2019 QBS
Request for Statement of Interest (SOI)

INTELLIGENT TRANSPORTATION SERVICES (ITS) STUDY
ENGINEERING SERVICES
Section Number: 19-00200-25-ES

The Will County Division of Transportation requires professional services from a qualified engineering firm to provide Engineering Services for a Countywide Intelligent Transportation Services (ITS) Study.

The attached **Project Description** and **Preliminary Project Scope** provides a summary of major items potentially encountered during the course of the required Engineering services. At this time, the County anticipates starting this work in August 2019, with an approximate twelve (12) to eighteen (18) months to complete the work.

Submittal of Statements of Interest required electronically to WCDOTconsultantservices@willcountyillinois.com no later than **12:00 PM (Noon), Wednesday, June 12, 2019** addressed to **Christina Kupkowski**.

If you plan to enter into a joint venture for this project, please note this on your SOI, including the name of the firm entering into this joint venture with you for this project.

The Short-listed firms will be posted on our Consultant Selection Summary Table at http://www.willcountyillinois.com/County-Offices/Economic-Development/Division-of-Transportation/Consultant-Selection

A Statement of Interest (SOI) received after the above noted deadline will not be used as part of our consultant selection process.

Please refer to the following Project Description and Preliminary Project Scope for more information on this project.

I. PROJECT DESCRIPTION

In March 2017, the Will County Board adopted the *Will Co*nnects 2040 Long Range Transportation Plan. During preparation of this plan a number of further studies were deemed necessary and included in the fiscally constrained plan. The ITS study was one of these studies. It has long been known throughout the industry and particularly in Northeastern IL that we will not be able to build our way out of future congestion challenges. Limited funding, ROW, and increasing traffic volumes require us to look to other means of moving people and goods across the county. Additionally, advances in technology and data gathering requirements by funding agencies require us to determine the future of technology in all its forms for use by the DOT in the future.

II. PRELIMINARY PROJECT SCOPE

The Consultant will provide Engineering Services including but not limited to the following:

Task I – Feasibility Analysis

PROJECT OUTREACH

The outreach and stakeholder participation effort approach by the consultant will utilize the following:

- Advisory/Steering Committee,
- Interactive Stakeholder workshops, and
- One-on-one interviews with key stakeholder agency staff.

Development of the preliminary ITS stakeholders list focusing on stakeholders involved in the following ITS program areas:

1. **Arterial Management** – improvement of system performance driven by but not limited to traffic signal integration, coordinated corridors, data collection, and increased traveler information
2. **Maintenance and Construction Management** – tools for routine maintenance operations, coordinating road construction projects, improving work zone operations, and collection of weather information
3. **Rural ITS Applications** – application of ITS technologies for specific rural transportation issues such as severe weather, high crash locations, etc.

Wherever possible, our project approach will coordinate with ITS Midwest Priority Corridor Architecture, the Northeastern Illinois Regional Architecture, the Chicago Metropolitan Agency for Planning (CMAP) outreach efforts, and other related initiatives involving the County and various regional ITS stakeholders and prior outreach activities.

Advisory/Steering Committee: The Advisory/Steering Committee will provide overall project direction and policy-level guidance. At least three (3) Committee meetings, including preparation of all meeting materials, will be scheduled. These meetings provide the opportunity to present project status and any draft deliverables, and obtain feedback and direction from the committee.

Workshops: Provide at least two (2) one-day stakeholder workshops hosted by the County. Scheduling of the first workshop will be during the initial stages of the project, used for identification of existing system characteristics and stakeholder needs. This workshop also provides the opportunity to present the project's goals and objects along with potential ITS applications and benefits. Additional workshops will focus on developing and prioritizing recommendations. Including the refining of the list of proposed ITS projects, prioritizing these recommendations, and identifying requirements (e.g., staffing levels, equipment) for project deployment. Documentation of these results will be in the Implementation Plan.

Preparation for these meetings, including all of the materials, and provision of a workshop summary are the responsibility of the consultant.

Interview: At least ten (10) interview sessions will be conducted with key stakeholders from throughout the County, depends on the developed list of key stakeholders. The purpose of the interviews are 1) to inform them of the effort to develop and implement ITS; 2) to identify existing or planned ITS initiatives in the County and any existing related agreements; 3) to further identify ITS needs, services and functions in the County and region; and 4) to ensure that all available traffic-related inventory data has been obtained. Development of the list of interview subjects will be done in consultation with County staff. Recommended interviewees may include members of the Advisory/Steering Committee. Where possible, multiple individuals and multiple agencies will participate in group interviews, which will be organized based on interest areas and/or organizations. The interviews will be conducted in person where feasible, or by telephone. The consultant will provide summaries of all interviews.

System Characteristics

The identification of system characteristics includes identifying and obtaining traffic-related data for arterial roadways in Will County that is available in various reports and databases. Including the location, operational characteristics, and jurisdictional responsibility for all traffic signals in the County, both isolated signals and those that are part of a coordinated traffic signal system. Related infrastructure, including communications (interconnect) cable, emergency preemption devices, and video detection will be inventoried. Available accident data will also be reviewed. A meeting will be held with County staff to review and obtain the available inventory data.

