

Responses provided by participants:

Most of the participants indicated that public works and law enforcement had a good working relationship in their community and that safety concerns were communicated between the two groups, but that this was usually a very informal process. Participants did not report specific collaborative efforts between the two departments on any safety efforts. That is, targeted enforcement and engineering improvements were typically not coordinated. Each agency makes its own decisions about how to allocate resources for safety programs and initiatives.

While several public works representatives reported cooperation between adjoining jurisdictions, which included sharing crash data and discussing possible safety improvement near the border of communities, police representatives reported slightly less cooperation. In some cases, police agencies found there to be inconsistencies in understanding of where jurisdiction boundaries fell, which made it difficult to determine which agency should be responding to and reporting crashes, especially those that took place on routes or intersections that fall on the boundary of two jurisdictions.

Participants also reported that most safety studies were completed as a result of a political request or a citizen complaint. Because most reported analysis of the crash data starts with a citizen request or complain, the public plays a large role in identifying and initiating solutions for safety concerns in an area.

3.3 Data Access

Questions asked by the facilitators:

- What safety data is kept in your jurisdiction and in what format?
- Who has access to crash reports and other safety data (volumes, speed studies, etc.)?
- What data is available to transportation officials and law enforcement in your city?

Responses provided by participants:

This topic elicited the greatest variety of responses. The methods and procedures for collecting and maintaining data ranged from smaller public works agencies that reported having no database of crash records at all to larger communities that had electronic, searchable databases and geo-coded crash reports that allowed crash mapping using commercial software tools. Some agencies stored data in an Access database, while other used crash reporting software to maintain the database. One agency used its own software that was developed in-house. In most cases, public works agencies maintained a database separate from the database maintained by the police department. The level of detail included in each database varied from agency to agency. While some could query the records based on almost any field on the report, others could only search based on a few high-level defining characteristics.

The public works representatives from the larger communities reported keeping speed and volume data, and that this information was made available to anyone who requested it. Most agencies had at least basic roadway characteristics and volume data for the major routes in their jurisdiction, but not all in an electronic database that could be correlated with or linked to crash files.

In Kansas, KDOT is the owner of state crash data, so all agencies send their crash reports, either as hard copies or electronically, to the DOT. All reports are due to KDOT by the end of January of the following year, and the data is usually compiled in the state database and available for analysis by summer of that year. This means that a crash that occurs in January of a given year may not be in the state database until June of the following year. Kansas does not require all jurisdictions to use a uniform crash report; therefore some agencies choose to use their own report. The delay in data compilation at the state level may be due, at least in part, to the fact that the entry fields on these

different reports must be transformed into the fields in a uniform database. Some of the smaller local agencies reported receiving fatality reports from the state each year and that these reports were how they identified areas of concern in their jurisdiction.

3.4 Data Quality

Questions asked by the facilitators:

- How are crashes located? How accurate is the location given?
- What training is provided on how to collect data? How to fill out a crash report? How to interpret a crash report?
- Is crash data available in a timely matter?
- Is there redundancy in recording and analyzing crash data between agencies?

Responses provided by participants:

When asked about the quality of crash data, most participants, both in public works and in law enforcement, indicated that the most frequent problem on the crash report was with locating the crash. Crashes are sometimes referenced to intersections or street addresses that do not exist, or to the wrong location. In addition, the police officers indicated that coding the report required a great deal of subjectivity. Training for crash reporting varied from agency to agency, but in general it was limited to the basics taught at the academy, and in some cases, annual refresher training. While training and crash reporting manuals are made available to officers, one officer indicated that experience is really the key to an accurate and thorough report. In addition, the comment was made that the quality of the report is mostly determined by the personality and priorities of the reporting officer and by the expectations of the supervising officer who checks the reports. Several participants brought up the fact that most officers believe the report is only for the insurance companies and that they are not aware of the research and analysis uses of the data on the report.

