Geotechnical Settlement and Wall Analysis

BACKGROUND

Proposed projects that would alter or relocate any part of a levee may require embankment settlement analysis. Proposed projects that would alter or relocate any part of a floodwall or revetment may require structural analysis. The analysis and report documenting the findings should be certified by a Professional Engineer and submitted to MCD.

PROJECT REQUIREMENTS

Geotechnical Exploration
Geotechnical/subsurface exploration, analysis, and documentation may be required to develop parameters for the settlement analysis and are the responsibility of the project owner.

Settlement Analysis
  - Analyses should address
    - Embankment loads
    - Compressibility of embankment soils
    - Compressibility of foundation soils
    - Age of levee system or dam
    - Construction compaction methods
  - MCD may require a higher finish elevation to mitigate potential settlement.

Wall Analysis
Any proposed improvement, development or use that alters or relocates concrete walls or revetment requires:

- Structural analysis of floodwalls, crest walls, and retaining walls following the guidelines of U.S. Army Corps of Engineers manual 1110-2-2502, “Retaining and Flood Walls.”
  - Bearing Capacity
  - Overturning
  - Sliding
  - Flexural Capacity

QUESTIONS

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