

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

## **Department of Highways Professional Services Procurement Bulletin 2016-08 Statewide Planning Traffic Modeling**

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**

Project Description – Consulting services are needed to refine existing and develop new travel demand models involving Statewide, MPO, Regional, and Corridor models using TransCAD and TransModeler or approved equivalent for micro-simulation models. Consultant services will also be utilized to refine current modeling procedures through the incorporation of additional data sources and innovative modeling methodologies.

### **II. PROJECT INFORMATION**

Project Manager – Scott Thomson, P.E.

User Division – Planning

Approximate Fee – \$400,000 upset limit per consultant. Three (3) consultants to be selected

Work will be assigned via Letter Agreement, not to exceed \$200,000 per Letter Agreement

Project Funding – State and Federal Funds

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

To support the efforts of Design, Planning, Operations, and Environmental Analysis in developing and maintaining a safe and reliable transportation network for the Commonwealth.

### **IV. DBE REQUIREMENT**

None

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

Selected consultants must possess the expertise and capacity to be able to perform any and all of the travel demand modeling tasks listed below:

1. MPO, Regional, County, and Corridor Level Modeling – These models provide a basis for supporting KYTC's traffic forecasting, planning, and air quality conformity analysis. The Division of Planning maintains HIS data extracts for model development. Some data collection or verification will be required by the consultant. Existing models may provide methodologies and transferable parameters in the development of new work.

2. Statewide Modeling – Maintenance and improvements to the Kentucky Statewide Traffic Model. The consultant shall be familiar with model calibration and validation, long distance travel, and other unique features of statewide modeling.
3. Simulation Modeling – Work shall include creating and calibrating sub area travel demand or micro simulation models.
4. Innovative Modeling Methodologies – Research, develop, and implement new modeling methodologies for the project/applications listed above while incorporating new data sources for freight, population, and employment.

Documentation of work, data sources, collection procedures, modeling techniques, calibration methodology with results and application shall be bound into a final technical model report. A colorized PDF of the final report shall also be provided.

## **VI. ADDITIONAL INFORMATION**

Selected consultants must have the capacity to work and use the most recent version of TransCAD & TransModeler software. Also required is familiarity with GPS centerline, the Division's Highway Information System databases, and third party databases.

The modeling tasks shall consider for incorporation innovative or state of the practice approaches when developing or updating the models. If micro-simulation is required, the most recent version of TransModeler is the preferred program. Model versions as well as electronic copies of all files and guidance manual(s) shall be provided.

Travel Demand and Simulation Modeling plus Traffic Data Collection are expected activities and are covered by the Cabinet's prequalification categories listed below.

## **VII. SPECIAL INSTRUCTIONS**

Three (3) firms will be selected to provide these services. The contract period is a two (2) year contract with no new work assigned after June 30, 2018, 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 will be re-advertised and no additional work assignments will be made under the contract. Contracts will not be modified to increase the upset limit or extended for time to assign new work. No letter of agreement shall exceed \$200,000 without written approval from the State Highway Engineer.

The Selection Committee will randomly draw from the pool and list in consecutive order to determine the initial order for which a project will be offered. Projects will be offered to firms on a rotational basis. 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, does not respond to an invitation to perform services for a project within fourteen (14) days, or the Department and Consultant cannot agree on reasonable scope of work and fee for services, documentation shall be placed 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:

<http://transportation.ky.gov/Professional-Services/Pages/Respond-to-an-Announcement.aspx>

## **VIII. METHOD OF DESIGN OR PLANNING**

The selected consultant will use a standardized TransCAD user interface and file structure for all travel demand models. Models will be evaluated based on the allowed maximum error (RMSE) by Vehicle class using all available data. TransModeler is the preferred micro-simulation software, other software may be approved on a case by case basis.

## **IX. PREQUALIFICATION REQUIREMENTS**

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

### **TRANSPORTATION PLANNING**

- Traffic Demand and Simulation Modeling
- Traffic Data Collection

## **X. PROCUREMENT SCHEDULE**

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

- Bulletin Posted – February 9, 2016
- Response Date – March 2, 2016 by 4:30 PM ET (Frankfort time)
- First Selection – March 7, 2016
- Final Selection – March 23, 2016
- Scoping Conference – March 30, 2016
- Notice to Proceed – May 19, 2016

## **XI. PROJECT SCHEDULE**

Projects will be assigned via a Letter Agreement. Project Schedule Milestones will be negotiated for each assigned project and reflected in the negotiated Letter Agreement.

### **Expected times to complete:**

Regional & County Model Creation	16 months
Existing model updates	6 months
Micro-Simulations	6 months
Statewide Model updates	20 months
MPO model updates	16 months
Innovative Modeling Methods	9 months

## **XII. EVALUATION FACTORS**

1. Relative experience of consultant personnel assigned to project team with highway projects for KYTC and/or for federal, local or other state governmental agencies within the past 5 years (10 points)
2. Capacity to comply with project schedule. (10 points)
3. Past record of performance on project of similar type and complexity. (10 points)

4. Project approach and proposed procedures to accomplish the services for this project. (10 points)
5. Consultant's office where work is to be performed. (2 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.

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

1. Scott Thomson, P.E., User Division
2. Jayalakshmi Balaji, P.E., User Division
3. Travis Thompson, P.E., Secretary's Pool
4. Jill Asher, P.E., Secretary's Pool
5. Cole Mitcham, Governor's Pool