HPP PROJECT DESCRIPTION

PROJECT NUMBER:
00233

PROJECT TITLE:
Erosion and Sediment Control for Highway Construction

PRINCIPAL INVESTIGATORS:
Shirley Clark
Department of Civil and Environmental Engineering
The University of Alabama at Birmingham
1075 13th Street South (Hoehn Building)
Birmingham, AL 35226

Robert Pitt
Department of Civil and Environmental Engineering
The University of Alabama at Birmingham
1075 13th Street South (Hoehn Building)
Birmingham, AL 35226
(205) 934-8434  fax (205) 934-9855
rpitt@eng.uab.edu

PROJECT OBJECTIVE:
The objective of this project is to enhance the ability of highway contractors and associated inspectors to successfully meet the requirements of the Clean Water Act, addressing construction site erosion control. Federal regulations now require specific activities to be accomplished in the planning and construction phases of land clearing operations affecting areas greater than five acres, and down to as small as one acre in some situations. The unique nature of highway construction operations requires special modification to the erosion control practices that have been used for general land development operations.

PROJECT ABSTRACT:
This technology transfer activity addresses preparation of guidelines needed for an acceptable erosion control program at highway construction sites in order to meet the recent requirements of the Clean Water Act (the final Stormwater NPDES permit Phase II Rule was published in the October 29, 1999 Federal Register). These requirements now apply to all construction activities of at least five acres, and are likely to apply to smaller areas in many situations. Specific principles and elements are needed for a qualifying program to meet the federal requirements.

This project will develop a summary guide for erosion and sediment control for Alabama highway construction projects, will include a series of workshops to review the new regulations and needed site activities, and will develop an Internet site that contains course materials and other information.
PROJECT TASK DESCRIPTIONS:
This project has three distinct activities:
1) Develop a written summary of erosion and sediment control specifications and standards appropriate for highway construction activities in the state of Alabama.
2) Conduct a series of six workshops, to be given at ALDOT district offices.
3) Prepare an Internet site covering this information, including updates of regulations and other resources.

MILESTONES AND DATES:
This project will start in February of 2001, and will last for 12 months.
Task 1 – Feb 2001 through Apr 2001. However, some updates will be conducted throughout the 12-month project period.
Task 2 – Apr 30, conclude first workshop; remaining five workshops concluded by Dec 31.

TOTAL BUDGET:
One-year project: other (HPP) $63,515; total budget $127,143.

STUDENT INVOLVEMENT:
Two graduate research assistants will be engaged for the duration of the project.

RELATIONSHIP TO OTHER RESEARCH PROJECTS:
No other UTCA projects have been conducted upon this topic. The Principal Investigator has conducted numerous research and technology transfer efforts in this field, and the current project is an extension of his work.

TECHNOLOGY TRANSFER ACTIVITIES:
It is important that the issues investigated during this project be incorporated into professional development education for individuals in the highway construction field. The project outcomes will be a summary report, a series of workshops given in several locations throughout the state, plus an Internet site that will contain training material and other resources.

POTENTIAL BENEFITS OF THE PROJECT:
This project could have a significant impact on enhancing transportation efforts in the State of Alabama, leading to improved design procedures, documentation and field practices associated with erosion treatments. This information will be extremely important when responding to new federal and state regulations pertaining to construction site erosion control.

TRB KEYWORDS:
Erosion control, sedimentation, permits