PROJECT NUMBER:
UTCA Project 02411

PROJECT TITLE
Phase 2--GASB Statement 34 Compliance: Development of A Fixed Asset (Infrastructure) MIS

CO-PRINCIPAL INVESTIGATORS:
David P. Hale, Ph.D.
Director, Enterprise Integration Lab and MIS Programs
The University of Alabama
Voice: 205.348.8909   Email: dhale@cba.ua.edu

Joanne E. Hale, Ph.D.
Associate Professor, Area of Management Information Systems
The University of Alabama
Voice: 205.348.0854   Email: jhale@cba.ua.edu

Shane Sharpe, Ph.D.
Associate Professor and the Thomas Endowed Fellow
Area of Management Information Systems
The University of Alabama
Voice: 205.348.9851   Email: ssharpe@cba.ua.edu

Jay U. Sterling, Ph.D., CPA
Sr. Research Scholar, Center for Business & Economic Research
Associate Director, University Transportation Center for Alabama
Voice: 205.348.8945   Email:jsterlin@cba.ua.edu

PROJECT OBJECTIVE
The direct benefit of this project is that ALDOT gains compliance with a mandated federal reporting requirement. The system provides the information required to grade, maintain, and disclose the overall quality of the state’s roadway system for the state’s fixed assets in the areas of roadways and bridges. But of equal importance, ALDOT will gain a tool to enhance its asset management program.

PROJECT ABSTRACT
This project focuses on incorporating roadway condition factors into a single integrated information system. The University’s staff will work with the Alabama Department of Transportation’s staff to specify, design, build, test, and evaluate a multi-criteria grading and reporting system for the State’s highway pavement system. The project will also detail the requirements for a parallel system for the state’s bridges. The new systems will integrate data from the Alabama Bridge Information Management System (ABIMS), ALBRIDGE, Comprehensive Project Management System (CPMS), Proposal Estimate System (PES), and Pavement Management System (PMS).
The initiative has support from ALDOT’s bureaus of planning, maintenance, and finance.

PROJECT TASK DESCRIPTIONS:
The University of Alabama staff will provide:
1. Roadway System (HYDRA+)
   a. Develop financial, planning, operational, and technical requirements
   b. Develop algorithms for allocation of resurfacing resources.
   c. Develop algorithms for division allocation and analysis.
   d. Convert the financial, planning, operational, and technical requirements into formal system specifications
   e. Construct information system conforming to ALDOT IT architecture
   f. Develop Data Visualization and Presentation System.
   g. Incorporate Security and Administration Procedures
   h. Assist System Certification by ALDOT IT Staff
   i. Deploy Systems to User Departments
2. Bridge update information system:
   a. Detail existing ALBRIDGE and ABIMS systems:
   b. Develop strategy (if possible) to use ALBRIDGE and ABIMS for GASB 34 reporting
   c. Develop mockups
   e. Develop plan for ongoing reporting for bridges.
   Initiate and test a preliminary framework that will enable ALDOT planners to assess and compare the relative impact on, and value to, the State’s overall roadway condition when evaluating alternative pavement, bridge and maintenance projects.

MILESTONES:
1. HYDRA+ release 1.0 8/15/02
2. Initial study of bridge system 9/1/02
3. Sensitivity study 12/8/02

FUNDING AGENCY: Alabama Department of Transportation, $149,983

STUDENT INVOLVEMENT:
This project will engage multiple students during the design, construction, testing and deployment of the systems.

RELATIONSHIP TO OTHER RESEARCH PROJECTS:
This project is a continuation of UTCA Project 01459: ALDOT and GASB 34 - Phase I. This project also provides the database resources for UTCA Project 02114: GIS-Resource Allocation Visualization

TRB KEYWORDS:
GASB 34, asset management, management information system, information resource information system