One traffic engineering technician reported reviewing every crash report that came through his office. More than one agency (both public works and police) indicated that experienced technicians (those who had been in their positions for a long time, or those that had served in other roles with the city or county prior to becoming a data entry technician) entering crash information into the database were familiar enough with the area that they could identify incorrect crash location information. However, several participants pointed out that when those entering the reports were not as familiar with the area or as motivated to perform a thorough quality control check, mistakes were not always caught. In addition, some participants indicated that crash reports were sent to the state before any quality control check was performed, and that even when mistakes were caught and corrected at the local level, they were likely still incorrect in the state database.

Most participants reported that each agency maintained its own database of crash records, so there is redundancy in entering the information more than once. Some communities submitted reports to the state electronically, while other submitted hard copies of reports so that the information is entered once again at the state level. Even within the police agencies, crash data was collected and recorded several times. One agency reported that information is taken at the crash scene, then entered in a laptop in the vehicle, then brought to the station and entered again at the station. Some officers indicated that moving to electronic crash records actually created more work and redundancy than filling out paper reports.

3.5 Crash Data Uses and Analyses

Questions asked by the facilitators:

- Who uses the crash data that is available?
- What is crash data used for in your jurisdiction?
- What kind of analysis is performed on crash data?
- Who performs the analysis and what training do they have?
- What software tools are used for data analysis?

Responses provided by participants:

This was another topic that brought forth a wide range of responses from participants. The level of analysis ranged from none in some agencies to fairly substantial in others. In general, police agencies did not report completing formal analyses with their crash data. One officer stated that officers know where their problem areas are from experience and do not need a formal analysis of crash records to tell them that. Another officer indicated that their agency would like to have a full-time employee dedicated to crash analysis, but that with limited resources and other priorities, this was not likely to happen.

Several public works agencies reported that they compile a list of high accident locations, or rank intersections by number of crashes. Some take severity and/or traffic volumes into consideration, while other simply rank by total number of crashes. One participant indicated that the agency puts little value in the crash rankings because the same locations show up each time and little can be done to improve them. These are often high-volume signalized intersections with a large number of property damage only crashes.

Some agencies reported that they complete a before and after study after an engineering improvement is made, but that this was usually a straight comparison of the number of “before” crashes to number of “after” crashes, rather than a rigorous statistical comparison. Another agency reported that crash data is sometimes analyzed in response to citizen complaints to justify taking action at a given location.

Many agencies, both engineering and law enforcement, were interested in understanding the causes or contributing circumstances of crashes. There was a great deal of discussion about how frequently “inattention” is marked as a contributing circumstance on crash reports. Many participants indicated that analyzing the contributing circumstances leading to crashes was not very informative, since the results would indicate that an overwhelming majority of crashes are caused by inattention. Participants agreed that this was probably true, but that the information was not specific enough to help determine appropriate countermeasures. Some officers indicated that the “inattention” check-box on the report is used by officers as a catch-all, and that information about cell phone use, eating, drinking, grooming, and other behaviors that usually fall into that category would be specific and helpful to establishing enforcement and educational campaigns around certain unsafe driving behaviors.

In general, participants indicated that their local agencies neither had the expertise nor the time to complete rigorous data analysis, and that even if they did, such a detailed analysis might not be as beneficial at the local level than at the state or regional level. One participant indicated that they would be interested in receiving training in basic statistical analysis of the crash data so that his agency could predict expected future accidents at a given location, and most participants were interested in a software tool that would aid in basic analysis. While many participants indicated that they would like to be able to get a little more information from the data they maintain, most also felt that they had a good understanding of the safety concerns in their jurisdiction. Participants reported that lack of dedicated resources (such as manpower to read through crash reports) and the quality of the data on the report were bigger barriers to thorough analysis than lack of expertise or software. In addition, one participant mentioned that if the funding was not available to implement any of the countermeasures the analysis might suggest, it was not worthwhile to complete the analysis.

3.6 Safety Project Funding

Questions asked by the facilitators:

- Are you familiar with all the funding mechanisms available to implement safety projects?
- How can KDOT or MARC help make you aware of available money?
- Would it be helpful to have training on applying for safety funds?

