



Safety Analysis Management System Version 2.0 (SAMSv2)

Preliminary Data Review

Version 1.0

May 29, 2014

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1.0 Introduction

1.1 Document Purpose

This document is intended to provide a high-level list of SAMSv1 data sources and a general assessment of their quality and suitability for SAMSv2. It also lists the intended data sources for SAMSv2 where known and any data identified as desirable for SAMSv2 or later versions. The purpose of this document is to provide sufficient information for potential vendors to estimate the magnitude of the detailed data review task planned for the SAMSv2 project.

1.2 Document Organization

This document contains two sections:

1.0 Introduction – provides document purpose and version information.

2.0 SAMS Data Sources – provides information and current and planned data sources.

1.3 Version Information

Version Num.	Edit Date	Edited By	Comments
0.1	May 1, 2014	M. Hiland	Initial draft.
0.2	May 21, 2014	M. Hiland	Revised draft.
1.0	May 29, 2014	M. Hiland	Finalized and accepted all edits.

2.0 SAMS Data Sources

Table 1 provides a preliminary list and categorization of potential SAMS data sources. This list will change as additional information is included throughout the life of the project, and as business practices at MDOT change. However, it will serve as a starting point for completing the Detailed Data Review tasks in the SAMSv2 project and for developing a complete logical data model and data dictionary.

The **Data Set** column shows categories of data and names of individual spatial data features. The **Custodian** column indicates the person or organization responsible for maintaining and providing the data. The **Feature Type** column indicates whether the data is a point, line, polygon, and/or event feature. The **Source** column indicates the system or application in which the data set is maintained. The **Format** column states the format in which it will be provided to SAMS. The **Current Status** column indicates whether the data is available. The **Quality Assessment** column provides a brief assessment of the data source's suitability for its proposed use in SAMS.

Table 1. SAMS Data Sources

Data Set	Custodian	Feature Type	Source	Format	Current Status	Quality Assessment	SAMSv2 Plan
MDOT Road Centerlines and LRS	Planning	Line	GeoMedia, Oracle	Oracle Database	Available	The existing data in SAMS is based on a copy of an older version of the data from Planning. It is not being updated.	Integrate with the MDOT Multi-level Linear Referencing System (MLRS).
Local Roads	Varies	Line	NA	NA	Available	The existing data in SAMS was built through a data cleansing project that merged a commercially available data set with the older version of the data from Planning. It is not being updated.	Integrate with the MDOT Multi-level Linear Referencing System (MLRS).
Street Names	Planning	Attribute, linear event	Flat file, SQL Server	SQL Server database	Available	The existing data in SAMS was built through a data cleansing project that merged a commercially available data set with the older version of the data from Planning. It is not being updated.	Integrate with the MDOT Multi-level Linear Referencing System (MLRS).
Roadway Characteristics	Planning, IS	Linear event, point event	Flat file, SQL Server	SQL Server database	Available	The existing data in SAMS is based on a copy of an older version of the data from Planning. It is not being updated.	Integrate with the MDOT Multi-level Linear Referencing System (MLRS).
State System Bridges	Bridge	Point event	PONTIS	Access database	Available	The existing data in SAMS is based on a copy of an older version of the data from Planning. It is not being updated.	Integrate with the MDOT Multi-level Linear Referencing System (MLRS).
City/County Bridges	State Aid	Point event	Unknown	Unknown	Unknown	Not currently in SAMS. Low priority.	Integrate with the MDOT Multi-level Linear Referencing System (MLRS).
Concurrent Routes	Planning	Linear event	NA	NA	Available	The existing data in SAMS was built through a data cleansing project that merged a commercially available data set with the older version of the data from Planning. It is not being updated.	Integrate with the MDOT Multi-level Linear Referencing System (MLRS).
Guardrails	Traffic Engineering	Linear event, point event	NA	NA	Not Available	SAMS is only interested in crashes that struck guardrails, and this is available on the crash report. Therefore, this is low priority to SAMS. If a comprehensive inventory existed, SAMS would probably use it. Not currently in SAMS.	Unknown

Data Set	Custodian	Feature Type	Source	Format	Current Status	Quality Assessment	SAMSv2 Plan
Attenuators	Maintenance	Linear event, point event	MAS	Sybase database export	Available	Locations not available, though database includes fields for GPS coordinates. SAMS is interested in crashes that struck attenuators, and this is available on the crash report. Therefore, this is low priority. If a comprehensive inventory existed, SAMS would probably use it. Not currently in SAMS.	Unknown
Sign Trusses	Bridge	Point event	Unknown	NA	Not Available	Bridge inspectors also inspect sign trusses, so they might have information on these. Crashes involving sign trusses are available on the crash report, included in the "post/pole/support" option for fixed objects. Low priority. Not currently in SAMS.	Unknown
Degree of Curve	Research, Planning	Linear event	HPMS	GeoMedia/SQL Server	Available	This data comes from Research and is included in HPMS reporting, but only for sample segments. Very limited. Not currently in SAMS.	Unknown
Rest Areas	Planning	Linear event, point event	Unknown	Unknown	Not Available	Could be easily generated, but does not currently exist. Not currently in SAMS.	Unknown
Permanent Barrier Walls	Traffic Engineering	Linear event, point event	Unknown	Unknown	Not Available	Not currently available, but very important to SAMS. Not currently in SAMS.	Unknown
Rumble Strips	Traffic Engineering	Linear event, point event	Unknown	Unknown	Not Available	Not currently available, but very important to SAMS. Not currently in SAMS.	Unknown
Rumble Stripes	Traffic Engineering	Linear event, point event	Unknown	Unknown	Not Available	Not currently available, but very important to SAMS. Not currently in SAMS.	Unknown

