Request for Proposal: Statewide RTK–GPS Network

Issued:

By:

Iowa Department of Transportation
A. INTRODUCTION

The Iowa Department of Transportation (Iowa DOT) is requesting a proposal from consulting engineering and business firms concerning their qualification, experience, and availability to perform a business model study of applying statewide real-time, kinematic global positioning system (RTK-GPS) throughout Iowa.

The Iowa DOT is requesting proposals from firms to determine their interest and capabilities in performing the prescribed work. If interested please respond in writing. This RFP is designed to provide interested consultants with sufficient basic information to submit proposals meeting the minimum requirements, but is not intended to limit a proposal’s content or exclude any relevant or essential data. Consultants are at liberty and are encouraged to expand upon the specifications after meeting the specified requirements to evidence service capability under any agreement.

Background Information

Global positioning system (GPS) capabilities have spawned new industries, vastly improved some existing applications, and have lead to the research and development of applications that could only be envisioned a few years ago. The information (location, direction, and velocity) capabilities provided by GPS have distinct advantages over its predecessors: all weather capability, 24 hour per day service, direct digital location data capture, unparalleled accuracy, lack of need for inter visible points, and real-time or post processing capabilities.

The primary application areas that use GPS provided information are survey control, photogrammetry, GIS applications, and navigation. Decision makers and other potential users of this technology need to gain a basic understanding of each of these areas in order to determine how and where this technology could be utilized within their organizations. Within each of these application areas the user's requirements for information, accuracy, and timely delivery of information must be resolved prior to acquiring, designing, developing or implementing a specific application that uses GPS technology. This RFP is intended to be the basis of a contract for the creation of a business model study to establish a statewide, real-time GPS network for the State of Iowa.

The unprecedented location accuracy available through GPS, along with the ability to determine velocity and direction has given rise to a wide variety of GPS supported applications in both the public and private sectors. Because of the rapid anticipated growth of applications that can use GPS technology and equipment, it is important that decision makers in both the public and private sectors gain a basic understanding of GPS technology, how it works with other related technologies and where they can be effectively applied to support organizational goals and objectives. Therefore, the Iowa Department of Transportation (Iowa DOT) requires information as to what is the most appropriate business model to provide statewide, real-time, kinematic GPS coverage.
1.0 PROJECT DESCRIPTION

The Iowa DOT has determined there are numerous benefits to a system of networked reference stations using GPS for surveying and road construction projects. Based on this and similar findings in other states, Iowa DOT wishes to determine the most appropriate business model to establish a statewide real-time kinematic RTK-GPS network.

1.1 The business model study will examine the potential business models for the establishment of a real-time kinematic, open architecture GPS network. The study will examine business models such as a “DOT-owned” system, a Leased system, and a “Partnership” system, a fee for service, and others that are viable.

1.3 The study will examine and report on the strengths, weaknesses, costs and benefits of each business model.

1.4 The features of the statewide RTK–GPS network proposed by the Iowa DOT are as follows:

- The proposed network must be accurate to a sub-inch level
- There must be an open architecture
- Real time GPS corrections shall be available for any location within the state of Iowa.
- The Iowa DOT has sites in each Iowa county which, potentially, can be available for use to establish base station locations.
- The Iowa DOT has a wide-area-network (WAN) which, potentially can be available for transmitting the network data to a central processing point.
- The sites and network shall be certified by the National Geodetic Survey (NGS).
- The sites shall be eligible for inclusion on the nationwide Continuously Operating Reference Station (CORS) network.

1.5 Project Area

The map on the following page shows the State of Iowa requiring the RTK-GPS coverage.
2.0 DEFINITIONS

In this RFP the following definitions shall apply:

Project Area –
    State of Iowa

Agency Project Manager –
    The person designated by the procuring agency (Iowa DOT) that is authorized to deal with the consultant, respond to inquiries and otherwise represent the agency's interest.