Responses provided by participants:

Participants reported that they would like to learn more about available safety funding. When the representative from KDOT indicated that they have certain dedicated monies available for local projects, most participants were interested in learning more about them. One participant suggested that MARC might be able to act as a clearing house for this kind of information since they are sometimes more aware of state and federal safety programs than the local agencies are. The KDOT representative suggested initiating application training sessions to teach local agencies how to apply for these dedicated funds, and most participants were very receptive to this idea. A representative from MARC discussed the MPO's continued advocacy for additional sources of funding dedicated to safety improvements, especially for engineering projects.

Section 4.

Recommendations and Conclusions

This section presents a comparison of the survey responses and the discussion generated at the workshop, a brief analysis of the barriers local agencies face in data collection and analysis, and a list of recommended actions that could be taken by MARC and KDOT to aid local agencies in collecting more thorough data and applying the analysis of that data to safety planning.

4.1 Comparison of Survey and Workshop Responses

Survey respondents and workshop participants represented a diversity of agencies and communities, ranging from small and rural, to large and urban. As described in the previous sections, responses and comments varied greatly. However, there were several themes that came out in the surveys and workshop that seemed to be common to a majority of the agencies. They are listed here.

1. The quality of crash data depends on the person filling out the report. In general, all agencies had fairly high confidence in the quality of data, but recognized that there are always officers with little training, lenient supervisors, higher priorities whose crash reports are not at the level of quality they should be. The universal concern about the accuracy of the crash data is the crash location information, and the piece of information on the report that the officers and engineers find to have the least value is the “inattention” field, since it is so widely used and not specific enough to provide any real information about the cause of the crash.
2. Crash reduction goals are not useful for local agencies due to the random nature of crashes and the small sample size of serious crashes. Thorough data analysis is not as helpful at the local level as it is at the regional or state level, because there are not enough crashes to find meaningful patterns or to determine trends. Also, local agencies do not have the manpower or expertise to devote significant resources to analysis. Most engineers, technicians and officers believe that detailed analysis probably would not tell them much more than what they already know about the areas where they work.
3. Local agencies are willing to cooperate to work towards improving roadway safety. Public works and law enforcement agencies have developed good, although informal, working relationships to inform each other of issues and to work with each other to solve them. Most officials have good working relationships with those in their position in neighboring jurisdictions.
4. Local agencies are willing to work towards improving data collection and analysis if it does not create an abundance of extra work for their staff and if they believe that they will see safety benefits from their efforts. Most agencies are already struggling to balance competing public and political pressures with a very limited budget. They are willing to participate in trainings and incorporate

new tools when they are low cost and user friendly, and when they are proven to help improve safety.

4.2 Barriers to Thorough Data Collection and Analysis

The survey results and workshop discussion brought to light several general barriers to thorough data collection, data analysis, and the application of that analysis to decision making. These barriers are broken into three types—data collection, data analysis, and implementation of data-supported safety strategies—and are described below.

Barriers to Thorough Data Collection:

- ***Time and complexity involved in filling out and filing crash reports.*** Officers indicated that completing a report for an average crash involving one or two vehicles without serious injury could take anywhere from one to two hours, and that as the severity or number of involved vehicles increases, so does the time it takes to complete the report. Many officers reported having to record information by hand at the scene, transfer all of the data into an in-vehicle laptop, and then return to the station to download this information to the station computer system. In some agencies, a technician would then enter the data from the report into a database. Because there are so many steps of data transfer involved, the reporting is susceptible to a greater degree of human error.
- ***Officers are not aware of the uses of the data.*** Several of the law enforcement officers at the workshop indicated that a common perception among reporting officers is that the crash report is only used by the insurance companies. Many are not aware the data is also used for safety analysis at the state and regional, as well as local, levels. The participants indicated that this perception may reduce some officers' motivation to complete a thorough and accurate report. This Motivation may be further reduced by low standards required by the supervising officer, back to back crash responses, poor weather conditions, or any other circumstance that may make crash reporting more difficult, time consuming, or tedious.
- ***Quality control of crash data.*** Once the data from the crash report has been entered into the system, there is a varying level of quality control done on the data. Experienced and thorough law enforcement supervisors, data entry technicians, or traffic engineers can often identify and catch coding or location errors in the crash report. However, not all agencies have a formal means of quality control, and often the errors go undetected. Even when errors are caught and corrected by one agency, these changes are not always carried through to the crash databases in the other agencies or at the state level.
- ***Issue prioritization within the agency.*** Traffic safety and crash reduction compete with many other agency goals both in law enforcement and public works departments and may rise or fall on an agency's priority list due political

influence, agency leadership initiatives, public sentiment and media coverage, funding and other resource availability, and many other factors. When traffic safety falls on the priority list, less emphasis is placed on thorough data collection and maintenance.

