

# **A REQUEST FOR PROPOSAL FOR PROFESSIONAL SERVICES CONTRACT**

## **Department of Highways Professional Services Procurement Bulletin 2021-11 Statewide Capacity and Safety Analysis**

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 Capacity and Safety Analysis. Two (2) consultants will be selected to provide these services on an as-needed basis for two years.

### **II. PROJECT INFORMATION**

Project Manager - Wendy Southworth, P.E.  
User Division - Highway Design  
Approximate Fee - \$400,000 per contract (Upset Limit)  
Work will be assigned via Letter Agreement, not to exceed \$100,000 per Letter Agreement  
Project Funding - State and Federal Funds  
Contract Term - Two Years

### **III. PURPOSE AND NEED**

To collect, review, or analyze traffic data that will support project development decisions such as alternative selection and operational improvements. To collect and analyze safety data that will support the decision-making process and improve the effectiveness of countermeasures to reduce the number and/or severity of crashes and to more effectively manage the funds available.

### **IV. DBE REQUIREMENT**

The Consultant team shall include a DBE Participation Plan with their Response to Announcement to help the Department meet the 11.95% DBE goal established by FHWA. The plan needs to demonstrate how DBE companies will be mentored or used to assist in the area(s) pertaining to this contract. An additional page will be allowed in the Project Approach (Page 7) to demonstrate this plan. A maximum of 2 points will be considered in the Evaluation Factors for the DBE Participation Plan.

### **V. SCOPE OF WORK**

The selected Consultants must possess the expertise and capacity to be able to build, run, and perform all of the traffic engineering tasks listed below:

Traffic Data Analyses and Simulation – This work will involve the utilization of professional traffic engineering expertise to analyze traffic flow in congested or crash prone areas, to provide performance measures for alternative comparison and analysis, and to make recommendations to solve traffic operational problems and/or to improve traffic flow. Procedures and methodologies consistent with the most recent edition of the Highway Capacity Manual (HCM) should be used as the basis for traffic engineering. Typically, peak hour data will be analyzed. The analysis should employ, as necessary, traffic engineering tools (KYTC compatible version), such as the latest version of HCS and may be supplemented with computer simulation models with software tools such as VISSIM to complete this work. The analysis may require traffic data collection, including but not limited to speed, volume, classification, turning movements, travel time, maximum queue lengths, etc.

Congestion and Performance Management – This work may involve the use of professional traffic engineering, data management and operations expertise to develop methodologies to calculate performance measures and calculation of measures; identify and quantify congested segments; and recommend improvements to mitigate congestion. Performance measures, or measures of effectiveness (MOEs), may include volume/capacity ratio, level of service (LOS), vehicular delay, queue length, and travel time or speed. Recommendations should include analysis needed to estimate improvement and quantify Return on Investment. The consultant may be expected to document their findings in report form depending on the level of task assigned.

Model Development Oversight and Training – This work will involve review of traffic models developed by others. The review may include geometrics, signal function & timing, vehicle classification and characteristics, driver behavior characteristics, and other parameters representative of the driving public in the study area. Base condition models will be reviewed after calibration and validated based on field measured volume, driver behavior parameters, vehicle class, travel time, delay, and queueing. Defaults as well as user input values utilized in all models shall be documented. This work may also include training others in the development of traffic models.

Safety and Operational Studies – This work may involve the collection and review of crash data; traffic volume data; roadway/asset inventory; alignment and design data; and the performance of operational and safety analyses. This may range from compilation of general crash data statistics to filtering and categorization of crash data based on crash types, pavement conditions, lighting conditions, time of day, time of year, etc. The goal is to identify any crash trends that could possibly be mitigated through the implementation of a specific countermeasure. The consultant should be able to perform and utilize methodologies in the Highway Capacity and Highway Safety Manuals and related analysis and design software with resources such as the Crash Modifications Factors (CMF) Clearinghouse and the Interactive Highway Safety Design Module (IHSDM). This effort may include field investigations, research, analysis, summarization and/or recommendations regarding the specific issue(s) being reviewed and studied, cost estimates (including costs for Preliminary Engineering, Right of Way, Utility Relocation, and Construction phase costs) and calculation of Benefit-to-Cost for safety improvements. The consultant may be expected to document their findings in report form depending on the level of task assigned. This work may also include training others and reviewing the work of others in the development of the safety analysis.

## **VI. SPECIAL INSTRUCTIONS**

Two (2) 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 \$400,000. 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 \$100,000 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 Highway 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.

Instructions for Response to Announcement can be found at:

<https://transportation.ky.gov/ProfessionalServices/Pages/Respond-to-an-Announcement.aspx>

## **VII. AVAILABLE INFORMATION**

[KY 185 Relocation Safety Analysis Memo](#)

[KY 185 Relocation Safety Analysis Appendix](#)

## **VIII. AVAILABLE INFORMATION**

Selected Consultants must have the capability to collect and analyze the data as well as the capability to work with the Department's Highway Information System (HIS) database and GIS database. In general, the data may be transmitted electronically in standard KYTC formats. It is expected that frequent coordination between the consultant and the Department's User Division will be necessary for each specific task.

## **IX. PREQUALIFICATION REQUIREMENTS**

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

### **ROADWAY DESIGN**

- Rural Roadway Design

- Advanced Traffic Engineering Design & Modeling
- Urban Roadway Design

#### TRANSPORTATION PLANNING

- Traffic Forecasting
- Traffic Data Collection

### **X. PROCUREMENT SCHEDULE**

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

- Advertisement Posted: May 11, 2021
- Response Date: June 2, 2021 by 4:30 PM ET (Frankfort Time)
- First Selection Meeting: June 7, 2021
- Final Selection: June 23, 2021
- Pre-Design Conference: June 30, 2021
- Notice to Proceed: July 21, 2021

### **XI. PROJECT SCHEDULE**

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

### **XII. 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. (15 Points)
2. Past record of performance on projects similar in type and complexity. (15 Points)
3. Project approach and proposed procedures to accomplish the services for the project. (10 Points)
4. Available team workload capacity to comply with project schedule. (10 Points)
5. DBE Participation Plan (2 Points)
6. Knowledge of the locality and familiarity of the general geographic area. (2 Points)

### **XIII. SELECTION COMMITTEE MEMBERS**

1. Wendy Southworth, P.E., User Division
2. Amanda Desmond, P.E., User Division
3. Joseph Van Zee, P.E., Secretary's Pool
4. Erika Drury, P.E., Secretary's Pool
5. R. Bruce Scott, P.E., Governor's Pool