UTC PROJECT DESCRIPTION

PROJECT NUMBER:
04405

PROJECT TITLE:
Evaluation of Profiled Pavement Markings: Revision

PRINCIPAL INVESTIGATOR:
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PROJECT OBJECTIVES:
This project will provide a quantitative assessment of the effectiveness and usefulness of “rumble stripes” and a comparison of rumble stripes to two other types of roadway edge markings used in Alabama: flat thermoplastic markings and profiled pavement markings.

PROJECT ABSTRACT:
In UTCA project 01465, the principle investigator measured and compared the retroreflectivities and the life cycle costs of two types of edge markings: flat thermoplastic markings (FTM) and profiled pavement markings (PPM). This new project will perform a quantitative assessment of the retroreflectivity and life cycle cost of rumble stripes, also called Modified Edge Striping (MES), so that MES can be compared to the data already amassed for FTM and PPM. Principle emphasis will be placed on comparing wet/night retroreflectivities.

PROJECT TASK DESCRIPTIONS:
Task 1 – Perform literary review
Task 2 – Visit MES sites
Task 3 – Measure retroreflectivity
Task 4 – Check retroreflectivity readings
Task 5 – Compare retroreflectivity of the MES, FTM and PPM
Task 6 – Share data
Task 7 – Observe retroreflectivity decay rate
Task 8 – Perform a life-cycle cost estimate
Task 9 – Produce final report

MILESTONES AND DATES:
Project Startup – October 1, 2003
Project Ends – December 31, 2005

TOTAL BUDGET:
27 month project; The proposed budget is $134,505.

STUDENT INVOLVEMENT:
A graduate student will be employed to coordinate test site selection, participate in field testing and help with data analysis.

RELATIONSHIP TO OTHER RESEARCH PROJECTS:
This project is an extension of the work done in project 01465. The project is a “safety” project and in that sense relates to many other UTCA projects and to the UTCA theme.

POTENTIAL BENEFITS OF THE PROJECT:
The results of this work will help the Alabama Department of Transportation select among three types of edge stripes for use in Alabama: FTM, PPM, and MES.

TRB KEYWORDS:
Rumble stripes, retroreflectivity, retroreflectometer, thermoplastic markings, pavement markings