
Geotechnical Consultant Services and Review

Design Manual
Chapter 200
Geotechnical Design
Originally Issued: 01-15-14

The purpose of this section is to outline the responsibilities of a Geotechnical Consultant to the Iowa DOT, and to discuss the procurement and review of the geotechnical services. Geotechnical Consultants are typically retained in three different ways by the Iowa DOT, although other methods may be used under certain circumstances.

- Via an on-call geotechnical contract, or as part of an on-call design contract with the Office of Design
- As part of a contract (other than on-call) for overall consultant design of a specific grading project, which would typically be through the Office of Design and then subsequently through a design consultant
- As part of a contract for overall consultant design of a specific bridge project, which would typically be through the Office of Bridges and Structures and subsequently through a design consultant

Quick Tips:

- Communication with the Soils Design Section is crucial to project success
- Follow Section [200I-1](#).
- The Consultant is responsible for quality control and assurance on submitted geotechnical information.

Geotechnical Consultant Administration

This section addresses the work of geotechnical consultants retained to provide geotechnical services for Iowa DOT by the general procedures referenced above. Geotechnical consultants are generally retained to handle peak geotechnical design workloads, or to obtain specialized expertise not available within the Soils Design Section. In addition to design related services, the geotechnical consultant may also occasionally provide support in other areas, such as to the Office of Construction and Materials. All geotechnical consultant work should generally be performed according to Chapter 200.

On-Call Contracts

Consultants working directly for the Office of Design will frequently do so through an on-call agreement, in which the consultant is assigned project-specific tasks. Through these tasks, the consultant is typically responsible for accomplishing all or only part of the overall geotechnical investigation, laboratory testing, geotechnical analysis and design, and/or reports or submittals associated with the applicable soil design events (S1-S4). For these assignments, the consultant is in essence viewed as an extension of the Soils Design Section and the Iowa DOT in general, and is, therefore, subject to the same standards of performance, design, plan sheet preparation, etc. as in-house staff on in-house projects. For this contractual scenario, the Soils Design Section is typically responsible for overseeing technical/geotechnical matters, and the Consultant Coordination Section is typically responsible for administration of the consultant agreement.

Contract for Overall Consultant Design of a Specific Grading Project

Geotechnical consultants may be retained for geotechnical design purposes by a prime design consultant that is responsible for designing a specific grading project. In such situations, the geotechnical consultant is under contract to the prime design consultant, but must still accomplish their geotechnical work according to the requirements in the prime consultant's contract with the Iowa DOT, plus all other applicable items such as Section [200I-1](#). All basic functions outlined in the On-Call Contracts section above also apply to this category of geotechnical consultant work.

Contract for Overall Consultant Design of a Specific Bridge Project

Geotechnical consultants may be retained for geotechnical design purposes by a structural or bridge consultant that is responsible for designing a specific bridge or other structure. In such situations, the geotechnical consultant is under contract to the structural or bridge consultant, but must still accomplish their geotechnical work per requirements in the structural or bridge consultant's contract with the Iowa DOT, plus all other applicable items such as Section [200I-1](#). All basic functions outlined in the On-Call Contracts section above also apply to this category of geotechnical consultant work.

Review of Geotechnical Consultant Submittals

Geotechnical consultant submittals will be reviewed by the Soils Design Section to ascertain that the information complies with the applicable sections of Chapter 200. Deviations from the procedures outlined in Chapter 200 should be documented and should be explained as to why the procedures were changed. The geotechnical submittals will be reviewed for clarity of information.

Office of Design practice/policy is to review and comment on consultant submittals for general content (is everything there?) and format (is everything put together right?), but not for technical content (is the analysis full and appropriate?) or accuracy (is everything correct geotechnically?). In that, a detailed review of calculations and analysis will typically not be performed by the Soils Design Section. For an analysis method or software not known to the Soils Design Section, additional information may be requested on the analysis method or software, including methods used to conduct the analysis, examples of where the method or software has been used by another governmental agency, and/or side-by-side comparisons between recognized analysis method/software and the non-recognized method/software. The Geotechnical Consultant is responsible for verifying all analysis methods and software will achieve suitable and acceptable results.

In instances where a consultant may perform only drilling and lab testing services, but no analysis or design, the Soils Design Section may require that the consultants' boring logs and lab data be in a format that is familiar to, usable by, and directly compatible with the Soils Design Sections's efforts with subsequent analysis and design.

Chronology of Changes to Design Manual Section:

200A-003 Geotechnical Consultant Services and Review

1/15/2014

New