

Geotechnical studies

Description

A geotechnical study includes preparation of final boring logs and an analysis of subsurface conditions and materials, submitted in the form of a report. The report includes but is not limited to; bearing capacity for deep or shallow foundations, settlement analysis, slope stability analysis, locations of unsuitable soils, sub-cut depths and type of backfill, muck excavation limits and treatment, culvert treatments, pavement designs, and geologic recommendations. The report should also include definite foundation recommendations for providing a safe and cost-effective foundation system.

In addition, this work type may include hiring and managing Standard Penetration Test & Rock Coring, and/or Cone Penetration Test subcontractors.

Standards and specifications

May include the following:

- All tasks will be performed in accordance with current ASTM, AASHTO, and, for highway construction projects, MnDOT standards and specifications. The current Specifications for Subsurface Investigation & Geotechnical Analysis and Design Recommendations can be found at <https://www.dot.state.mn.us/materials/foundationdocs/tcontract/consultdrillreport.pdf>

Provided by Hennepin County

Information to be supplied by Hennepin County for a project may include the following:

- Plans showing existing topography, proposed alignments, locations of the existing and proposed structures and locations of borings.
- Completed boring logs in gINT format.
- American Society for Testing and Materials (ASTM), American Association of State Highway & Transportation Officials (AASHTO), and MnDOT Standard Specifications.

Typical services

Project deliverables may include the following:

- Final geotechnical report
 - Final boring logs in paper and electronic format.
 - Final logs using MnDOT's gINT templates.
 - Plotted boring plan and soils profile in electronic format (hard copy may be required).
 - Materials design recommendation (if required).
 - Weekly progress reports.
 - Final report summarizing the results of the testing along with recommendations and conclusions.