Barriers to Meaningful Data Analysis:

- ***Inaccurate crash location.*** Many participants, both in law enforcement and in public works, reported that their biggest concern with the accuracy of crash data is the reported crash location. For agencies that map their crash locations, inaccurate addresses or on/at street locations can lead to crashes that cannot be mapped, or that are mapped in the wrong location. Determining the appropriate targeted enforcement or engineering countermeasures at a specific location becomes more difficult when crashes are improperly located.
- ***Not all jurisdictions use the same crash report.*** Local jurisdictions in Kansas are still permitted to use their own crash report, as long as it conforms to the minimum uniform reporting standards. Because the data is not in the same format for all jurisdictions, compiling and analyzing across jurisdictions can be more complicated and tedious. KDOT currently gathers all local crash data and compiles it into a central database, and dealing with different crash reports probably contributes to a long lag time between when crashes happen and when they are recorded in the database.
- ***Random nature of crashes.*** While fatal and serious injury crash analysis at the state and regional level can be very useful, at the local level, the random nature of the most severe crash types as well as the low frequency at which they occur makes their analysis less meaningful. While patterns of fatalities can be seen at the state or regional level, these patterns are not as apparent at a local level. Local traffic engineers recognize this and because of it, find less value in completing detailed analysis of their most serious crashes.
- ***No training in data analysis.*** Most local officials in public works, and especially in law enforcement, have not had training or background in statistical analysis. Before and after studies are often simply a comparison of the number of crashes before an improvement to the number after. This process does not take into account regression to the mean, changes in volume, or other influences that may have an effect on crashes beyond the countermeasure that was implemented. Engineers are generally not trained to determine statistically significant differences in the number of crashes from one year to the next or from one location to the next. This limits the local engineer or enforcement officer's ability to determine the locations that are truly more in need than others, as well as their ability to determine how successful safety initiatives turn out to be.
- ***Data not available from states in a timely manner.*** Some of the smaller agencies do not keep their own databases of crash records and rely on fatality and injury reports from the state to determine their transportation safety needs

and projects. MARC also completes analysis based on state crash databases, and the state crash is often not complete for a given year until the following calendar year—that is, there can be up to a year of lag between when a crash occurs and when the database has it recorded. In addition, smaller agencies as well as MARC rely on the state’s monthly fatality reports for safety decision making, and these reports are sometimes late or never received. Reducing the lag between when a crash occurs and when it is available in the state and regional databases is important to MARC, as well as many of the smaller, rural communities who rely on the state and MARC for crash data. Some grants and safety programs require current safety data for funding, and for smaller jurisdictions that do not have the ability to access and query current crash data, this can limit their ability to apply for certain funding.

- **Manpower.** Manpower is a significant limiting factor in completing ongoing thorough safety analysis for most local public works or traffic engineers. Many participants reported that responding to citizen concerns takes up a majority of their time. After responding to those concerns and to the concerns and priorities of local politicians, reviewing plans, and overseeing construction projects, they have little time and few resources left to actively look for additional needs or areas of concern. This causes most local traffic safety projects to be reactive rather than proactive.

