Geocomposite Capillary Barrier Drain (GCBD)

Construction Summary

Ruth Roberson
MnROAD Open House
July 17, 2006
GCBD Project

Funding
- NCHRP IDEA Program
- Pooled Funds
  - NY, MI, MN

Principal Investigators
- John Stormont, University of New Mexico-Albuquerque
- Karen Henry, Army Corps of Engineers Cold Regions Research Laboratory
- Ruth Roberson, Minnesota Department of Transportation, Road Research
Acknowledgements

Student Workers
- *Felipe Camargo
- *Cassandra O’neal
- Yer Vue
- Bao Tha0
- Matthew Beyer
- Agueda Guerra

MnROAD Operations Personnel
- *Bob Strommen
- *Doug Lindenfelser

NYDOT and MIDOT
- Bob Burnett
- Mike Eacker

Tenax
- Larry Salzer

*special thanks
GCBD Project

- Design (March 2006)
- Experimental Design/Research Plan (April 2006)
- Contracting Process (May 2006)
- Construction (July-August, 2006)
- Website (August 2006)
Design II

Test Section

Control Section
Design III

4.0” diameter solid PVC pipe

Fine Filter Aggregate

GCBD

14.0”

12.0”

Base course

Fine filter aggregate

GCBD

Slotted drain pipe

Subgrade
## Experimental Design

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*All sensors go to cabinet 1*
Pipe Segment Construction
Sensor Installation

Auger into subgrade

Placing sensors

Placing sensors

Backfilling and recompacting
Research Plan
Construction

Modern construction techniques.
Construction

Compacting the trench and placing the pipe
Construction

Placing Tenax Tendrain

Rolling out the Transport Layer

Thursday Afternoon 3:30pm
Construction

Wind Speed: 65 mi/hr

Friday Morning 6:00am
Construction

Placing the Class 5 Aggregate Base

Friday Afternoon 4:00 pm