



**University Transportation Research Center
RFP Cover Sheet**

Title: Road Weather Information System (RWIS) Statewide Implementation Plan.

Proposal Number: C-11-54

Sponsor: NYSDOT

Date Issued: August 25, 2011

RFP Closing Date: October 19, 2011 @ 5:00 PM

(Submit through the UTRC Online Submission System at www.utrc2.org)

Questions & Answers on NYSDOT RFP for Study C-11-54 are included on Page 7

If you plan to apply:

Please contact Penny Eickemeyer at peickemeyer@utrc2.org to let us know you are assembling a proposal. We will make sure you receive any additional information that becomes available about this RFP.

Proposal submission guidelines:

Please submit your proposal electronically to UTRC at www.utrc2.org. All proposals must include the UTRC cover page (<http://www.utrc2.org/research/assets/Technical-CoverSheet.doc>)

Funding available:

Up to \$150,000 is available from NYSDOT. Facilities and Administrative Costs (or Indirect Costs) charged by academic institutions are included in the above amount. In addition, USDOT (UTRC) will provide up to \$35,000 in matching funds for requested funding above the NYSDOT budgeted amount. To the extent possible, we request that PIs identify sources of in-kind funding from their home institution (e.g., tuition waiver/reductions, overhead cost-sharing, faculty release time, etc.)

Budget forms can be downloaded at

<http://www.utrc2.org/research/assets/budget-Template.xls>

For questions about this proposal, please contact:

Deborah L. Mooney, Director
Research & Policy Studies Section, 6th Floor
New York State Department of Transportation
50 Wolf Road
Albany, NY 12232

For questions about budget preparation, contact: Penny Eickemeyer, peickemeyer@utrc2.org

**New York State Department of Transportation
Request for Proposals
August 25, 2011**

**SPR Project # C-11-54: Road Weather Information System (RWIS)
Statewide Implementation Plan**

PROBLEM STATEMENT

The NYSDOT has a very limited network of RWIS stations in various states of disrepair. A comprehensive plan is needed for the upgrade (if appropriate) and expansion of that network to serve current operational needs and to support a future Maintenance Decision Support System (MDSS) currently under development in a separate project.

OBJECTIVES

The goal of this project is to develop a detailed plan for the deployment of a statewide Road Weather Information System (RWIS) to support both current NYSDOT operations and NYSDOT's future use of a Maintenance Decision Support System (MDSS). The objectives are as follows:

1. To document the current condition of NYSDOT's existing RWIS network.
2. To document data needs necessary to support a statewide MDSS.
3. To document availability of data beneficial to an MDSS from various existing "third party sources" (e.g. NWS, Clarus, NYS Thruway, FHWA Connected Vehicle initiative, etc.)
4. To identify upgrades (if appropriate) and expansions to the NYSDOT RWIS network needed to support current operational data needs and future MDSS data needs.

PROPOSED TASKS

Task descriptions are intended to provide a framework for conducting the project. NYSDOT is seeking the insights of proposers on how best to achieve the project objectives. Proposers are expected to describe project work plans that can realistically be accomplished within the constraints of available funds and project period. Proposals must present the proposers' current thinking in sufficient detail to demonstrate their understanding of the issues and the soundness of their approach to meeting the project objectives.

Possible Tasks:

- Literature review of current RWIS, MDSS and Connected Vehicle technologies
- Interviews with NYSDOT staff
- Review of current, limited NYSDOT RWIS station configurations
- Review of Meridian's Maintenance Decision Support System (MDSS) computer model and data requirements
- Review of best practices of 2 other state DOTs considered to be leaders in the use of RWIS to support a MDSS
- Analysis of New York State meteorological zones and current weather and surface condition data sources
- Design of a statewide RWIS network to best support an MDSS model for use by NYSDOT operations.

PROJECT DELIVERABLES

- A statewide deployment plan for RWIS sites and perhaps mobile RWIS equipment showing the approximate geographic locations and sensor/equipment arrays needed to support current operational needs and a future MDSS implementation.
- Final Report summarizing all tasks, findings, conclusions, recommendations, and implementation strategy.

URGENCY / EXPECTED BENEFITS

It is expected that an efficient and effective RWIS network used in conjunction with a proven MDSS model will help the Department achieve significant operational savings while maintaining acceptable levels of service, particularly in the winter months. Estimates of reductions in the range of 5% to 10% in winter maintenance overtime labor and materials costs would yield annual savings of approximately \$4 million to \$8 million.

PROJECT PERIOD

12 months

FUNDING

\$ 150,000 has been budgeted for this project, exclusive of administrative fees. New York State believes this is a reasonable estimate for the total cost of the work being requested.

The net cost to New York State is one of the selection criteria. When compared to competing proposals, a proposal that requires fewer New York State dollars will receive a higher score on the cost component of the selection criteria. The value of New York State funds required could be reduced through efficiencies (fewer hours per task and / or lower cost per hour) or through cost-sharing where other funds substitute for New York State funds.

Proposals with a New York State cost over the budgeted amount will also be considered, provided the New York State cost, exclusive of administrative fees, does not exceed the budget estimate by more than 10%. (Note: Cost-sharing funds may increase the total project cost further.)

