National Road Research Alliance Geotechnical Team November Meeting

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Agenda

- 1. Welcome and Introductions
- 2. General NRRA Update
- 3. Update Ongoing Research Projects
- 4. Lessons Learned DOTs Members Initiative
- 5. Feedback on Best Practices for Geotextile Wrapping of Granular Backfill of Integral Abutments
- 6. Questions/Requests

General NRRA Update

- Phase II Membership
- Phase II Research Ideas
 - Expect a Research Call in February 2021
- Previous RPO available in NRRA YouTube channel:
 - https://www.youtube.com/playlist?list=PLhkRICZI75wIPxYDgl9kQruzdUd7g
 FDU8
- Stay tuned for upcoming Webinar by PennDOT on "Use of Geosynthetics in Pavement Foundation" - Kerry Petrasic
 - Tuesday November 17, TBD time

Update Research Projects

Project	Team	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9 & 10
Determining Pavement Design Criteria for Recycled Aggregate Base and Large Stone Subbase [90%]	MSU/ISU /UWM								In progress	
Mechanistic Load Restriction Decision Platform for Pavement Systems Prone to Moisture Variations [65%]	UNH				TAP reviewing	In progress				
Environmental Impacts on the Performance of Pavement Foundation Layers [60%]	MSU			In progress	In progress					
Permeability of Base Aggregate and Sand [70%]	UWM				In progress					
Improve material inputs into mechanistic design properties for reclaimed HMA Roadways [50%]	MSU/ISU		Addres. TAP feedback	In progress	In progress					
Continuous Moisture Measurement during Pavement Foundation Construction	UTEP	Contract TAP Workplan								

Lessons Learned DOTs Members Initiative

Kevin Kliethermes, FHWA

- What is your State DOT's typical section for designing of a new roadway? reconstruction roadway?
 - Base
 - Subbase
 - Subgrade?



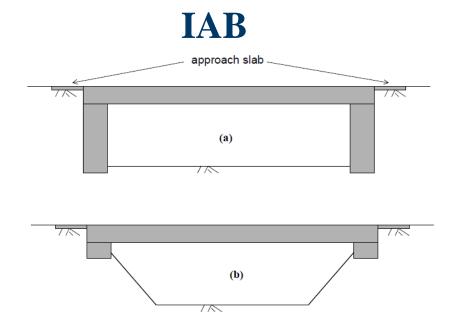
- What is causing grading and base issues in your state today, during construction this year?
- Does your state have a different typical G&B section for Bituminous than Concrete?
- What does you state use for soil stabilization? Cement?
 Lime?

Best Practices for Geotextile Wrapping of Granular Backfill of Integral Abutments

Integral Abutment Bridges (IABs) are jointless bridges in which superstructure is cast monolithically with substructure

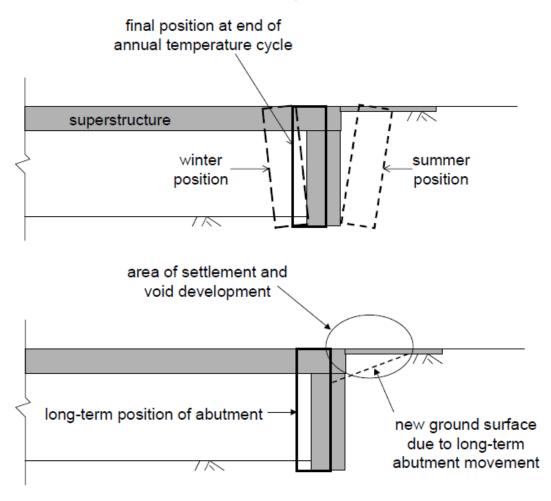
- => Eliminating expansion joints
- => Reduces corrosion of bridge elements (leaking joints)
- => Cost effective (short and long-term)
- => Standard single span bridge of choice by majority DOTs

expansion joints primary direction of thermally induced movement superstructure bearings abutments



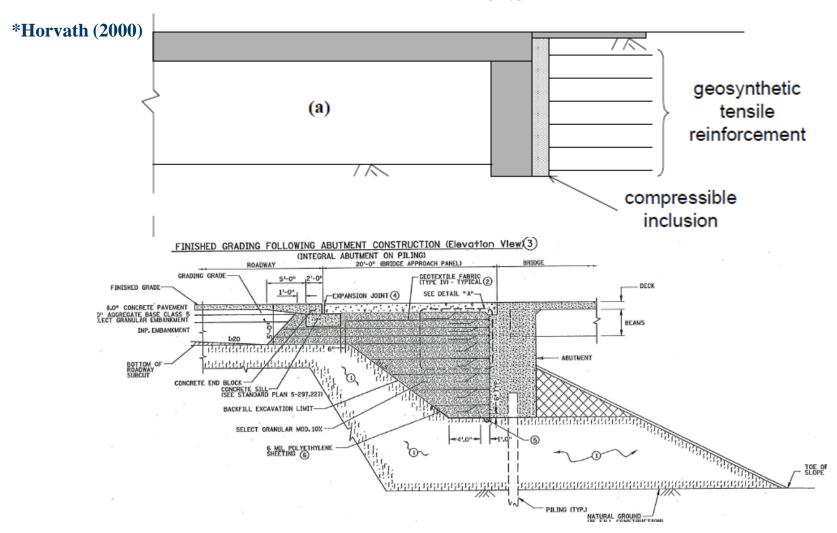
Best Practices for Geotextile Wrapping of Granular Backfill of Integral Abutments

Identified Issues – Thermally Induced Movement



Best Practices for Geotextile Wrapping of Granular Backfill of Integral Abutments

Alternatives / Solutions



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