Data Set	Custodian	Feature Type	Source	Format	Current Status	Quality Assessment	SAMSv2 Plan
Raised Pavement Markers	Traffic Engineering	Linear event, point event	Unknown	Unknown	Not Available	Not currently available, but very important to SAMS. Not currently in SAMS.	Unknown
Signs	Traffic Engineering	Point event	AMMO	Oracle	Available	Suitable for SAMS use, but may need to be updated. Not currently in SAMS.	Unknown
Signals	Traffic Engineering	Point event	TMIS	Access database and Sybase database	Available	Currently, the data is maintained in Access database without location information and old data is in Sybase database. There is no direct link between these two databases. The two data sets need to be merged and then MDOT will only maintain one data set. The data has been included in SAMS but it not being updated in SAMS.	Unknown
Rail Crossing Features	Traffic Engineering	Point	Flat files, spreadsheets	Access database	Available	Currently included in SAMS.	Unknown
SHRP/WIM Sites and Data	Traffic Engineering	Point	Unknown	Unknown	Not Available	Not currently in SAMS. Low priority.	Unknown
Digital Orthophotography	Transportation Information	Image	Terrashare but converting to Apollo	Image	Available	Currently included in SAMS.	Change display to be a user-selected option rather than auto-display by view scale.
Basemap Data Layers	Transportation Information	Point, line, polygon	GeoMedia, Oracle	Oracle	Available	Currently included in SAMS.	Link to copy from Transportation Information rather than keeping an outdated copy in SAMS.
AMMO	Maintenance	Linear event	Current prioritized list of projects (fy04) and past years available in Oracle	Oracle database	Available	Suitable for SAMS use. Not currently in SAMS.	Unknown
State System Crashes (2004 +)	MDPS	Point event	SQL Server database at MDPS	Exported flat file	Available	Currently included in SAMS.	Will be migrated to SAMSv2.

Data Set	Custodian	Feature Type	Source	Format	Current Status	Quality Assessment	SAMSv2 Plan
Collision Diagrams and Narrative Description from Crash Report	MDPS	Image	Unknown	Image	Available	Currently included in SAMS.	Will be migrated to SAMSv2.
Historical State System Crashes (1998-2003)	MDPS	Point event	MDPS, Planning	Adabase	Available	Not included in SAMS because of age and data quality issues.	Will not be included in SAMSv2.
Local System Crashes	MDPS	Point event	SQL Server database at MDPS	Exported flat file	Not Available	Currently in SAMS, but not fully utilized.	Will be included in SAMSv2.
State System DUI/Citation Crashes	MDPS	Point	MDPS, Law Enforcement	Adabase	Available	Not easily accessible or comparable. Most of SAMS requirements can be met with crash report queries.	Unknown
Local System DUI/Citation Crashes	Varies	Point	Miscellaneous	Varies	Available	Not easily accessible or comparable. Most of SAMS requirements can be met with crash report queries.	Unknown
Work Zones	Unknown	Point or linear event	Unknown	Unknown	Not Available	Not currently available. Might be useful for SAMS, but can query on work zone-related from crash report.	Unknown
Fatal Crashes/FARS Crashes	MDPS	Point event	MDPS, USDOT	Flat file	Available	Currently in SAMS, but out of date.	Will be migrated to SAMSv2.
Commercial Vehicle Crashes	MDOT Law Enforcement	Point event	Unknown	Unknown	Available	Low priority.	Unknown.
Project Data	Information Systems	Point event, linear event	FMS/Oracle	Oracle database	Available	Probably suitable for SAMS use. Not currently in SAMS.	Unknown.
State System AADT	Planning	Linear event	GeoMedia/Oracle	GeoMedia/Oracle	Available	Currently in SAMS, but out of date.	Link to data rather than storing a copy.
Truck Percent	Planning	Linear event	GeoMedia/SQL Server	GeoMedia/SQL Server	Available	Currently in SAMS, but out of date.	Link to data rather than storing a copy.
Local System AADT	Varies	Linear event	Miscellaneous	Varies	Not Available	Low priority, at least until local roads are available. Not currently in SAMS.	Link to data rather than storing a copy.
Pavement Ratings	Cindy Grogan	Linear event	Pathway/TMIS	Flat file	Available	Currently in SAMS, but out of date.	Link to data rather than storing a copy.

Data Set	Custodian	Feature Type	Source	Format	Current Status	Quality Assessment	SAMSv2 Plan
Digital Videologging	Cindy Grogan/ Jeff Ely	Image	Pavement Management/ Planning	Image	Not Available. Planning has video logging application as well	Low priority. Not currently in SAMS.	Unknown.
3D Scanner Imagery	Pavement Management	Image	Image	Image	Available	Low priority. Not currently in SAMS.	Unknown