REQUEST FOR COST PROPOSAL

FOR SERVICES TO CONDUCT THE

CITY OF WATERTOWN PAVEMENT MANAGEMENT SYSTEM
DEVELOPMENT STUDY

THE SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

IN CONJUNCTION WITH

WATERTOWN, SOUTH DAKOTA

AND THE FEDERAL HIGHWAY ADMINISTRATION

June 19, 2015
Request for Proposal for
Watertown Pavement Management System Development

The South Dakota Department of Transportation (SDDOT) in conjunction with Watertown, South Dakota and the Federal Highway Administration (FHWA) is soliciting proposals to develop a methodology and system for pavement condition data collection and analysis of the street system of Watertown, South Dakota.

Background:

Understanding how road pavements age and deteriorate over time, both by environmental conditions and traffic loading, are critical in developing a sustainable street rehabilitation and maintenance program. Maintaining and rehabilitating infrastructure at appropriate times saves public dollars in the long term. Studies have found maintaining pavement through rehabilitation techniques has the potential to be 6 to 14 times more cost effective than rebuilding a deteriorated road. Rehabilitation and maintenance plans will be developed to ensure continued success of the transportation system in Watertown.

Study Advisory Team:

A Study Advisory Team has been formed to guide the study through completion. The Study Advisory Team is comprised of representative parties of the SDDOT, Watertown, and the FHWA. Members of the Study Advisory Team are:

Rob Beynon  City of Watertown – Street Department  Doug Kinniburgh  SDDOT – Local Government Assistance
Sarah Caron  City of Watertown - Engineering  Blair Lunde  SDDOT – Project Development
Steve Gramm  SDDOT - Project Development  Luke Muller  First District
Ryan Hartley  First District  Ray Tesch  City of Watertown – Information Technology

Additional team members may be added as the study progresses.

Study Expectations:

The study is expected to fulfill the following objectives:

1. Complete a condition assessment of Watertown’s street system.

2. Develop feasible solutions to address the needs determined that meet current design standards and/or traffic level of service expectations under both the current and predicted future traffic conditions while promoting a livable community that will enhance the economic and social well-being of Watertown residents.

3. Create final products for use by Watertown and the SDDOT which will provide guidance to implement recommended improvements.
Area of Study:

The study area encompasses all of the streets under the jurisdiction of the City of Watertown, South Dakota indicated in red on the following map.
**Scope of Study:**

The Study Advisory Team believes the study needs to include, but not be limited to, the following tasks:

1) **Kick Off Meeting:** The consultant shall facilitate a meeting with the Study Advisory Team to confirm expectations and to finalize the work plan.

2) **Methods & Assumptions:** The consultant shall facilitate a meeting to determine the assumptions to be used during the course of the study. Resulting from that meeting, the consultant shall develop a Methods and Assumptions Document in accordance with the Method and Assumptions Template for SDDOT Planning Studies.

3) **Literature Review:** Review literature, including SDDOT’s and other Local Governments’ experience pertinent to other pavement management systems.

4) **Agency Review:** Review information available from documentation and interviews with Watertown City staff to gain familiarity with Watertown’s existing street management and maintenance procedures.

5) **Existing Condition Assessment:** The consultant shall recommend and/or develop a system to assign a pavement condition rating to each street segment. Upon acceptance of the rating system, the consultant shall collect the initial data collection. The consultant shall develop a documented user manual so that Watertown city staff can update the data collection in future years. City staff shall be invited to ride with the consultant's evaluation team as they are doing the street condition survey to learn the system while it is being developed.

The data shall be collected as to be easily aggregated to match up with the City's applicable street segments. This task also includes creating GIS maps showing all the conditions on all streets evaluated. Paved streets will be the focus of this effort, but built databases should be able to accommodate expansion in the future to include other City assets such as gravel streets, trails, signs, public parking areas, etc.

6) **Pavement Management System Development:** In consultation with Study Advisory Team and other State and City personnel, the consultant shall develop a pavement management system at a level that can be sustainable by the City of Watertown. This shall include the following:

   - Development of performance (life-cycle) curves for all pavement types found within Watertown’s street network. The curves should be expressed in terms of individual distress and composite indexes, and should be based on expert judgements supported by existing data available.
   - Construction of comprehensive maintenance, preservation, rehabilitation, and reconstruction strategies based on decision trees or other appropriate methods. The decision trees shall be specifically prepared for the City of Watertown’s use but may be loosely based on existing decision trees used by the SDDOT or other state and local transportation authorities. Average Annual Daily Traffic (AADT) shall be included within the decision tree matrixes.
Identify costs, selection criteria, and expected improvements for each treatment considered. Existing pavement widths and other criteria may be added into the decision matrix in order to weed out inappropriate improvements considering potential safety and highway standards.

