
Geotechnical Engineer

Expertise	Geology and Geotechnical Engineering
Education	B.Sc. (Geology), 2012 University of Wisconsin, Eau Claire, Wisconsin B.Sc. (Geoengineering), 2012 University of Minnesota, Minneapolis, Minnesota
Registration	Registered Professional Engineer, Minnesota Geologist in Training (GIT)

Professional Experience

2013 – Present	ITASCA Minneapolis Geotechnical Engineer
2012	American Engineering Testing, St. Paul Summer Engineering Technician Intern
2010 – 2011	University of Wisconsin – Eau Claire Research Assistant

Project Experience

Highwall Stability Assessment for a Proposed Redevelopment Project — Geotechnical engineer for the stability assessment of a sandstone highwall in Wisconsin. Tasks included developing a jointing model, conducting a rockfall analysis, assessing long-term stability and raveling, and developing a draft trigger and response action plan (TARP).

Slope Stability Analysis for a Large Open Pit Copper Mine — Built, analyzed, and calibrated a three-dimensional numerical model to assess the slope stability of a large open pit copper mine using *FLAC3D*.

Slope Stability Analysis for a Large Open Pit Diamond Mine — Built and analyzed a three-dimensional numerical model to assess the slope stability of a large open pit diamond mine using *3DEC*.

Pompeys Pillar National Monument Rock Stabilization — Geotechnical Engineer for the stability assessment of Pompeys Pillar National Monument. Duties included geologic mapping, joint mapping, and 3D modeling using *3DEC*. The numerical models were used to identify potentially hazardous rocks as well as develop remediation options.

Wabasha Street Rock Stabilization — Geotechnical Engineer for the investigation of the Wabasha Street rock slide in Saint Paul, Minnesota. Duties included conducting a thorough assessment of the cause of the rock slide as well as the immediate and long-term threats posed by the rock slide and remaining materials, developing remedial measures for review by the City, and assisting in construction plan preparation.

Investigation of a Domeout in an Underground Limestone Mine — Geotechnical Engineer for the investigation of the cause of a domeout in an underground limestone mine. Duties included mapping the extent of the domeout using 3D scanning, videography, and photography. Additionally, the investigation included mapping joints and rockbolts, investigating broader site information regarding geologic setting, and observing current roof conditions. Processed data was used to develop a *FLAC* model to assist in determining the cause of collapse.

Mesa Verde National Park Spruce Tree House Alcove Local Arch Analysis — Geotechnical Engineer for the stability assessment of the Spruce Tree House Alcove arch. Duties included geologic and joint mapping, core drilling, and 3D modeling. The numerical models were used to identify remediation options. Additional duties included assisting with construction cost estimates, aesthetic considerations, and construction documents.

T.H.53 Relocation Project — Geotechnical Engineer for the relocation of T.H. 53 near Virginia, Minnesota. Duties included coordinating geomechanical core logging, point load testing, and data processing. Processed data was used to characterize the rock mass according to a number of classification systems.

Site Investigation and Mine Design for a Large Underground Cu-Ni-PG Mine — Geotechnical Engineer for this conceptual and pre-feasibility design project. Duties as part of this multi-year project included geomechanical core logging, point load testing, analyzing downhole acoustic televiewer (ATV) logging data from exploration boreholes, and empirically estimating rock-mass quality using both the Q system and RMR system.

Raccoon Mountain Shaft Condition Assessment — Geotechnical Engineer. Duties included shotcrete sounding, shotcrete condition observation, geologic and civil document review, data compilation, and reporting.

Software Support — Provided *FLAC* technical support.