National Road Research Alliance Geotechnical Team Feb Meeting

Terry Beaudry
Reclamation/Grading Engineer

Agenda

- 1. Welcome and Introductions
- 2. General NRRA Update *Upcoming Events*
- 3. Update Ongoing Research Projects
- 4. Any state allows use of recycled porcelain in base/subbase?
- 5. Update Determining Pavement Design Criteria for Recycled Aggregate Base and Large Stone Subbase
 - Task 5 Performance Monitoring and Reporting
 - Task 6 Instrumentation
- 6. Questions/Requests

General NRRA Update – Upcoming Events

Geo-Congress 2020, Minneapolis (Feb 25-28)

https://www.geocongress.org/

- -NRRA Booth
- -Special Pavement Session Wed Feb 26 2-3:30 PM: The Road Ahead: Using Technological Advances to Address Challenges in Pavements
- -Special Session Thursday Feb 27 1:30-3:00 PM: Determining Pavement Design Criteria for Recycled Aggregate Base and Large Stone Subbase

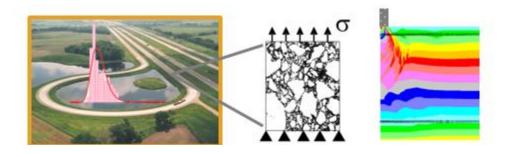
2020 NRRA Pavement Workshop, Minneapolis (May 19-21)

http://dot.state.mn.us/mnroad/nrra/pavement-workshop/index.html

General NRRA Update

The Road Ahead: Using Technological Advances to Address Challenges in Pavements

Wednesday February 26 2:00-3:30 PM, 2020 Geo-Congress 2020



Presiding: Eyoab Zegeye Teshale, PhD, PE, Minnesota DOT, eyoab.zegeye.teshale@state.mn.us

Hassan Tabatabaee, PhD, Cargill, <u>Hassan Tabatabaee@cargill.com</u>
Raul Velasquez, PhD, PE, Minnesota DOT, raul.velasquez@state.mn.us

Moderator: Jon Chiglo, PE (WSB) Chief Operating Officer

Panel: Glenn Engstrom, PE (MnDOT) Director, Office of Materials and Road Research

Peter Taylor, PhD, PE (ISU) Professor

Buzz Powell, PhD, PE (NCAT) Assistant Director, Senior Research Engineer
Tom Sorel, PE (WSP) Vice President, MN/ND/SD Senior Area Manager

Will Abernathy, (**Kiewit**) Senior Project Manager Bryan Downing, (**CAT**) Global Sales Support Consultant

General NRRA Update

Determining Pavement Design Criteria for Recycled Aggregate Base <u>and Large Stone Subbase</u>

Thursday, February 27, 2020, 1:30-3:00pm (90 minutes)

This session describes the 2017 construction and ongoing monitoring of test sections sponsored by the National Road Research Alliance (NRRA) and built at the MnROAD facility operated by the Minnesota DOT. The study objectives are to develop pavement design criteria and performance-based specifications that will optimize the use of recycled aggregate base and large stone subbase in pavement systems. The expected benefits include: cost savings from the use of recycled materials, longer pavement service life, reduced life cycle costs, conservation of natural resources, and reduced environmental impact. Geosynthetics were also included in some of the test sections to facilitate construction. The research team is evaluating both the geomechanical and environmental properties of these pavement systems, developing a method to estimate the stiffness and permeability of recycled aggregate base and large stone subbase designs, and preparing construction specifications.

Presiding: John Siekmeier, Minnesota DOT, john.siekmeier@state.mn.us
David Van Deusen, Minnesota DOT, dave.vandeusen@state.mn.us

The total session time is 90 minutes of which the first hour will have four 15 minute presentations. The final half hour will be a panel discussion with the audience.

Agenda

Introduction

Bora Cetin, Michigan State University, cetinbor@msu.edu

David White, Ingios Geotechnics, david.white@ingios.com

Mark Wayne, Tensar International, mwayne@tensarcorp.com

Soheil Nazarian, University of Texas El Paso, nazarian@utep.edu

Panel Conversation with the Audience

General NRRA Update

Research Pays Off
February 18, 2020. Early Opening Strength to Traffic by
Lev Khazanovich of University of Pittsburgh

Update Research Projects

Project	Team	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9
Determining Pavement Design Criteria for Recycled Aggregate Base and Large Stone Subbase	MSU/ISU /UWM									
Mechanistic Load Restriction Decision Platform for Pavement Systems Prone to Moisture Variations	UNH									
Environmental Impacts on the Performance of Pavement Foundation Layers	MSU									
Permeability of Base Aggregate and Sand	UWM									
Improve material inputs into mechanistic design properties for reclaimed HMA Roadways	MSU/ISU									

Any state allows use of recycled porcelain in base/subbase?

Input from Members