

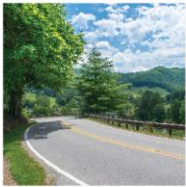


NORTH CAROLINA

Department of Transportation

AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO



AASHTO 2019 COBS Annual Meeting, Montgomery, AL

T-15 Committee Meeting – June 25th

Scott Hidden, NCDOT

How did we get to where we are now?

- Main purpose of MSE ballot items is to update/improve internal stability analysis for MSE walls
- Needed because some of current spec is very out of date (20+ years) and there has been a lot of research done that needs to be incorporated into the code
- Effort began back in 2012 through joint effort between T-15 and an MSE Wall Task Force
- Some other MSE wall issues besides internal stability have been addressed in previous years ballot items
- Research for and development of new methods for MSE wall internal stability was mostly completed by 2017

How did we get to where we are now?

- First rough draft developed for 2017 T-15 mid-year meeting and draft was revised for later T-15 meetings
- Primary concern with draft from T-5, state DOTs and industry was inclusion of 4 different methods for internal stability (“current” *Simplified Method* and *Coherent Gravity Method* and “added” *Stiffness Method* and *Limit Equilibrium Analysis*)
 - Why do we need 4 methods?
 - How do you know when to use what method where?
- At 2018 T-15 mid-year meeting, the following was decided and agreed upon by T-15, T-5 and the MSE Task Force

How did we get to where we are now?

- Retain the Coherent Gravity Method for steel reinforced structures, but leave uncalibrated for now
- Add in the Stiffness Method for geosynthetic reinforced walls (including geostrips), and calibrate it
- Move the Simplified Method to a new Appendix B11 as a legacy method and leave uncalibrated, but refer to the method in the code as an acceptable method
- Include Limit Equilibrium Analysis with improved guidance in the compound stability article for use in:
 - Checking compound stability
 - Checking internal stability for walls with complex geometry or very soft/weak foundation soil

MSE Agenda Item Highlights

- MSE ballot items include 3 attachments (A, B & C)
- Attachment A covers changes to Section 3 (Loads and Load Factors) for internal stability of MSE walls
- Attachment B covers updates, improvements and additions to Section 11 (Abutments, Piers, and Walls) for internal stability including T_{\max} calcs based on agreement reached at 2018 T-15 mid-year mtg
- Attachment C covers additional changes and clarifications to Section 11 for miscellaneous items primarily related to zinc coating thickness, geostrips, AASHTO R69 and facing connection strength



Discussion

