A REQUEST FOR PROPOSAL
FOR
PROFESSIONAL SERVICES CONTRACT

Department of Highways
Professional Services Procurement Bulletin 2020-09
Statewide Geotechnical Engineering and Laboratory Services

This document constitutes a Request for Proposals for a Professional Service Contract from qualified individuals and organizations to furnish those services as described herein for the Commonwealth of Kentucky, Department of Highways.

I. PROJECT DESCRIPTION

This statewide contract is to provide necessary Statewide Geotechnical Engineering and Laboratory Services. Four (4) consultants will be selected to provide these services on an as-needed basis for two years.

II. PROJECT INFORMATION

Project Manager - Michael Carpenter, P.E.
User Division - Structural Design
Approximate Fee - $1,500,000 per contract (Upset Limit)
Work will be assigned via Letter Agreement, not to exceed $500,000 per Letter Agreement
Project Funding - State and Federal Funds
Contract Term - Two Years

III. PURPOSE AND NEED

To provide geotechnical engineering and laboratory testing services on an as needed basis to help expedite the completion of projects and effectively handle the workload on a statewide basis.

Some projects may require surveying and roadway design necessary to prepare a complete set of roadway plans for the design of landslide, rock-fall, and other small project corrections. A prequalified subconsultant may be used on these projects. The names of the sub-consultants should be identified in the response. Prequalification in the areas of Rural Roadway Design, Surveying, and Structure Design spans under 500 feet will be required.

IV. DBE REQUIREMENT

None

V. SCOPE OF WORK

Services will be performed in general accordance with the KYTC Geotechnical Manual and other applicable KYTC and/or FHWA documents, with exceptions, clarifications, or additions

identified during negotiations and/or on a project by project basis. The services will include but are not necessarily limited to the following:

CONVENTIONAL GEOTECHNICAL ENGINEERING ANALYSES:
Slope Stability, Settlement, Deep Foundation, Wave Equation Drivability, Negative Skin Friction, Bearing Capacity, and Retaining Wall.

SEISMIC GEOTECHNICAL ENGINEERING ANALYSES:
Simplified Seismic Site Response, Equivalent-Linear One Dimensional Site Response, Liquefaction, Earthquake Induced Settlement, Pseudo-Static Slope Stability.

LOAD AND RESISTANCE FACTOR DESIGN (LRFD): Conform to the AASHTO LRFD Bridge Design Specifications, current edition, with interims, for projects that involve structural foundations and retaining walls.

DRAFTING: Preparing Microstation CADD drawings of roadway soil profile sheets, embankment and cut stability sheets, structure subsurface data sheets, geotechnical note sheets, and other related drafting.

gINT: Proficient use of the Bently software package gINT for data manipulation is required.

PRELIMINARY PLANS: Boring, Laboratory Requests, and Analysis Request.

MEETINGS: Preliminary, Rock Core, Interim, and Final Meetings.

REPORTS: Writing and publishing Geotechnical Engineering Reports in hard copy and electronic format in accordance with applicable sections of the Geotechnical Guidance Manual.

LOGGING ROCK CORES

GEOTECHNICAL LABORATORY TESTING: *Refer to the Summary of Laboratory Tests and Specified Production Rates* in the Word document described below for a list of laboratory tests. Tests included in Items 1-12 in this schedule may be required on a regular basis; Items 13-20 will be used rarely. Upon request, provide laboratory test reports according to KYTC format.

RURAL ROADWAY DESIGN AND SURVEYING: Performing Rural Roadway Design and Surveying as necessary to prepare a complete set of roadway plans for the design of landslide, rock fall and other small project corrections.

SPECIALTY SERVICES: Services such as in-situ testing, geophysical testing, Pile Dynamic Testing, Pile integrity Testing, Crosshole Sonic Logging, Cone Penetration Testing, Specialty drilling, tunneling, etc., may be included with details to be discussed on a project-specific basis.

VI. SPECIAL INSTRUCTIONS

Four (4) consultants will be selected to provide these services for a period of two (2) years with no new work assigned after two years from the Notice to Proceed, although the contract may be extended for time to complete work already assigned. Contracts will have an upset limit of $1,500,000. Once the upset limit is reached or the two year term has expired, services may be re-advertised and no additional Letter Agreements will be executed under the contract. Contracts

will not be modified to increase the upset limit or extended for time to assign new work. No Letter Agreement shall exceed $500,000 without written approval from the State Highway Engineer.