Deliverables

- Prepared agendas and meeting minutes for each of the Advisory/Steering Committee meetings. Distribution of all meeting and project materials will be done electronically.
- Prepare agendas, materials and conduct the ITS stakeholder workshops.
- Conduct and prepare summaries for at least ten (10) interview sessions with key stakeholders.
- Meeting minutes and compilation of data provided at the meeting with County staff.
- Document and present results of the stakeholder workshops and interviews in a Needs Assessment technical memorandum.

Task 2 – Systems Engineering Process

Concept of Operations

Development of an operational concept, at a high level, by the consultant how statewide, regional, county, municipal, and private organizations will interact with each other to operate and implement systems and interfaces within the County.

The first step in this process is the development of a vision statement for the application of ITS within Will County. The basis of this statement will include previous work completed within the region as well as guidance from the Advisory/Steering Committee. The ITS Vision Statement will avoid the use of ITS lingo or buzzwords and be prepared in a style suitable for public officials, the media, and the general public. The workshops will identify the ITS services, or market packages, appropriate for application within the County, with particular attention paid to better defining the vision for expanding and enhancing the existing ITS deployments and systems with an eye on future compatibility as the County's system will grow substantially over the coming years as technologies are rapidly changing. Finally, these market packages can be compared to those included in the Northeastern Illinois Regional ITS Architecture and the ITS Midwest Priority Corridor Architecture.

The operational concept will be documented in a Concept of Operations document prepared from the perspective of the operators of the various systems. Building on the vision and describing in understandable terms how sharing data between systems will enable coordinated and improved

transportation and emergency management services. Presents a systems and operational framework used to guide project and system design and implementation, containing the following information:

- Introduction and Purpose – including a discussion of the methodology used in preparing the document
- Vision, needs summary, goals and objectives, and market packages previously identified by users and stakeholders.
- Operational Analysis – including a discussion for each market package of the applicable geographic scope and ITS systems:
    - Specific public and private organizations
    - Their roles and responsibilities
    - How and what information will be shared with other organizations

The Concept of Operations will identify "what needs to be done" and lay the ground work for "how to get there."

TECHNOLOGY / STRATEGY ASSESSMENT

Consideration of various technologies and strategies to be used for ITS applications in Will County is the basis of this subtask. This work, in conjunction with the Advisory/Steering Committee, includes examination of various general strategies that have been implemented elsewhere across the region and the United States, along with those within Northeastern Illinois and Will County, in order to determine the suitability for addressing functional areas.

The impact and role of the Northeastern Illinois Regional ITS Architecture and the evolving National Transportation Communications for ITS Protocol (NTCIP) requirements will be assessed, along with the current policies and practices of the County and other stakeholders. Of particular importance are: procurement & compatibility issues; operations and maintenance issues; training; staffing impacts; and the level of ongoing support that will be required.

Technologies consistent with the regional architecture will be identified and assessed. The costs and advantages of different technologies and strategies will be compared to the identified performance criteria. A matrix will be prepared to highlight functionality versus the suitability of technologies with respect to initial, operations, and maintenance costs; industry and open standards; future compatibility; and maturity.

DELIVERABLES

- Concept of Operations technical memorandum
- Technology matrix – Excel format
- Technology/Strategy Assessment technical memorandum summarizing the various integration technologies, strategies, and tools applicable to ITS deployment in Will County

Task 3 – Implementation Plan

Leading to the Will County ITS Opportunities Plan (ITS OP), one section will be the Implementation Plan. Other sections of the ITS OP will be based on the technical memoranda prepared in other tasks. Some or all of that information may be contained in an appendix.

The Implementation Plan contains recommendations with respect to the general direction that the County and the other key stakeholders should take to prioritize the allocation of funds for the deployment of ITS in the County. Recommendations for the deployment of ITS along specific arterial roadway corridors will be the primary focus of the Implementation Plan. The Plan includes identifying the criteria used to define the priority corridors.

CATEGORIZATION

Application of ITS technologies by function, the short-term (1-2 years), mid-term (3-5 years), and long-term (more than 5 years) including:

- Project partners,
- Timeframes,

- Conceptual cost estimates, and
- Potential funding opportunities.

Based on the information gathered in the system inventory, stakeholder workshops, and alternative analysis the Advisory/Steering Committee will establish these priorities.

ADDITIONAL TOPICS

To be examined and addressed in the Implementation Plan include but are not limited to:

- Integration of information,
- Traffic incident management & coordination,
- Implementation & operational strategy issues,
- Project phasing,
- Procurement,
- Freight,
- Funding,
- Legal issues, and
- Required agreements

Recommendations for a process or processes that can be utilized by the County to consider the impacts of alternative technologies on life cycle costs will be the outcome of this task.
To ensure coordination and consistency with other initiatives, the existing ITS Strategic Plan for Northeastern Illinois, encompassing the Chicago metropolitan area, the existing ITS-Midwest Priority Corridor Program Plan and Architecture, and the Illinois Statewide ITS Strategic Plan, among other documents will be referenced.

DELIVERABLES

- Will County ITS Opportunities Plan
- Multiple electronic copies of all project deliverables

Task 4 – Project Management, Administration, and Quality Assurance/Control

Performance of all project management, administration, and internal coordination activities (e.g., invoices, monthly progress reports, team and client coordination and communications) required for a successful project. Quality Assurance / Quality Control activities included in this task.

DELIVERABLES

- Prepare and submit monthly invoices
- Prepare and submit monthly progress reports including an updated status report on the project schedule & budget.

Project Contact

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