

DRAFT AIA® Document C202™ - 2015

Standard Form of Consultant's Services: Geotechnical Engineering

for the following **PROJECT**:
(Name and location or address)

«As set forth in Attachment A – Request for Proposal (RFP)»

THE OWNER:
(Name, legal status, and address)

«Milwaukee County»
«600 N. Plankinton Ave., Suite 600»
«Milwaukee, WI 53203»

THE GEOTECHNICAL ENGINEER:
(Name, legal status, and address)

« »
« »

THE AGREEMENT

This Standard Form of Consultant's Services is part of the accompanying C103™ -2015, Standard Form of Agreement between Owner and Consultant without a Predefined Scope of Consultant's Services dated the « » day of « » in the year « ».
(In words, indicate day, month and year of the accompanying C103-2015.)

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ARTICLE 1 INITIAL INFORMATION

§ 1.1 The Geotechnical Engineer's performance of the services set forth in this document is based upon the information contained in this Article 1 and the Initial Information in C103-2015. If this information changes materially, the Owner and Geotechnical Engineer shall appropriately adjust the schedule, the Geotechnical Engineer's services, and the Geotechnical Engineer's compensation.

(List below information, including conditions or assumptions, which will affect the Geotechnical Engineer's performance.)

« »

§ 1.2 Property Information

§ 1.2.1 Legal or other description of the Property upon, or for which, the Geotechnical Engineer's services will be performed.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document provides the Consultant's scope of services only and should be attached as an exhibit to AIA Document C103™-2015, Standard Form of Agreement Between Owner and Consultant without a Predefined Scope of Consultant's Services.

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(Insert legal description of the Property, if known. Otherwise, describe the Property.)

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§ 1.2.2 Site access is provided by the arrangement checked below:

[« »] The Owner has title to the Property and the right of entry for the Geotechnical Engineer to perform its services.

[« »] The Owner has secured permission for entry to the Property for the Geotechnical Engineer to perform its services from the following parties subject to the conditions identified below.

Permission for entry provided by:
(Insert names, addresses, and telephone numbers of the present owner or tenant who has given permission for entry to the Property.)

« »

Conditions:
(Insert conditions pertaining to the Geotechnical Engineer's access to the Property, such as time, noise, and equipment limitations.)

« »

§ 1.2.3 The Geotechnical Engineer shall contact the following person(s) to schedule and make necessary arrangements for access to the Property.

(Insert names, addresses, and telephone numbers.)

« »

§ 1.2.4 The Owner shall provide the Geotechnical Engineer with documents in the Owner's possession, such as geotechnical reports and surveys, that contain relevant information about the existing condition of the Property, including information regarding boundary lines, topography, means of access to the site, utilities, encumbrances, and locations of structures that may be affected by the Project.

§ 1.3 Project Information

The Owner shall provide the following Project information, to the extent known, to the Geotechnical Engineer:

§ 1.3.1 The Owner's objectives for the Project, including a general description and anticipated design loads of the buildings and other improvements being considered.

§ 1.3.2 A site plan showing grades and locations of proposed building or other improvements being considered.

§ 1.3.3 Other: (Specify)

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ARTICLE 2 GEOTECHNICAL ENGINEER'S SERVICES

§ 2.1.1 The Geotechnical Engineer's services shall be performed by qualified personnel under the supervision of a licensed professional permitted to practice geotechnical engineering in the jurisdiction in which the Project is located.

§ 2.1.2 The Geotechnical Engineer shall review the information furnished by the Owner, and shall review laws, codes, and regulations applicable to the Geotechnical Engineer's services. The requirements of this Agreement shall be in addition to such laws, codes, and regulations. If a conflict exists between the requirements of the jurisdiction in which the Project is located and the requirements of this Agreement, the Geotechnical Engineer shall notify and consult with the Owner prior to proceeding with the services impacted by the conflict.

§ 2.1.3 The Geotechnical Engineer shall identify a benchmark at the site, record it in the Geotechnical Report, and reference field explorations to it as appropriate.

§ 2.2 Explorations and Testing

§ 2.2.1 The Geotechnical Engineer shall perform field explorations, including soils sampling and field testing, necessary for the planning and design of the Project and for preparation of the Geotechnical Report. The Geotechnical Engineer's explorations shall be consistent with the scope of the Project as determined through consultation with the Owner and Architect, and review of the Initial Information and any attached exhibits.

§ 2.2.2 The Geotechnical Engineer shall prepare a detailed plan for the Owner's approval, in consultation with the Owner and Architect, indicating the nature and location of all proposed field explorations. The Geotechnical Engineer's plan shall include, at a minimum, information regarding the type, number, location, and depth of proposed soil borings and other explorations. If the Geotechnical Engineer finds it necessary to change the location or depth of any of these proposed borings, the Geotechnical Engineer shall notify the Owner and Architect and a new location or depth shall be agreed upon between the Owner and Geotechnical Engineer, in consultation with the Architect.

