PROJECT NUMBER:
02409

PROJECT TITLE:
Adjustments to Pavement Life-Cycle Cost Analysis Procedures

PRINCIPAL INVESTIGATOR:
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PROJECT OBJECTIVE:
The objectives of this project are to evaluate potential enhancements to pavement life-cycle cost analysis (LCCA) procedures used by the Alabama Department of Transportation (ALDOT). New software and practices adopted by other states will be analyzed, leading to recommendations for enhancements.

PROJECT ABSTRACT:
ALDOT now performs LCCA for two situations, flexible pavement for new construction projects or addition of a separate roadway to an existing roadway when the pavement design structural number is equal or exceeds 6000, and projects involving the reconstruction of concrete pavement. In January of 2002 ALDOT requested a LCCA peer review. The review team found no items that required modification, but suggested several areas where the existing LCCA could be strengthened. This research project will address those areas.

PROJECT TASK DESCRIPTIONS:
Task 1. Evaluate HYDRA
Task 2. Evaluate the database of new materials
Task 3. Evaluate user-cost software
Task 4. Prepare final report and recommendations

MILESTONES AND DATES:
Task 1  Aug 15 – Oct 30, 2002
Task 2  Oct 30 – Dec 31, 2002
Task 3  Nov 1 – Mar 30, 2001
Task 4  Mar 1 - Apr 30, 2003

TOTAL BUDGET:
Eight-month project; ALDOT – State Planning & Research (SPR) funds: $45,000.
STUDENT INVOLVEMENT:
Two graduate students will contribute to the research effort.

RELATIONSHIP TO OTHER RESEARCH PROJECTS:
This project is not related to any other UTCA project.

TECHNOLOGY TRANSFER ACTIVITIES:
No technology transfer is anticipated from this project, except for the interim and final reports, and possibly a paper submitted to a refereed journal.

POTENTIAL BENEFITS OF THE PROJECT:
This project can improve economic decision making for major paving projects in the state, leading to considerable economic gain.

TRB KEYWORDS:
Asphalt pavement, concrete pavement, life-cycle cost analysis, HYDRA