Barriers to Implementation of Data-Supported Safety Strategies:

- **Data sharing issues.** Because crash data contains personal identifying information, there are sensitivities associated with sharing the data between jurisdictions. In additions, jurisdictions are hesitant to share information that may be misinterpreted in the media or used to initiate law suits. Many local jurisdictions reported sharing crash data with neighboring jurisdictions, and several also reported a willingness to share data with anyone who asks. However, organizations like MARC, who are granted access to the state’s databases, are not permitted to share the information for anything other than planning purposes, which limits their ability to share the data with local jurisdictions.
- **Manpower.** For law enforcement, manpower becomes an issue when trying to implement the needs identified in a thorough safety analysis. For example, if the data shows that seat-belt use is especially low in a certain community and that it has become a factor in a large portion of serious crashes, “Click It or Ticket” type strategies might be recommended. However, this is the type of strategy that requires widespread aggressive enforcement to be effective. Local agencies may not be able to dedicate the required manpower and resources to this kind of strategy when they have many other competing priorities, many of which are not related to traffic safety.
- **Funding.** In general, local agencies do not have large pools of dedicated funding to use on safety projects. Ideally, safety improvements are worked into planned

construction projects, and low-cost improvements can be made when a need is identified. In addition, many local agencies are not aware of safety funding available from state and regional agencies, or the application process to compete for these funds.

4.3 Recommendations

In order to address the barriers faced by local agencies that are discussed above, several recommendations for improvements or strategies that KDOT or MARC could undertake to aid them are presented in this section. Some of these recommendations were suggested directly from the data collectors and users at the workshop, while others are a result of post-workshop discussion among members of the MRI/MARC project team. These are broken into recommendations for low-cost, immediate improvements, and recommendations for long-term solutions that may require more resources, greater commitment of staff, or more thoroughly developed technology.

Short-Term, Lower-Cost Improvements

- ***Develop MARC as a clearinghouse of transportation safety information for local agencies.*** MARC is in an ideal position to provide resources and information to the local agencies within their planning region. Local officials can benefit from their extensive state and local contacts, as well as their breadth of expertise and extensive involvement in transportation, planning and safety projects and initiatives in the region. MARC could create a mechanism for collecting and distributing information such as new safety research; reports of safety strategies implemented in other areas; regional safety initiatives; updates from local safety coalitions; sources of traffic safety funding; traffic safety workshops and seminars; a database of regional, state, and federal transportation, enforcement, education, and traffic safety contacts; and any other information that would benefit local agencies and support their traffic safety efforts. The information could be kept in an on-site library or on a website that can be accessed by any local agency official in the area. In addition, MARC can make local agencies aware of the planning services they can provide, such as mapping crash data. Ideally, providing local agencies with easy access to this information will help them identify potential safety strategies and to find funding for their implementation.
- ***Institute a technical working group of local data creators and users.*** Regular or “as needed” meetings between data creators (enforcement officers who complete the crash reports) and data users (local, regional and state officials who are interested in crash data analysis) may help identify barriers to and solutions for better data analysis. These meetings could be hosted by MARC and/or KDOT and would address issues such as crash report form usability and coding issues, additional data that agencies would like to see collected, methods of

improving efficiency in transferring information from the form to a database, strategies for managing and linking databases, etc.

- ***Train local agencies on the safety funding application process.*** KDOT allocates state and federal dollars to local agencies for certain types of projects. Many local agencies are not aware of the available money or how they can apply for it. KDOT could provide training sessions or workshops for local public works and law enforcement officials to inform them of available grants and other funding sources, as well as the application process and tips for choosing projects that are the best candidates for funding. These workshops could also help agencies identify the data that they need to be collecting and maintaining to justify the need for their projects and to document the success of the countermeasures that are implemented with any funding that is awarded.