Consultant Project Manager -
    The person designated by the consultant who is responsible for the overall direction of the project, scheduling, quality control, personnel and who can respond to inquiries regarding any aspect of the project.

Agency –
    The Iowa Department of Transportation

Consultant –
    Entity contracted to provide goods and services.
RTK-GPS (Real Time Kinematic-Global Positioning Systems) Network – Refers to networks that enable users to get consistent GPS positions to within an inch using the differential correction service. Users of the system use the term RTK when referring to the most accurate GPS correction signals. Real-time Kinematic (RTK) differential correction refers to Global Positioning System (GPS) locations that are accurate to within an inch.

3.0 PROJECT OBJECTIVES

This RFP provides for the information necessary to develop a study of business models available to deploy, manage, operate, and/or obtain services for real time GPS corrections across Iowa.

3.1 Objective: Determine the listing of available business models. What are the strengths and weaknesses of each? Are there new models to be tried?

3.1.1 This objective is to provide an in-depth examination of the business models available for deployment of a statewide RTK-GPS network. The examination should include the strengths and weaknesses of each model, costs and benefits of each, and other non-traditional models that could be used. It should also consider the implications for the deployment, management, operations and maintenance of the RTK-GPS network.

3.1.2 Research the DOT's available support for the network (physical facilities and communications network) and the state of the industry relative to RTK-GPS networks so that the applications of business models are practical and feasible.

In support of this goal, early in the work period, the Iowa DOT shall arrange for the consultant interviews with the Iowa DOT’s IT Division staff and with representatives of the major GPS providers (e.g., Leica, NavCom, Thales, TopCon and Trimble).

4.0 DELIVERABLES

4.1 All products generated in the course of this contract shall be the exclusive property of and delivered to the Iowa DOT, unless directed by the Agency Project Manager. The report shall be the property of the Iowa DOT the moment the material/data are generated.

4.2 The consultant shall provide a comprehensive business model study at the conclusion of the project that includes a stand-alone executive summary and appendices. The consultant shall provide ten (10) copies of the final report to the Iowa DOT, plus one electronic version in portable document format (PDF).

4.3 The consultant shall deliver the final report and formally present their findings. The delivery of the final report and presentation shall occur no later than Thursday, September 21, 2006, unless specifically agreed to in writing by the Agency Project Manager.
5.0 PROPOSAL REQUIREMENTS

A Project Selection Committee will review and evaluate each consultant proposal. The selected consultant will interact primarily with the Agency Project Manager of the Iowa DOT.

In order to facilitate review of the project proposals by the Project Selection Committee, we ask that the following information be included the proposal, in the following order

1. Listing of organizations included in the project team. This discussion will also include the primary areas of responsibility of each organization.

2. The name, qualifications, experience, location and availability of the Consultant Project Manager, as well as managers in charge of each major work task under general direction of the Consultant Project Manager. This information should include the identification of similar projects managed or participated in by this individual. The selection of a Consultant Contract Manager and work task managers by a firm will constitute a contractual commitment by that firm and NO substitute managers will be allowed without prior written approval by Iowa DOT.

3. A brief discussion of the firm’s understanding of the project scope, key issues, and any concerns that may need to be addressed.

4. The firm’s approach and proposed scope to address the project’s objectives.

5. A project schedule outlining the timeline and estimated completion date. The schedule should include a description of the deliverable products throughout the project period. A graphical representation of the proposed schedule should be included.

6. A brief discussion of similar projects the organizations on the project team have completed in the past five (5) years. This listing should be limited to the three (3) most applicable projects. This listing should also include for whom the project was done and a reference that the Project Selection Committee may contact.

7. A listing of key members of the project team, a brief presentation of their qualifications, related experience, and the percent of time they will be committing to the project. This item should also identify the work tasks for which each of these individuals will be responsible.

