

**Structural improvements of flexible pavements using geosynthetics for base
course reinforcement
Quarterly Progress Report**

October-December 2007

Next report due: April 30, 2008 (for period January – March 2008)

ACCOMPLISHMENTS DURING THE QUARTER:

ERDC-CRREL:

Trafficking of Test Section 8 (4 in asphalt, 24 in base, grid) began on 19 October and continued through mid-November. However, the heavy vehicle simulator broke down at 357,308 pass applications.

The draft construction report was completed and accepted for publication as an ERDC report. This will be published some time in the first two quarters of 2008.

PROPOSED ACTIVITIES:

1. Repair the HVS.
2. Complete trafficking of Test Section 8.
3. Continue construction report publication process.

UNIVERSITY OF MAINE:

Data collected at the interval test points has been received and processed using the protocols previously developed. No timed strain data was collected during the period between 9 and 31 December 2007 because the HVS was down awaiting repair.

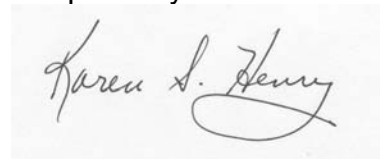
PROPOSED ACTIVITIES:

1. Continue to monitor data being generated by CRREL
2. Cooperatively develop/modify static testing protocols based on instrumentation survivability

UNRESOLVED OR NOTABLE ISSUES:

1. Additional funding, now available at FHWA, has not been received by either CRREL or University of Maine. ***This funding should be received very soon in order to continue work without any further delays in the project.*** This remains a critical issue that requires immediate resolution to ensure further testing delays are not encountered.

Respectfully submitted:



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PURPOSE AND SCOPE:

This study will provide missing data required to help determine whether geosynthetic reinforcement is beneficial at conditions typically experienced in state highway construction. If the geogrid does provide benefit, the study will develop an AASHTO specification for geosynthetic reinforcement of the aggregate base course of flexible pavement structures. Furthermore, the results will be published in a format to conform with future modifications to the AASHTO Pavement Design Guide.

The objectives of this study are:

- 1.To determine whether and under what conditions geosynthetics (geogrids and geotextiles) increase the structural capacity of pavements typically constructed by state DOTs.
- 2.To determine whether and under what conditions geosynthetics increase the service life of pavements typically constructed by state DOTs.
- 3.To measure in-situ stress/strain response of the reinforced material for use in current or future pavement design processes.