Long-Term Strategies

- ***Develop a web-based query and mapping tool that can be accessed and used by local agencies.*** Several of the larger public works departments already own the software that allows them to map their crash records, but most smaller agencies do not have this capability. Since MARC already maps crashes for the region, and KDOT maintains a complete database of crashes in the state, finding a web-based means of sharing their already-built maps and queries with all other engineering, planning and law enforcement agencies in the region is recommended. The software tool should provide a means for the user to manipulate the maps in ways that suit their needs. For example, a traffic engineer in a small community should be able to access MARC's or KDOT's crash map or query table and filter for night-time injury crashes within their city limits, or other similar searches.
- ***Simplify crash reporting procedure.*** Several officers reported that the process of collecting the data for the crash report and entering it into the system involved several steps, which all allowed the potential for error. Many officers were interested in getting tools that allowed for quicker report writing, such as hand-held devices that could swipe driver's licenses to retrieve information about the people involved in the crash, and GPS devices for accurately identifying the crash location. MARC and KDOT could investigate existing devices with these capabilities and fund a pilot study with an interested local agency. If they are found to be useful and to improve data quality, the region could consider a cost sharing program to provide the tools to more officers in the area.
- ***Create uniform crash reports across the state.*** In Kansas, agencies are permitted to use their own crash reports as long as they adhere to the minimum state and federal reporting requirements. Moving to a uniform report would aid in the development of a timelier state crash database. It would also promote easier sharing of information among neighboring agencies. Additionally, developing a uniform and precise system for recording crash location, such as GPS coordinates, would aid in thorough crash analysis.

- ***Research and implement data sharing, management, and analysis strategies used by other jurisdictions/agencies around the county.*** Several workshop participants commented on systems used by other states for collecting, maintaining and sharing crash and other safety data. MARC and KDOT could research these systems and determine if similar systems may be beneficial and appropriate for Kansas data. Ultimately, the goal would be to implement a system that allows local agencies access to the state database in a timely fashion, and which incorporates mechanisms for correcting data in one database for all users.
- ***Initiate training for local law enforcement officers on the purpose of collecting and uses of crash data.*** The quality of crash report data depends on the motivation the reporting officer has to collect accurate, thorough data for the crashes he or she responds to. When officers believe that the data is solely used by insurance companies, it is easy to understand why good crash reporting may not be their highest priority. When officers believe that the data is solely used by insurance companies, it is easy to understand why good crash reporting may not be their highest priority. MARC and KDOT may be able to organize training for law enforcement officers, instructed by a local crash data expert, illustrating how information from crash reports is used for research and safety planning. Police agencies could host short, in-house crash data workshops where analysts or researchers provide examples of the kinds of analyses that are performed with data from the crash reports in order to re-emphasize careful and thorough crash reporting as a meaningful priority for the agency. Providing this information to officers may help them understand what analysts are looking for when they are faced with subjective coding situations.

4.4 Conclusions

The project team is grateful to all the survey respondents and workshop participants for sharing their experiences and insights about crash data collection and analysis. Many important concerns were brought to light, as well as interesting and innovative suggestions for how to make the data better and more useful. The recommendations in this report were intended to address the barriers to accurate and timely data collection and usage uncovered through the research in a way that would be helpful, rather than burdensome, to the local agencies.

Local agencies have a symbiotic relationship with the regional and state agencies. State agencies rely on the local agencies to collect and provide accurate, thorough crash report data, while local agencies rely on the state and regional agencies to conduct detailed analyses and provide information about the types and locations of crashes that are of the biggest concern. While local agencies may not have the resources or the need to complete detailed statistical crash analyses themselves, they do have a responsibility to provide the best data possible to those who do analyze the data. Similarly, even though KDOT and MARC do not collect the crash data, they may be able to provide tools and technology that enable local agencies to collect accurate data and to organize and

maintain it in a way that allows everyone to use it to its fullest potential. It is the hope of the research team that the recommendations presented here will strengthen the relationship between the state and regional organizations that use the data and the local agencies that collect it, and by doing so, help Kansas communities support their highway safety decisions with the best data possible.

Appendix

Local Agency Safety Data Survey Questionnaire

Regional Transportation Safety Blueprint

“Improving Traffic Safety Analysis Capabilities for Local Communities in the Kansas City Area”

The following survey on crash data and safety analysis capabilities at the local level in the Kansas City area is being conducted by Midwest Research Institute (MRI) and the Mid-America Regional Council (MARC) in support of Destination: Safe’s Regional Transportation Safety Blueprint. MRI and MARC are investigating ways to help local agencies improve their capabilities to analyze crash data. Your responses to the following questions concerning your city's or county's crash data and safety analysis capabilities would be greatly appreciated. If you are unable to complete the survey, or if you know of someone else in your department who would be more appropriate to complete the survey, please pass it along.

