A REQUEST FOR PROPOSAL
FOR
PROFESSIONAL SERVICES CONTRACT

Department of Highways
Professional Services Procurement Bulletin 2016-10
Statewide Geotechnical Engineering & Laboratory Testing

This document constitutes a Request for Proposals for 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

Four (4) consultant firms will be selected to provide statewide Geotechnical Engineering and Laboratory Testing on an as-needed basis for two (2) years.

II. PROJECT INFORMATION

Project Manager – Bart Asher, P.E.
User Division – Structural Design
Approximate Fee – $1,500,000 upset limit (per contract)
Projects to be assigned by Letter Agreement not to exceed $500,000 each
Project Funding – State and Federal Funds

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 during FY 2017 and 2018.

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. 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.

V. ENVIRONMENTAL

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

VI. GEOTECHNICAL SERVICES

Consultant will provide geotechnical engineering and laboratory testing services.

VII. RURAL ROADWAY SERVICES

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

VIII. SURVEYING

Consultant may be required to provide surveying on some projects.

IX. STRUCTURE DESIGN

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

X. SPECIAL INSTRUCTIONS

Four (4) firms will be selected to provide these services. The contract period is a two (2) year contract with no new work assigned after two years from the original Notice to Proceed date, 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 will be re-advertised and no additional work assignments will be made under the contract. Contracts will not be modified to increase upset limit or extended for time to assign new work. If additional work is required on the same Letter Agreement, a Supplemental Letter Agreement shall be issued. No Letter Agreement shall exceed $500,000 without written approval from the State Highway Engineer.

Once the four (4) firms have been chosen, they will be ranked in consecutive order (1-4) by being placed in a pool, randomly drawn and listed in consecutive order (1-4). This order will generally determine the numerical order in which projects will be offered to firms on a rotating basis. KYTC reserves the right to select one of the four firms outside of the assignment order for a particular project if it is to the benefit of KYTC (e.g. the firm selected is also completing the drilling for the project or the firm has a specialization that is required). 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 Geotechnical Branch reserves the right to group multiple projects together as one offering if it is advantageous to the KYTC. KYTC can also add additional work to an existing Letter Agreement, if needed. In the typical order offering, firms will not be offered an additional project until the remaining firms on the list have been offered a project. If a firm turns down a project, it will be offered to the next firm in consecutive order and so on until the project is accepted. If a firm declines a project or does not respond to an invitation to perform services for a project within 3 workdays from the date the Department offers a project, then documentation shall be placed in the project files noting the project was declined and the next firm in the list shall be offered the project, etc. Firms will not be penalized for not accepting a project, regardless of reason.

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 have staffs who 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, T297, T265; and capable of performing KM64-501(CBR by Kentucky Method) KM 64-513 (Slake Durability), KM-64-514 (Jar Slake), 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 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 a 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. 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~~

Click here for the revised 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:
http://transportation.ky.gov/Professional-Services/Pages/Respond-to-an-Announcement.aspx

XI. PREQUALIFICATION REQUIREMENTS

To respond to this project, the proposed consultant project team must be prequalified in the following areas prior to the response due date of this advertisement.

GEOTECHNICAL SERVICES
- Engineering Services
- Laboratory Testing

ROADWAY DESIGN
- Rural Roadway Design
- Surveying

STRUCTURE DESIGN
- Spans under 500 feet

XII. PROCUREMENT SCHEDULE

Dates other than Response Date are tentative and provided for information only.
- Bulletin Posted – April 12, 2016
- Response Date – May 4, 2016 by 4:30 PM ET (Frankfort time)
- First Selection – May 9, 2016
- Final Selection – May 25, 2016
- Scoping Conference – June 1, 2016
- Notice to Proceed – July 21, 2016

XIII. PROJECT SCHEDULE

Individual project schedules will be by letter agreement on a project by project basis.

XIV. EVALUATION FACTORS

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

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

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

4. Capacity to comply with project schedule (10 points).

5. Consultant's offices were work is to be performed. (5 points)

For state-funded projects, if a Selection Committee vote results in a tie between two (2) firms, one (1) of which will perform more of the work tasks in Kentucky than the other, then the former firm

shall be ranked one (1) place ahead of the latter.

XV. SELECTION COMMITTEE MEMBERS

1. Bart Asher, PE, User Division
2. Erik Scott, PE, User Division
3. Wheeler Nevels, PE, Secretary's Pool
4. Kevin Rust, PE, Secretary's Pool
5. Cole Mitcham, Governor's Pool