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| COUNTY | Statewide | |
| ROUTE | N/A | |
| ITEM NUMBER | N/A | |
| DISTRICT | Statewide | |
| PROJECT DESCRIPTION | N/A | |
| PROJECT MANAGER | William Broyles, P.E. | |
| USER DIVISION | Materials | |
| APPROXIMATE FEE | \$750,000 upset limit | |
| PURPOSE AND NEED | To provide geotechnical engineering and laboratory testing services; to help expedite the completion of projects and effectively handle estimated workload, on a statewide basis. <i>(A pre-qualified subconsultant may be used on projects requiring limited rural roadway design and surveying services.)</i> | |
| PROCUREMENT SCHEDULE | Response Date | Wednesday, June 5, 2002, 4:30 p.m. (Frankfort time) |
| | Selection Committee Date | June 19, 2002 2:00 p.m. |

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| | Tentative Deadline for Consultant Fee Proposal | July 12, 2002 |
| | Contract Negotiations | July 22, 2002 |
| | Notice to Proceed | July 31, 2002 |
| PROJECT SCHEDULE & PROJECT SCHEDULE MILESTONES | | |
| | Completion of Services | June 30, 2004 |
| | The selected consultant is expected to meet the scheduled milestone dates. | |
| EVALUATION FACTORS | <ol style="list-style-type: none"> 1. Project approach and proposed procedures to accomplish the services for the project (10 points) 2. Relative experience of consultant personnel assigned to project team with highway projects for KYTC and/or for federal, local or other state governmental agencies (10 points) 3. Capacity to comply with project schedule (10 points) 4. Past record of performance by firm on projects of similar type and complexity (10 points) 5. Consultant has Kentucky offices where work is to be performed (2 points) <p>75% - 100% of work accomplished in Kentucky offices – 2 points</p> <p>26% - 74% of work accomplished in Kentucky offices – 1 point</p> <p>0% - 25% of work accomplished in Kentucky office - 0 points</p> | |
| SELECTION COMMITTEE MEMBERS | <ol style="list-style-type: none"> 1. Bart Asher, P.E., User Division 2. Darrin Beckett, P.E., User Division 3. Amos Hubbard, P.E., Secretary's Pool 4. David Jones, P.E., Secretary's Pool 5. Joe Kearnes, P.E., Governor's Pool | |

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| DBE REQUIREMENT | None |
| SPECIAL INSTRUCTIONS | <p>The Department reserves the option to modify the selected consultant's agreement to include any necessary engineering and/or related services for this project. At that time, the firm(s) will be pre-qualified by the Department in the required area(s).</p> <p>Four (4) firms will be selected to provide these services. The contract period is each firm receiving a one-year contract with the option of extending the period for (1) year. The firms will be placed in a pool, randomly drawn and listed in consecutive order (1 - 4). This order will determine the numerical order in which projects will be offered to firms on a rotating basis. Firms 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 shall not be eligible to accept another project until the remaining firms on the list are offered a project. If a firm declines a project or does not respond to an invitation to perform services for a project within 7 calendar days, documentation shall be placed in the project files and the next firm on the list shall be offered the project. If the next firm on the list declines, the project shall be offered to the next firm, etc.</p> <p>The selected firms must be capable of performing a variety of geotechnical engineering and laboratory testing. A few projects may require firms capable of performing surveying and rural roadway design necessary to prepare a complete set of roadway plans for the design of landslide and rockfall corrections. A pre-qualified sub-consultant may be used on these projects. Prequalification in the areas of Rural Roadway Design and Surveying and/or the name of sub consultant are not required to be identified in the consultant's Response to Announcement; these issues will be addressed during negotiations.</p> <p>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.</p> <p>Technical Staff Qualifications</p> |

- **Three or more Professional Engineers with two or more years of experience in geotechnical engineering on highway projects for KYTC and/or for federal, local or other state governmental agencies, and licensed to practice in Kentucky; one or more with a post-graduate degree in civil engineering.**
- **One or more Professional Geologists with two or more years of experience in engineering geology on highway projects for KYTC and/or for federal, local or other state governmental agencies, and licensed to practice in Kentucky.**
- **One or more CADD operators proficient with Microstation, with one or more years of experience in geotechnical drafting on highway projects for KYTC and/or for federal, local or other state governmental agencies.**
- **Laboratory staff meeting the proficiency requirements necessary for AASTHO Accreditation.**

Conventional Geotechnical Engineering Experience and 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 capability 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 rockfall corrections for transportation facilities.**
- **Performing geotechnical engineering analyses for deep foundations (e.g. driven piles and drilled shafts) and non-conventional retaining structures (e.g. mechanically stabilized earth, tiedback, 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 non-conventional retaining structures, and installation of deep foundations.

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

Seismic Geotechnical Engineering Experience and 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 and Capabilities

- AASHTO Accredited for the following AASHTO test methods: T87, T88, T89, T90, T99, T100, T193, T208, T216, T296, T297, T265; and capable of performing KM 64-501 (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).

Rural Roadway Design and Surveying Capabilities (*Prequalified sub consultant may be used*)

- *Capable of performing all design and surveying required to prepare complete set of rural roadway plans in accordance with applicable AASHTO and/or KYTC format, as necessary for the design of landslide and rockfall correction projects.*

SCOPE

Services will be performed in general accordance with the KYTC Geotechnical Manual and other applicable KYTC documents, with exceptions, clarifications, or additions identified during negotiations. The services will include:

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

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

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.

PRELIMINARY PLANS

MEETINGS: Preliminary, Rock Core, and Final Meetings.

REPORTS: Writing and publishing Geotechnical Engineering Reports.

LOGGING ROCK CORES

GEOTECHNICAL LABORATORY TESTING: Moisture Content, Soil Classification, Wash and Sieve Gradation; Moisture-Density, CBR and Soil Classification; Unconfined Compression on Soil; One-Dimensional Consolidation; Consolidated-Undrained Triaxial Compression with Pore Pressure Measurements; Unconsolidated-Undrained Triaxial; Slake Durability and Jar Slake; and Unconfined Compression on Rock.

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

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| PREQUALIFICATION REQUIREMENTS | |
| | <p><u>GEOTECHNICAL SERVICES</u></p> <ul style="list-style-type: none">• Engineering• Laboratory Testing |