LOCAL AGENCY SAFETY DATA SURVEY QUESTIONNAIRE

(Please return by February 15, 2008)

CITY/COUNTY: _____

Public Works Department

Police Department

How long have you been in your current position? _____

CRASH DATA

1. Does your city maintain a crash database for local roads?..... Yes No

If YES, which agency maintains the crash database? _____

If NO, skip to Question 7.

2. Are your crash records in electronic form? Yes No

If YES, in what format is the data stored? (e.g., report, spreadsheet, database)?

If NO, please describe how it is maintained (e.g., hard copy police reports):

3. Do you plan to make significant changes or upgrades to you crash record management system in the next five years? Yes No

4. How is the location of a crash identified (i.e., what location reference system, if any, is used)?

5. Is the crash data made available to any of the following?

- | | | |
|--|------------------------------|-----------------------------|
| State DOT and/or their safety division/office..... | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Highway patrol | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Police officers | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Local coalitions..... | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Citizens | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Traffic engineers..... | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Local public works departments..... | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

List additional agencies with which data is shared. For those checked “no”, explain why data is not shared with that agency.

6. On a scale of 1 to 10, how confident are you in the accuracy of the crash data for your city?
(1 = least confident; 10 = most confident) _____

What changes would make you more confident?

7. Do you provide training on how to collect crash data at the scene? Yes No
Do you provide training on crash report data entry and management? Yes No

If YES to either, please elaborate.

8. Does your city obtain crash data from other jurisdictions/agencies (i.e., from a state DOT, state troopers, another city, or another county)? Yes No

If YES, from whom, and for what purpose?

SAFETY DATA ANALYSIS

9. Does your city analyze crash data?..... Yes No

If YES, what types of safety analyses are conducted and which agency or department conducts them?

10. Would your agency consider analyzing crash data if it were more readily available?

..... Yes No

11. If your city currently analyzes crash data, how confident are you (on a scale of 1 to 10) in your city's *ability* to analyze crash data? (1 = least confident; 10 = most confident) _____

12. Would you be interested in obtaining help with any of the following?

- | | |
|---|---|
| <input type="checkbox"/> Identifying problem crash types | <input type="checkbox"/> Identifying crash causation patterns |
| <input type="checkbox"/> Identifying appropriate countermeasures | <input type="checkbox"/> Identifying locations for safety improvement |
| <input type="checkbox"/> Coding/interpreting the crash report | <input type="checkbox"/> Database management |
| <input type="checkbox"/> Implementing new crash analysis software | <input type="checkbox"/> Crash analysis methods |
| <input type="checkbox"/> Other (Please elaborate) _____ | |

13. If there were an analysis tool available (at no cost) to help your agency with safety data analysis, would you be interested? Yes No

14. Does your city currently use any software for crash data entry and analysis? Yes No

If so, what software do you have and what do you use it for?

15. What types of analyses are your agency interested in conducting that are not currently being done?

16. What contributing factors would you be interested in investigating?

17. What types of locations (e.g., corridors, intersections, school zones, new development, etc.) would you be interested in investigating?

18. Does your agency keep a database of roadway inventory data (lane width, shoulder width, pavement type, speed limit, etc.)? Yes No

Of traffic volume data (major road ADT, minor road ADT)? Yes No

If YES to either, how are roadway inventory data and ADT collected and stored? How often is this data updated? Is it being used to help identify potential safety locations and improvements?

If NO to either, is your agency interested in starting or gaining access to a database with this information?

WORKSHOP

19. We are planning a one-day workshop in the Kansas City area to discuss current safety data availability, uses of available data, and safety analysis needs that are not being met. Would you, or someone from your agency, be interested in attending?..... Yes No

20. Do you have any other observations or comments?

21. May we have the name of a knowledgeable person in your agency that we may contact to clarify any aspect of your response or to obtain additional information?

Contact: _____

Title: _____

Agency: _____

Address: _____

Telephone #: _____

Fax #: _____

E-mail address: _____

Please mail, email or fax the completed survey by **February 15, 2008**, to:

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