§ 2.2.3 The Geotechnical Engineer shall perform laboratory tests necessary for the planning and design of the Project and for preparation of the Geotechnical Report. The Geotechnical Engineer shall provide a detailed plan, for the Owner's review and approval, of the Geotechnical Engineer's proposed laboratory tests.

§ 2.2.4 If the Geotechnical Engineer encounters unusual and unanticipated conditions, including materials which cannot be penetrated by standard sampling equipment, the Geotechnical Engineer shall immediately consult with the Owner and Architect.

§ 2.2.5 The Geotechnical Engineer shall advise the Owner and Architect as to any additional explorations and tests necessary for the Geotechnical Engineer to assess the conditions at the Property. The Geotechnical Engineer shall perform such additional work only as authorized by the Owner and after consultation with the Architect.

§ 2.2.6 The Geotechnical Engineer shall perform all field explorations and lab tests in accordance with current applicable ASTM International (ASTM) standards or other standards approved in advance by the Owner. The Geotechnical Engineer shall record all data in the field and reference it to the appropriate exploration point numbers. When collecting soil samples, the Geotechnical Engineer shall classify soils in field logs in accordance with applicable ASTM standards or other standards, including ASTM D2488 Standard Practice for Description and Identification of Soils. The classification for final logs shall be based on field information, plus results of tests and further inspection of samples in the laboratory by the Geotechnical Engineer preparing the reports in accordance with ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes or other Owner-approved standards.

§ 2.2.7 All samples collected by the Geotechnical Engineer are the Owner's property and shall be preserved according to Section 2.4. All field logs shall be prepared by the Geotechnical Engineer or by an experienced soils technician or experienced driller acting under the supervision of the Geotechnical Engineer.

§ 2.2.8 The Geotechnical Engineer shall take reasonable precautions to prevent damage to the Property, both visible and concealed, and shall reasonably restore the Property to the condition existing prior to the Geotechnical Engineer's entry. Such restoration includes backfilling of borings, patching of slabs and pavements, and repair of lawns and plantings. Each boring shall be capped pending additional groundwater readings. At the completion of the groundwater readings, the borings shall be permanently plugged, including patching of slabs and pavements.

§ 2.2.9 Prior to starting any field explorations, the Geotechnical Engineer shall contact the Owner and the appropriate public utility location service for information regarding buried utilities and structures. If requested by the Geotechnical Engineer and agreed to by the Owner, the Owner shall provide the services of a utility location firm to locate utilities not identified by a public utility location service.

§ 2.3 Geotechnical Report

§ 2.3.1 The Geotechnical Engineer shall analyze the information gathered from the field explorations and lab tests performed under Section 2.2 and consult with the Owner and Architect regarding the design and engineering requirements of the Project. Based on such analysis, the Geotechnical Engineer shall provide a written Geotechnical Report to the Owner. The Geotechnical Engineer shall provide the Geotechnical Report and any related documents to

the Owner in a medium and format determined by the Owner and as required by the jurisdiction in which the Project is located. The Geotechnical Engineer shall sign and seal the Geotechnical Report as required by the jurisdiction in which the Project is located. The Geotechnical Engineer shall consult with the Owner and Architect regarding the information presented in the Geotechnical Report. The Geotechnical Report shall contain the following information:

§ 2.3.2 Background Information

§ 2.3.2.1 General description of the Project.

§ 2.3.2.2 List of all resources used in evaluation of the Property and preparation of the Geotechnical Report, including existing surveys and geotechnical reports.

§ 2.3.2.3 Narrative description of the history, existing features, and geology of the Property.

§ 2.3.3 Exploration and Test Results

§ 2.3.3.1 Record of the date and time of each field exploration.

§ 2.3.3.2 Plan showing dimensioned locations of each field exploration and equipment used.

§ 2.3.3.3 Identification of ASTM standards or other Owner-approved standard sampling and test methods used.

§ 2.3.3.4 All data as required by the ASTM standards or other Owner-approved standard sampling and test methods used.

§ 2.3.3.5 Chart illustrating the soil classification criteria, and defining the terminology and symbols used on the boring logs.

§ 2.3.3.6 Vertical sections for each boring, plotted and graphically presented to show (1) number of borings, (2) sampling method used, (3) date of start and finish, (4) surface elevations, (5) description of soil and thickness of each layer, (6) depth to loss or gain of drilling fluid, and (7) hydraulic pressure required or number of blows per foot (Standard Penetration Test N value for each sample). Where applicable, show depth to wet cave-in, depth to artesian head, groundwater elevation and time when water reading was made, and presence of gases. Note the location of strata containing organic materials, wet materials, or other inconsistencies that might affect engineering conclusions.