If a sufficient number of potential Principal Investigators indicate in writing that they believe the research cannot be reasonably conducted within these funding constraints and there are only a limited number of proposals submitted within the funding constraints, New York State reserves the option of not proceeding with the work or revising the budget estimate and issuing a new Request for Proposals. Potential Principal Investigators who believe the budget estimate is unreasonable should write to:

Deborah L. Mooney, Director
Research & Policy Studies Section, 6th Floor
New York State Department of Transportation
50 Wolf Road
Albany, NY 12232

SPECIAL NOTES

- **Proposals are due by close of business, Wednesday, October 19, 2011.** This Request for Proposals is being offered to the University Transportation Research Center (UTRC) members only. Members should submit proposals through the Administrator of this research consortium. The receipt of an electronic PDF copy of the proposal by NYSDOT on or before the above due date is satisfactory, providing hard copies follow within a week.
- **Nine (9) hard copies** of the proposal should be provided.
- Proposals should indicate direct and indirect costs, hourly rates and hours by task, travel costs, and material costs to assist NYSDOT in understanding how the total cost for the work was estimated. The winning proposal will result in a fixed cost contract based on the details provided in a supporting detailed budget.
- Please provide a Budget Chart which shows for each task the deliverable and cost. Task headings in the Budget Chart are to match the scope task headings.
- Please include a Gantt Chart, showing the duration (start to finish) for each task in terms of months (i.e. Month 1, Month 2, etc) since the actual start date is an estimate. This can be combined on one page with the Budget Chart.
- If the proposal involves a joint venture or sub-consultants, it must be clear as to how tasks will be distributed or shared in the scope of work.
- The Principal Investigator is required to submit quarterly project status reports to the NYSDOT Project Manager, as specified in the Task Assignment.
- The Principal Investigator is required to submit all project task deliverables, first, in draft formats for review and comment by the NYSDOT Project Manager and Technical Working Group (TWG). The Principal Investigator is required to revise draft task deliverables, based upon comments, as needed, and re-submit to the NYSDOT Project Manager for review. Upon acceptance by the NYSDOT Project Manager, the Principal Investigator is required to submit draft task deliverables to the NYSDOT Project Manager in final formats, as specified in the Task Assignment.
- The final report on the results of the study is to contain, at a minimum, the information described in Attachment A, *Requirements for the Final Report*.
- Principal Investigators should be familiar with and follow the requirements of New York State with regard to the *Compliance Procurement Lobbying Law* and consultant contract procurement. Information can be found on the NYSDOT website under Business Center / Doing Business with NYSDOT / Consultants / Non-Architectural Engineering Information / Active Solicitations: <https://www.nysdot.gov/main/business-center/consultants>
- **The designated contact for this solicitation is Deborah L. Mooney.** Questions seeking clarification on the RFP will be accepted up to three (3) weeks prior to the due date for proposals and should be e-mailed to: dmooney@dot.state.ny.us

CRITERIA FOR SELECTION

- **Expertise / Understanding / Approach (Weight: 70%)**

Expertise: What is the extent of the relevant expertise of the Principal Investigator? What is the extent of the relevant expertise of others who will be involved in the research?

Understanding of the Problem: Does the proposal reflect an understanding of the problem and its relevance to New York State? Does the proposal reflect an understanding of existing data and the current state of knowledge in New York State?

Approach: Is the proposed approach clear, especially in how it will build upon and enhance the state of knowledge in New York State? Will it yield the deliverables called for in the RFP? Does the approach show insight that will lead to results that will sufficiently assist New York State in addressing the problem? Is the proposed approach practical given the schedule and total budget? Will the proposed research draw upon all critical sources of pertinent information?

- **Investigator's Previous Experience with Similar Projects (Weight: 10%)**

Successful completion of previous projects by the Investigator(s) will be considered. These projects should be in the area of expertise required for successful completion of this project, such as meteorology, modeling of weather and surface conditions, understanding of New York State meteorological zones and current weather and surface condition data sources within New York State.

- **Cost to New York State (Weight 20%)**

The lower the New York State cost, the greater consideration a proposal will receive.

Requirements for the Final Report

Copies of Final Report – **Fourteen (14) hard copies** of a bound, final report is required at the conclusion of the study. An electronic PDF copy of the final report is required, as well. In addition to the final report, a one page document, summarizing the project and project findings, shall be provided for technical transfer purposes. This is required in PDF format only.

Required Organization for the Final Report

Title Page (front cover) - that contains:

- The SPR Project ID number (C#) assigned by the Research & Policy Studies Section of the Policy & Planning Division;
- The name of the SPR-funded study as stated in the Task Assignment (contract);
- The words “Final Report;”
- The date (month & year) the final report is completed;
- The name(s) of the Consultant(s) / Principal Investigator(s), along with the name(s) of the organization(s) they represent and their address(es); and,
- If the final report has a security classification, it shall be noted on the title page.

Disclaimer (inside cover) - as follows:

DISCLAIMER

This report was funded in part through grant(s) from the Federal Highway Administration, United States Department of Transportation, under the State Planning and Research Program, Section 505 of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the United States Department of Transportation, the Federal Highway Administration or the New York State Department of Transportation. This report does not constitute a standard, specification, regulation, product endorsement, or an endorsement of manufacturers.

Form DOT F 1700.7 – complete the standard form entitled *Technical Report Documentation Page* used throughout the country to summarize federally-funded transportation research

Table of Contents

Executive Summary - a non-technical summary of the research and its findings

Introduction – a discussion of the problem, its background, and a concise history of research previously completed on the topic, and a discussion of what NYSDOT policies, procedures, and practices are currently in place related to the research topic.

Research Method – a description of the methods used in conducting the research

Findings and Conclusions – a discussion on the analysis of the data (findings) and the conclusions reached based on the findings. Suggestions for additional research, if appropriate, would appear in this section.

Statement on Implementation – a brief discussion on what would need to occur to introduce the results into practice, and a discussion on possible technology transfer activities

Appendices – as appropriate

**Questions on NYSDOT RFP for Study C-11-54
Road Weather Information System (RWIS) Statewide Implementation Plan**

Q1. How many RWIS sites does NYSDOT currently have and where they are located?

A1. There are approximately 37 RWIS sites statewide and the attached pdf gives a listing of their locations.