8. A summary of the current workload and commitment of key project members.

9. The location of the office where the majority of the work will be performed.

10. A disclosure of all work for other clients that may be affected by work on the proposed contract to avoid potential conflict of interest.

11. A listing of subconsultants included in the project team. This discussion should include the primary areas of responsibility of each subconsultant and the estimated percent of the total work to be performed.
12. Include a self-addressed mailing label for your firm with the proposal.

Please note that the Iowa DOT is not requesting a lengthy, technical proposal. Rather, particular emphasis should be placed upon providing concise information regarding the firm’s proposed project approach, similar projects that the firm has recently completed, and the availability and qualifications of key staff. Promotional brochures containing general, firm-wide information are not being solicited, nor are they appropriate. Proposals shall be limited to ten (10) double-sided pages, or twenty (20) single sided pages placed between covers. Dividers do NOT count as pages. Costs should NOT be submitted at this time as part of the proposal. If submitted, they will not be considered.

13. The consultant selected for this project will NOT be eligible to submit a proposal for the related RTK–GPS network deployment. The Iowa DOT, however, does maintain the right to retain the consultant for assistance and support in the development and deployment of the statewide RTK–GPS network.

6.0 MINIMUM EVALUATION CRITERIA

The following are the evaluation criteria and weighting factors that Project Selection Committee will include, but are not limited to:

10% The firm’s past experience with similar types of business development.
15% Key staff’s expertise related to business development and feasibility studies.
35% Specific qualifications of the Consultant Project Manager that will be on the project.
15% Understanding of the project scope and potential impact
20% Project approach
5% Current workload.

7.0 PROPOSAL INFORMATION

7.1 Upon receipt of the proposals, the Project Selection Committee will select a short list of consultants with whom to begin the final selection. It is anticipated that the finalists for this project will be selected by Friday, April 21, 2006. Iowa DOT anticipates negotiating a contract with the preferred consultant shortly after the selection process is completed. The anticipated start of the contract is Monday, May 22, 2006.

7.2 All proposals must be received by NOON on Wednesday, April 5, 2006.
Please submit five (5) copies of the proposal to:

Mr. Michael Jackson, PE
Special Projects Engineer
Research and Technology Bureau
Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010
7.3 An oral interview may be conducted if warranted, after the Project Selection Committee has reviewed the proposals and additional information is requested.

7.4 All questions concerning this request for proposal should be submitted in writing, via e-mail to: michael.jackson@dot.iowa.gov

All questions and the related responses will be posted with the proposal information on the following web site:

www.prof-tech-consultant.dot.state.ia.us

All questions must be received by 4:30 PM CST, Wednesday, March 29, 2006. Questions submitted after that date cannot be answered because of the time frame needed to finalize & submit the proposals. Contacting other members of the Project Selection Committee is considered inappropriate.

7.5 Responses to questions as well as other useful information can be found on the Iowa DOT’s consultant selection website,

www.prof-tech-consultant.dot.state.ia.us

7.6 In the event the Iowa DOT needs to modify, change, or delete any of the requirements set forth in this request for proposal, notice will be given to the consultants and a revised RFP will be posted on the Iowa DOT’s web site,

www.prof-tech-consultant.dot.state.ia.us

8.0 PUBLIC RECORDS

The Iowa DOT may treat all information submitted by a consultant as public information following the conclusion of the selection process unless the consultant properly requests that information be treated as confidential at the time of submitting the proposal. The Iowa DOT’s release of information is governed by Iowa Code Chapter 22. Consultants are encouraged to familiarize themselves with Chapter 22 before submitting a proposal. The Iowa DOT will copy public records as required to comply with the public records laws. Any consultant that is impacted by a request for public record will be notified of the details of the request prior to the release of information.

9.0 CONTRACT SCHEDULE

9.1 Anticipated Project Start Date is Monday, May 22, 2006. The project is scheduled to be completed in approximately four (4) months, with the final report due to Iowa DOT on Thursday, September 21, 2006.