The Selection Committee will randomly draw from the pool of selected Consultants and list in consecutive order to determine the initial order for which projects will be assigned. Projects will generally be assigned on a rotational basis. The Department reserves the right to select one of the firms outside of the assignment order for a particular project if it is to the benefit of the Department. That firm, if selected out of order, will be skipped in the rotation when their turn comes and the regular order will be followed thereafter. The Division of Structural Design reserves the right to group multiple projects together as one offering if it is advantageous to the Department. The Department may also add additional work to an existing Letter Agreement, if needed. A firm will not be offered an additional project until the remaining firms on the list have been offered a project. If a firm declines to accept a project, that firm will not be eligible to accept another project until the remaining firms on the list have been offered a project. If a firm declines a project or does not respond to an invitation to perform services for a project within five (5) business days, documentation shall be provided in the project files and the next firm on the rotating list shall be offered the project.

The Geotechnical Branch reserves the right to revoke a consultant's contract at any time for unsatisfactory work.

The selected firms must be capable of performing a variety of geotechnical engineering and laboratory testing services. A few projects may require capability of performing structural foundation design, surveying and rural roadway design. Some projects may require the consultant to hire specialty personnel as a sub-consultant to assist on highly specialized projects.

All selected firms must demonstrate proficiency in the field of geotechnical engineering and laboratory testing for transportation facilities on highway projects for KYTC and/or for federal, local or other state governmental agencies; experience on challenging projects and applicable continuing education are desirable. The firms must clearly demonstrate qualifications, experience, and capabilities in the areas below; they may not necessarily meet all these criteria, but the criteria do represent a benchmark.

Conventional Geotechnical Engineering Experience & Capabilities

Preparing geotechnical submittals in accordance with KYTC format, including: Boring, Laboratory Testing, and Engineering Analysis Plans; Cost Estimates and Invoices for Engineering and Laboratory Testing Services.

Preparing CADD drawings including roadway soil profile sheets, embankment and cut stability sheets, structure subsurface data sheets, geotechnical note sheets, and other related drawings in accordance with KYTC format, with the capacity of preparing full size 22" X 36" and reduced size 11" X 17" CADD drawings.

Preparing and Interpreting Subsurface Logs in accordance with KYTC format.

Preparing Geotechnical Engineering Reports for roadways and structures in accordance with KYTC format.

Analyzing and/or designing embankments, soil and rock cuts, reinforced soil slopes, and landslide and rock fall corrections for transportation facilities.

Preparing geotechnical engineering analyses for shallow and deep foundations (e.g. driven piles and drilled shafts) and retaining structures (e.g. cantilever, mechanically stabilized earth, tieback, and soil nail walls) for transportation facilities.

Monitoring geotechnical construction of transportation facilities, including but not limited to: compaction of embankments and soil subgrades, excavation for roadway cuts and structure foundations, construction of retaining structures, and installation of deep foundations.

Interpreting data from geotechnical instrumentation installed in slopes, retaining walls, deep foundations and other related facilities.

Formal training and/or experience with Load and Resistance Factor Design (LRFD).

Seismic Geotechnical Engineering Experience & Capabilities

Performing seismic geotechnical engineering analyses for the design of bridges, embankments, dams, and/or other major structures, including: Simplified Seismic Site Response, Equivalent-Linear One Dimensional Site Response, Liquefaction, Earthquake Induced Settlement, Pseudo-Static Seismic Slope Stability, and other related analyses.

Geotechnical Laboratory Qualifications & Capabilities

AASHTO Accreditation (R18) for the following AASHTO test methods: R58, T88, T89, T90, T99, T100, T193, T208, T216, T296, T265; and capable of performing KM 64-501(CBR by Kentucky Method) KM 64-513 (Slake Durability), KM-64-514 (Jar Slake), ASTM D 4767, and ASTM D 2938 or KM 64-523 (Unconfined Compression Test on Rock).

Lab testing is generally to be performed in the lab(s) identified in the most recent approved prequalification response. The firm may request to use another lab facility within the firm that meets the applicable accreditation requirement. This request is to be made in writing and is subject to the approval of the Geotechnical Branch.

Refer to the Schedule of Laboratory Tests and Specified Production Rates in the Word document described below for a list of laboratory tests. The selected firms will be expected to have the capacity to perform tests included in Items 1-12 in this schedule. Items 13-20 may be used on rare occasions; so, the capability to perform these tests is desirable, but not necessary in order to be selected to receive a contract. Firms should clearly indicate which tests they are capable of performing in their response.

Ability to proficiently use gINT software to store and report laboratory data in the gINT library file provided by KYTC. Firms will be required to send all gINT data entry employees to one or more KYTC hosted training class. All gINT data entry will be as directed by KYTC. KYTC is available for some limited technical support for following KYTC input format. General gINT technical support is the responsibility of the firm.

