

# **GENERALIZED METHOD FOR ANALYSIS OF PAVEMENT MANAGEMENT DATABASE**

**Contract No.: BB883**

## **EXECUTIVE SUMMARY**

In Florida, pavement materials are periodically and systematically sampled and tested. The test results are recorded in the databases of pavement management system (PMS). The PMS databases are large and are currently stored on a remote mainframe system that is usually not directly accessible by an end user at a PC terminal with a modem connection. This project involves the development of a mainframe computer tool to allow the remote users to conveniently and instantly perform initial on-line statistical analyses on the FDOT's PMS databases.

The SAS/AF software was used to create user-friendly interactive windowing applications. As a product of the Statistical Analysis System (SAS) software, SAS/AF provides interactive user interfaces to all the data access, management, analysis, and presentation features. The software uses the Frame class as the foundation for GUI-based applications. The Frame class provides windowing capabilities to SAS/AF applications. It can contain visual controls and non-visual components for creating a user interface. Through the Frame class, windows and dialog boxes, menu bars or banners, and application help can be created. However, SAS/AF versions 7 and up do not support build-time development of FRAME entries in the mainframe operating environments. Consequently, applications developed in other desktop environments must be ported to a mainframe, i.e., frames have to be created on a personal computer (PC) or other systems that support frame entries and then ported to the mainframe.

The mainframe SAS/AF application program was designed to query a subset of records for analysis. Currently, querying non-index variables is likely to consume more CPU time than a data source is allowed. As a result, users can only use index variables to query and create subset databases of less than 86,030 records. This report documents the development process and serves as the user manual for the SAS/AF mainframe program developed. The procedure for porting the SAS/AF code from a PC to the mainframe is also included.