

Transportation Pooled Fund Program Quarterly Report

Project Title: "Geosynthetic Reinforced Pile Supported Embankment"		
Project Manager and Phone Number: Michael Adams (202) 493-3025	Project No: TPF-5(061)	Project is: <input type="checkbox"/> PLANNING <input checked="" type="checkbox"/> R&D
Reporting Period: January 2005	Multi-Year Project Period of Performance is 18 months.	

Description of Work Performed and Progress:

The Collin Group is performing work for this project as outlined in FHWA contract DTFH61-03-P-00312.

The project objective and scope are as follows:

Objective: Develop design guidelines for geosynthetic reinforced soil-pile supported embankments. The primary objective of this investigation improve the design of pile supported embankments with the use of geosynthetic reinforcement to distribute the embankment loads onto the piles and to limit the punching of piles into the embankment during the consolidation of the foundation soil.

Scope: Used numerical methods to simulate the behavior of GRS-pile supported embankments. Parametric studies will be performed by a Finite Element (FE) method to simulate embankment behavior for a variety of ground conditions. The FE model will include simulations for linear and non-linear soil conditions.

Project Progress:

Task A. Literature Search: **completed.**

Task B. Development of Numerical Simulation Plan: **completed**

Task C. Numerical Simulation: **completed work submitted TRB2005 for publication and presentation; Session: Deep Column Supported Embankments.**

Task D. Design Guidelines: **Under Development (work in progress).**

Task E. Final report: **Interim reports only.**

Contract Modification: Instrumentation of Load transfer platform I-235 Polk County, Des Moines, Iowa

Task 1) State of the Practice Review: **completed**

Task 2) Instrumentation Program: **completed**

Task 3) Project Coordination: **completed**

Task 4) Instrumentation Installation, Data Collection, and Final Report: **Initial report on embankment performance has been submitted for review, Collection of field instrumentation data was terminated during 12/04. Final instrumentation report expected in 02/05.**

Description of Work Performed and Progress (Continued):

Fund expenditure summary:

Original contract DTFH61-03-P-00312: \$53,000

Modification to DTFH61-03-P-00312: \$16,150

Procurement of monitoring instrumentation: \$19,500, PO DTFH61-04-P-00151

Modification of FHWA service support contract DTFH61-03-P-0000127 for work related to Instrumentation of Load transfer platform I-235 Polk County, Des Moines, Iowa. \$21,350

Total: \$110,000

Status and Completion Date

Percentage of work completed to date for total project

Project is: 85 %

 X on schedule behind schedule, explain:

Expected Completion Date: 03/05