§ 2.3.3.7 Description of the existing surface conditions and a summary of the subsurface conditions.

§ 2.3.3.8 Subsurface profiles of rock or other bearing stratum.

§ 2.3.3.9 Estimate of potential variations in elevation and movements of subsurface water due to seasonal influences.

§ 2.3.3.10 Description of laboratory testing performed, and a report of all results, including laboratory determinations of soil properties.

§ 2.3.3.11 Results of any percolation tests performed.

§ 2.3.3.12 Other: *(Specify)*

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§ 2.3.4 Foundation Evaluation and Recommendations

As part of the Geotechnical Report, the Geotechnical Engineer shall prepare an evaluation and recommendations for the necessary areas of consideration pertaining to existing or proposed foundations, including the following:

§ 2.3.4.1 Foundation support of the structure and slabs, including bearing pressures, bearing elevations, foundation design recommendations, anticipated settlement, and need for ground improvement to mitigate against settlement, liquefaction, and other conditions encountered on the Property.

§ 2.3.4.2 Anticipation and management of groundwater for design of structures and pavements.

§ 2.3.4.3 Lateral earth pressures and requirements for design of below grade walls and trenches, including backfill, compaction, and subdrainage.

§ 2.3.4.4 Soil material and compaction requirements for the support of structures and pavements, and for site fill, construction backfill, and grading.

§ 2.3.4.5 Subgrade moduli for design of pavements or slabs.

§ 2.3.4.6 Temporary excavation and temporary protection, such as excavation sheeting, underpinning, and temporary dewatering systems.

§ 2.3.4.7 Site stability, including slope stability and settlement.

§ 2.3.4.8 Site seismic activity and seismic design information with references to current applicable building code.

§ 2.3.4.9 Frost penetration depth and effect.

§ 2.3.4.10 Effect of weather or construction equipment or both on soil conditions during construction.

§ 2.3.4.11 Presence of potentially expansive soils; deleterious, chemically active, or corrosive materials or conditions; or the presence of gas. The analysis shall not require the Geotechnical Engineer to provide environmental assessment services for the Project unless otherwise agreed to by the Geotechnical Engineer and Owner.

§ 2.3.4.12 Depth of material requiring rock or other difficult soil excavation and suggested methods of removal.

§ 2.3.4.13 Potential sustainable design elements and low-impact development.

§ 2.3.4.14 Other: *(Specify)*

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§ 2.4 Samples

The Geotechnical Engineer shall dispose of samples as indicated below after all laboratory tests have been completed:

Discard

Retain at the Geotechnical Engineer's office, and remain open to inspection until

the end of the Project's Bidding or Negotiation Phase.

the Project's foundation installation is complete.

Substantial Completion.

Other: *(Specify)*

« »

§ 2.5 Design Phase Services

§ 2.5.1 During the design phase of the Project, the Geotechnical Engineer shall consult with the Owner and the Owner's other consultants regarding geotechnical aspects of the Project.

§ 2.5.2 The Geotechnical Engineer shall review, and provide written comments on, geotechnical aspects of drawings, specifications, and other design submittals prepared by the Owner and the Owner's other consultants.

§ 2.6 Construction Phase Services

During construction of the Project, the Geotechnical Engineer shall consult with the Owner and the Owner’s other consultants regarding geotechnical aspects of the Project. If required, site visits shall be performed as an Additional Service in accordance with Article 3.

ARTICLE 3 ADDITIONAL SERVICES

§ 3.1 Additional Services listed below are not included in Basic Services but may be required for the Project. The Geotechnical Engineer shall provide the listed Additional Services only if specifically designated in the table below as the Geotechnical Engineer’s responsibility.

(Designate the Additional Services the Geotechnical Engineer shall provide in the second column of the table below. In the third column indicate whether the service description is located in Section 3.2 or in an attached exhibit. If in an exhibit, identify the exhibit.)

Services	Responsibility <i>(Geotechnical Engineer, Owner or Not Provided)</i>	Location of Service Description <i>(Section 3.2 below or an exhibit attached to this document and identified below)</i>
§ 3.1.1 Ground Motion Studies		
§ 3.1.2 Bidding or Negotiation related Services		
§ 3.1.3 Ground Water Control		
§ 3.1.4 Earth Structures and Retention Systems		
§ 3.1.5 Preparation of Specifications		
§ 3.1.6 Geologic Mapping		
§ 3.1.7 Site Visits during Construction		
§ 3.1.8 Construction Phase Testing and Inspections		
§ 3.1.9 Ground Improvement		
§ 3.1.10 Other:		

§ 3.2 Insert a description of each Additional Service designated in Section 3.1 as the Geotechnical Engineer’s responsibility, if not further described in an exhibit attached to this document.