- Development of a composite pavement health index, and/or an overall health index shall also be generated and potentially used in the decision tree process and/or may be used as one of the high level reporting metrics.
- Development recommendations for pavement management policies, procedures, and software design consistent with the City of Watertown’s technical and organizational requirements.
- Provide interim reports and appropriate documentation, and make presentations to the Study Advisory Team describing the findings of above tasks which shall include how existing pavement conditions were identified using what methods.
- Provide and install operational software which incorporates the developed performance curves, decision trees, and treatment strategies and costs, which provides full pavement management functions. This shall include database management, analysis of pavement performance, selection of maintenance, preservation, rehabilitation, and reconstruction alternatives, optimized investment strategies, and graphic representation of results. Software must have the capability to easily link to the City’s GIS. Software and the pavement management system shall be used by one primary user and two secondary users at the City of Watertown and/or First District with the potential of having multiple “viewer” applications with limited functionality.
- Develop all documentation necessary in the form of a user’s manual and provide training in the use of the manual and installed software. Expert advice and recommendations shall cover which strategies are appropriate for the City of Watertown, which are not, and which may be beneficial to add in the future as the system and personnel evolves. These strategies shall define the difference between reactive and preventative treatments which may include crack sealing, crack leveling, rut filling, sand seals, chip seals, micro-surfacing, milling, overlays, major rehabilitation, full depth recycling and/or surface replacement, and reconstruction. The user manual shall also clearly describe how to optimize the system using a variety of funding levels and outcome goals.

7) Study Advisory Team Meetings: The consultant shall have a minimum of three (3) meetings with the Study Advisory Team for study coordination. The first (kick-off) meeting should be held within 30 days of the beginning of the study. The second meeting should be held during Task 4 or 5. The third meeting should be held during Task 6. Other meetings will be held as deemed necessary.

8) Project Deliverables: The consultant shall provide the following items to the SDDOT contact person:

- Study Updates in word processing format (Microsoft® Word compatible) or as Portable Document Format (Adobe® .pdf) of the study’s progression due August 15, 2015, October 15, 2015; December 15, 2015, February 16, 2016, and April 15, 2016. If the study completion date needs to be extended, study
updates will be expected around the 15th of every other month beginning on June 15, 2016, until submittal of the draft final report.

- An ESRI ArcMap GIS Data Package. All data collected should be provided as part of GIS Data Package. This package should also include all maps created as part of this study.
- An electronic copy, in word processing format (Microsoft® Word compatible) or as Portable Document Format (Adobe®.pdf) of the draft user manuals, reports and executive summary.
- An electronic copy, in word processing format (Microsoft® Word compatible) as well as Portable Document Format (Adobe®.pdf), of the complete final user manuals, final report and the complete executive summary.
- Twenty (20) printed copies of the final report and executive summary.
- Two (2) printed copies of all final user manuals.
- Copies of any pertinent working papers and electronic files created during the project.

After the Study Advisory Team’s review of the draft reports, the SDDOT’s contact person will advise the consultant as to its acceptability and will request any changes that may be desired. It should be anticipated that multiple drafts of the final report may be needed before final acceptance. The executive summary and final report shall be due to SDDOT’s contact person seven (7) days prior to the study’s completion date.

Available Information:

The following will be made available to aid the selected consultant in performing the study if the consultant deems them needed:

- Existing vehicular traffic data.
- Available construction plans
- Available GIS data.

Many of these documents are available on the SDDOT’s website, www.sddot.com for review during proposal preparation. Information regarding the availability of specific GIS and/or traffic data from the state can be obtained from Mr. Rocky Hook at 605-773-4404 or rocky.hook@state.sd.us. Information regarding the availability of specific data from the City can be obtained from Sarah Caron at 605-882-6202 or scaron@watertownsnd.us.

Proposal Deadline:

12:00 pm (Noon) CDT, July 10, 2016

Proposal is to be submitted to:

Steven Gramm, P.E.  
SDDOT – Project Development  
700 East Broadway Avenue  
Pierre, SD  57501-2586,
The consultant must submit nine (9) hard copies and 1 electronic (Portable Document Format (Adobe®.pdf) preferred) of their proposal to this RFP. The selected consultant shall provide a final Portable Document Format (Adobe®.pdf) version.

