

GSI W-4 Webinar Entitled:

“Mechanically Stabilized Earth (MSE) Wall, Berm and Slope Construction Inspection”

Webinar Overview

The inspection (aka monitoring) of MSE wall, berm and slope construction using geosynthetic reinforcement is absolutely essential for providing a safe and durability system. Such inspection includes three distinct time frames; before, during and after construction. This webinar is focused on what is felt to be the proper state-of-the-practice in this regard. Integral to this task is the contractual method, the various organizations involved, and the specific inspectors tasks. The materials involved (soils, geosynthetics and facings) will be illustrated as will be typical inspection costs.

Specific activities before construction (foundation conditions, water regimes, materials conformance testing, meetings and documentation); during construction (leveling pad, drainage, face forming, lift progression and finished soil surface); and after construction (final structure, as-built survey, and periodic future inspections) will be emphasized. An inspector certification program will be described.

Learning Objectives

Webinar participants will learn about contractual variations used in the construction of MSE structures with geosynthetic reinforcement. They will also learn about types and conformance testing of materials used in their construction. The major focus, however, is to learn an inspectors duties and obligations before, during and after construction of the MSE system. These separate stages are amply illustrated by many field photos of correct practice.

The implications of a failed MSE structure will be discussed from the vantage point of remediation costs, negative publicity and loss of confidence in this type of wall, berm and slope system.

Webinar Benefits

- Various contracting schemes will be discussed
- General inspector’s tasks will be defined
- The different materials involved in construction will be illustrated
- Specifics of activities before construction will be illustrated
- Specifics of activities during construction will be illustrated
- Specifics of activities after construction will be illustrated
- Data on failed MSE systems will be described so as to emphasize various areas of specific attention
- Costs of inspection and remediation of failed walls will be presented

Intended Audiences

Owners of MSE walls, berms and slopes in both the public and private sectors; federal, state and regional geotechnical, transportation, and environmental engineers; engineers from municipal districts and townships; private and municipal land developers, architectural and landscape designers; general civil consulting engineers; testing laboratories servicing these organizations; manufacturers and representatives of geosynthetic materials; contractors and installers of MSE walls, berms and steep soil slopes; academic and research groups; and others desiring technically related information on this important aspect of our constructed infrastructure.

Specific Topics Covered

1. Introduction and Background
2. Inspection Activities Before Construction
3. Inspection Activities During Construction
4. Inspection Activities After Construction
5. Summary and Conclusions

Webinar Instructor

Dr. George R. Koerner is the current director of the Geosynthetic Institute, a position that he has held since 2014. George's interest in geosynthetics spans his entire professional life from undergraduate work in the 1980's to the present. He holds his PH.D. in Civil, Architectural and Environmental Engineering from Drexel University in Philadelphia. George's master thesis was on direct shear testing of geosynthetic interfaces and his doctoral dissertation was on landfill leachate clogging of soil and geosynthetic filters. Both are regularly cited to this day.

Dr. George Koerner is a Professional Engineer in both Pennsylvania and New Jersey, and is an ASQC Quality Auditor. During his 30-years of geosynthetic activities, Dr. Koerner's output has been tremendous and he has to his credit the following publications:

- Books Edited or Co-Edited – 15
- Journal Papers – 18
- Symposium and Conference Publications – 40
- Book Chapters and Published Reports – 4
- Miscellaneous Articles – 30

The Geosynthetic Institute is a nonprofit research and development organization dedicated to the proper use of geosynthetics in its myriad applications. As director of the Geosynthetic Institute, Dr. George Koerner is also in charge of the laboratory accreditation and inspection certification programs.