The hourly rate for engineering and laboratory testing services will be based upon "loaded" rates determined from the audited average hourly rates and multipliers (overhead and cost of money plus an operating margin of 10% for geotechnical engineering and 15% for laboratory testing). All applicable rates will be from audits performed by the Division of Audits, External Audit Branch. Invoices will be paid by the Geotechnical Branch using loaded rates based upon the average hourly rates of the personnel classifications and multipliers contained in the most recent audit report at the time of the Notice to Proceed for this contract. The begin/end work dates used to derive the escalated loaded rates will be the begin/end dates of the two (2) year contract and will be constant throughout the two (2) year contract period. Payment may be adjusted by the Division of Audits, External Audit Branch and/or the Division of Professional Services.

For geotechnical engineering services, the Department will pay for the actual hours worked, up to the specified ceiling rates (maximum allowable hours); time records will be required. There may be project specified exceptions for ceiling rates if preapproved in writing. For laboratory testing services, the Department will pay the specified production rates per unit; time records will not be required. The production rates (hours per unit of work) are specified below in the Summary of Specified Ceiling Rates for Engineering Tasks and the Summary of Laboratory Tests and Specified Production Rates. The Geotechnical Branch may specify classifications of personnel for engineering tasks on a project by project basis. There may be project specified exceptions for engineering tasks if preapproved in writing. Roadway design services (including surveying) will be paid as Lump Sum determined from the audited average hourly rates and multipliers (overhead and cost of money plus an operating margin of 15%) with hours to be negotiated for each individual letter agreement. The Department will reimburse the consultant for any direct cost expenses preapproved in writing at the actual cost (with receipts). Invoicing and documentation will be as specified by the Geotechnical Branch in all instances.

Click here for a Word document containing a Summary of Estimated Hours for Engineering Tasks and Production Rates for Laboratory Tests

Professional Liability Insurance

Firms must provide proof of $1,000,000 of professional liability insurance in order to receive a statewide geotechnical engineering and laboratory testing contract.

Instructions for Response to Announcement can be found at:
https://transportation.ky.gov/ProfessionalServices/Pages/Respond-to-an-Announcement.aspx

VII. ENVIRONMENTAL SERVICES

Any Laboratory testing on contaminated soils or rock may be sub-contracted with prior approval of the Geotechnical Branch.

VIII. GEOTECHNICAL SERVICES

Consultant will provide geotechnical engineering and laboratory testing services.

IX. RURAL ROADWAY SERVICES

Consultant may be required to provide rural roadway design on some projects.

X. SURVEYING SERVICES

Consultant may be required to provide surveying on some projects.

XI. STRUCTURE DESIGN

Consultant may be required to provide foundation structural design on some projects.

XII. PREQUALIFICATION REQUIREMENTS

To respond to this project, the Consultant must be prequalified in the following areas by the response due date of this advertisement.

GEOTECHNICAL SERVICES
- Geotechnical Engineering
- Geotechnical Laboratory Testing

ROADWAY DESIGN
- Rural Roadway Design
- Surveying

STRUCTURE DESIGN
- Spans under 500 feet

XIII. PROCUREMENT SCHEDULE

Dates other than Response Date are tentative and provided for information only.

- Advertisement Posted: March 10, 2020
- Response Date: April 1, 2020 by 4:30 PM ET (Frankfort Time)
- First Selection Meeting: April 6, 2020
- Final Selection: April 22, 2020
- Pre-Design Conference: April 29, 2020
- Notice to Proceed: May 20, 2020

XIV. PROJECT SCHEDULE

Individual project schedules will be defined by Letter Agreement on a project-by-project basis.

XV. EVALUATION FACTORS

Consultants will be evaluated by the selection committee based on the following, weighted factors:

1. Relative experience of consultant personnel assigned to project team with highway project for KYTC and/or federal, local or other state governmental agencies. (35 Points)

2. Past record of performance on projects similar in type and complexity. (35 Points)

3. Project approach and proposed procedures to accomplish the services for the project. (15

Points)

4. Available team workload capacity to comply with project schedule. (10 Points)

5. Knowledge of the locality and familiarity of the general geographic area. (5 Points)

XVI. SELECTION COMMITTEE MEMBERS

1. Michael Carpenter, P.E., User Division
2. Erik Scott, P.E., User Division
3. Dane Blackburn, P.E., Secretary's Pool
4. Patrick Perry, P.E., Secretary's Pool
5. Cole Mitcham, P.E., Governor's Pool