Proposals must remain valid for at least 90 days after submittal. The SDDOT will not acknowledge receipt of proposals unless a stamped, self-addressed post card is included in the proposal package.

**Anticipated Start Date:**

August 1, 2015

**Anticipated End Date:**

July 29, 2016

**Funds Available:**

$100,000
Proposal Guidelines and Requirements:

Each proposer must demonstrate in their proposal that they have the professional capabilities needed to accomplish this study. The proposal should contain all information relevant to indicate the consultant team’s abilities to successfully complete this study and give the study advisory team a better understanding of the consultant team’s qualifications.

At a minimum, the proposal should contain the following:

- **Statement of Study Approach:** Describe the approach the consultant proposes to accomplish the study.

- **Proposed Study Team Members:** Provide a written description of the consultant team composition, including disciplines, primary role in regards to the study, and relevant experience. The information provided must clearly indicate the consultant team’s point of contact, the team leader for the study (if different) and the responsible party in each firm who will be providing the required professional experience.

  Provide a table showing the number of person-hours (not percentages of time) that will be devoted to each task by consultant team members. List the names of principal investigators and other key professionals who will be involved. Support personnel may be identified by classification. If subcontracting is necessary, include subcontractors' key personnel and support staff in the table. Clearly identify subcontractors' involvement.

  Describe current commitments to other work in sufficient detail to permit assessment of each consultant team member's ability to meet the proposal's commitments. Include a statement that the level of effort proposed for principal and professional members of the study team will not be changed without written consent of SDDOT.

- **Individual Experience:** Provide a description of the background of key members of the consultant team and their specific participation in previous projects that would directly relate to the work planned to be done for this study. This may be done in descriptive text or in resume format.

- **Study Schedule:** Provide a graphic or text calendar to define the proposed study schedule for tasks and set milestone dates.
• Budget: Show the estimated cost for the entire study by SDDOT fiscal year. SDDOT's fiscal years run from July 1 through June 30. A sample budget is shown below.

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Notes: 1. May be included with Overhead / Indirect Costs, Must be in accordance with 48CFR Part 31
2. Must be in accordance with 49CFR Part 1B
3. Only if normally treated as a direct cost

If the proposal includes effort by subcontractors, a similar budget table must be included for each subcontractor.

Out-of-state travel, which is defined as travel between the consultant's base and destinations other than South Dakota, must be identified separately. All travel between the consultant’s home base and South Dakota should be recorded as in-state travel.

Indirect costs listed in the budget must be substantiated if and when the proposal is selected. Prior to the first contract payment, the successful proposer must submit documentation supporting the bases and rates used to calculate indirect costs by the prime contractor and each of the subcontractors. Examples of indirect cost schedule formats can be found in Chapter 9 of the AASHTO Uniform Audit & Accounting Guide located at: http://audit.transportation.org/.

Total funding should not exceed the amount indicated as "Funds Available" on the Request for Proposal. This amount represents what SDDOT feels the study merits and what level of funding should be necessary to complete the work. Proposers should set the scope and depth of study accordingly. Because of budget constraints, additional funding is highly unlikely. No budget expansions should be anticipated.
Proposal Evaluation:

Proposals will be evaluated by the Study Advisory Team. Selection will be made by the advisory team in consideration of:

- the proposer’s demonstrated understanding of the issues;
- the merit of the proposed approach to the study;
- the probability of success in the achieving the study’s objectives;
- the proposer’s record of accomplishments in related areas;
- the adequacy of the proposer’s staff and facilities;

The SDDOT will afford equal opportunity to all those who submit proposals and will not discriminate in its selection of consultants on the grounds of race, sex, color, physical handicap or national origin.

Proposers should anticipate being notified of the results of the selection process in writing no later than August 31, 2015.

Ownership of Proposals:

All proposals submitted become the property of the South Dakota Department of Transportation. SDDOT has the right to use all information presented in any proposal, unless it is annotated as being proprietary. SDDOT considers all information contained in proposals as privileged and reserves the right to maintain its confidentiality. Selection or rejection of a proposal does not affect these rights. SDDOT reserves the right to reject any and all proposals submitted. SDDOT may, under certain conditions, negotiate with the proposer to address specific weaknesses in a submitted proposal.

SDDOT is not responsible for any costs incurred by proposers, including proposal preparation, prior to execution of a contract.

Questions should be submitted to:

Steve Gramm, P.E.
SDDOT – Project Development
700 East Broadway Avenue
Pierre, SD 57501-2586
Phone (605) 773-6641
Email steve.gramm@state.sd.us.