PROJECT NUMBER: 05231

PROJECT TITLE: Transportation CIP Education

PRINCIPAL INVESTIGATOR:
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PROJECT OBJECTIVES:
The objective is to develop a comprehensive overview course of study of the nation’s critical infrastructure protection (CIP) strategy and how Alabama’s transportation infrastructure is a part. The projects will: (1) provide a comprehensive overview of Alabama’s transportation infrastructure, (2) articulate potential vulnerabilities of the transportation system and its overlap impact on other infrastructure, locally, regionally and nationally, (3) develop information summaries and educational materials, and (4) complete and distribute a final report.

PROJECT ABSTRACT:
The terrorist attacks against the United States on September 11, 2001 clearly demonstrated the need to protect the infrastructure of the United States from terrorist attacks. The National Strategy for the Physical Protection of the Nations Critical Infrastructures and Key Assets (February 2003) established eleven key areas of critical infrastructure in the United States of which the transportation sector is one. The strategy calls for an unprecedented coordinated effort between all levels of government, the military, the private sector, US citizens, and foreign nationals in defending against a thinking enemy. This strategy requires the participants from these diverse areas to be educated and conversant in the multiple issues involved. Taken as a whole, the task seems overwhelming, but it is manageable if the issues are broken down into workable topics that can be quantified and studied in detail. This project focuses on the transportation infrastructure of Alabama as a component part of the nation’s critical infrastructure. The project consists of four tasks: (1) provide a comprehensive overview of Alabama’s transportation infrastructure detailing ownership, maintenance and security responsibilities, (2) articulate potential vulnerabilities of the transportation system overlapping impact on other parts of the critical infrastructure, locally, regionally and nationally, (3) develop information summaries and educational materials formatted into seminar and short course learning tools suitable for both residence and online learning, and (4) complete a detailed project report.

PROJECT TASK DISCRIPTIONS:
Task 2: Study the potential vulnerabilities of the transportation network and the cascading issues with other critical infrastructure.
Task 3: Prepare educational materials suitable for seminars or online learning for (1) general education overview and (2) detailed education for public and private transportation managers.
Task 4: Prepare a final report.
MILESTONES AND DATES:
Task 1: Aug 1 - Nov 30, 2005
Task 2: Dec 1 - ‘05 - Feb 28, ‘06
Task 3: Mar 1 - May 31
Task 4: Jun 1 - Jul 31, ‘05
TOTAL BUDGET:

One-year project: UTCA $49,734; total budget $100,131

STUDENT INVOLVEMENT:
One graduate student from the Department of Civil and Environmental Engineering will be funded during this project for six months. It is also anticipated that one or two graduate students from The Bush School of Government and Public Service at Texas A&M University will provide a portion of the research in fulfillment of graduate research requirements.

RELATIONSHIP WITH OTHER RESEARCH PROJECTS:
This project is a stand-alone project as it does not tie to any other UTCA projects.

TECHNOLOGY TRANSFER:
Information compiled in the study will be utilized in the planned educational materials as well as in the development of a multi-disciplinary graduate course on the defense of the nation’s Critical Infrastructure with emphasis on the roles of engineers. Additional uses of the materials will be specially tailored short courses so as to maximize the ongoing technology and information transfer of UTCA projects.

POTENTIAL BENEFITS OF THE PROJECT:
The results of this project are expected to provide a broad education of the CIP transportation issues facing the nation and Alabama and how they fit into overall Homeland Security preparedness. This emerging complex field of study should attract numerous students interested in careers in public transportation, government, and the private transportation sector. In addition, the work products of this research project will include educational materials directly related to the transportation infrastructure of the state of Alabama and should be a valuable aid for orientation and education of transportation professionals in the state. Because the body of knowledge in this area of study is evolving, the project results should be an excellent point of departure for additional study and education.

TRB KEYWORDS: Critical Infrastructure Protection, Homeland Security, transportation infrastructure education