

**CHECKLIST TO DESIGNATE AREAS OF EVALUATION
FOR REQUESTS FOR PROPOSAL (RFP)**
Research Administration University Use Only

MDOT PROJECT MANAGER Tim Croze		JOB NUMBER (JN) n/a	CONTROL SECTION (CS) n/a
DESCRIPTION Evaluating the Use of Tow Plows in Michigan			
MDOT PROJECT MANAGER: Check all items to be included in RFP WHITE = REQUIRED GRAY SHADING = OPTIONAL		CONSULTANT: Provide only checked items below in proposal	
Check the appropriate Tier in the box below			
<input type="checkbox"/> TIER I (\$25,000-\$99,999)	<input checked="" type="checkbox"/> TIER II (\$100,000-\$250,000)	<input type="checkbox"/> TIER III (>\$250,000)	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Understanding of Service
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Organizational Chart
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Quality Assurance/Quality Control
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location: The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.
N/A	N/A	<input type="checkbox"/>	Presentation
N/A	N/A	<input type="checkbox"/>	Technical Proposal (if Presentation is required)

The prime consultant must be a Michigan university. The prime consultant/vendor is responsible for the successful completion of the service and is expected to perform at least 40 percent of the services, by dollar value. The basis of payment is Actual Costs as defined in standard MDOT contracts.

If your organization is interested in providing services, please indicate your interest by submitting a proposal following the research guidelines near the top of MDOT's Request for Proposals Web page at http://www.michigan.gov/mdot/0,1607,7-151-9625_32842---.00.html.

RFP SPECIFIC INFORMATION

Problem Title: **Evaluating the Use of Tow Plows in Michigan**
OR Number: 14-006

This is Best Value Selection which means the budget amount submitted with the proposal is a component of the proposal score, not the determining factor of the selection.

PROPOSAL SUBMITTAL INFORMATION

PROPOSAL AND BID SHEET EMAIL ADDRESS –	PROPOSAL DUE DATE	TIME DUE
mdot-rfp-response@michigan.gov with a CC to mdot-research@michigan.gov	11/26/12	Noon, EST

GENERAL INFORMATION

Any questions relative to the Research Problem Statement must be submitted by e-mail to:

mdot-research@michigan.gov. Questions must be received by 5 business days prior to the RFP due date at 5:00 p.m. EST. All questions and answers will be placed on the MDOT RFP Web site as soon as possible after receipt of the questions and at least three (3) days prior to the due date listed above. The names of organizations submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal.

MDOT AND RESEARCH FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION:

5100D- Request for Proposal Cover Sheet

Research Proposal Budget Form Worksheet Appendix D

Schedule of Research Activities Form- Appendix B

Deliverables Table- Appendix A

Initial Implementation Plan Form- Appendix C

5100J- Consultant Data and Presignature sheet is required for signatory on this proposal

**NOTIFICATION
MANDATORY ELECTRONIC SUBMITTAL**

Proposals submitted for this project must be submitted electronically.

The following are changes to the Proposal Submittal Requirements:

- Eliminated the Following Requirements:
 - Safety Program
 - Communication Plan
 - Past Performance as *a separate section*
 - Separate section for DBE Statement of goals. Include information in Qualification of Team section

- Implemented the Following Changes:
 - All proposals require an Organization Chart
 - Resumes must be a maximum of two pages
 - Only Key (lead) staff resumes may be submitted
 - Tier III proposal reduced from 19 to 14 pages
 - Forms 5100D, 5100I, and 5100G combined – 5100D
 - Forms 5100B and 5100H combined – 5100B
 - RFP's will be posted on a weekly basis -- on Mondays

The following are Requirements for Electronic Submittals:

- Proposals must be prepared using the most current guidelines
- The proposal must be bookmarked to clearly identify the proposal sections (See Below)
- For any section not required per the RFP, the bookmark must be edited to include “N/A” after the bookmark title.
Example: Understanding of Service – N/A
- Proposals must be assembled and saved as a single PDF file
- PDF file must be 5 megabytes or smaller
- PDF file must be submitted via e-mail to MDOT-RFP-Response@michigan.gov
- MDOT's requisition number and company name must be included in the subject line of the e-mail. The PDF shall be named using the following format:
 - Requisition#XXX_Company Name.PDF
- MDOT will not accept multiple submittals
- Proposals must be *received* by MDOT on or before the due date and time specified in each RFP

If the submittals do not comply with the requirements, they may be determined unresponsive.

The Consultant's will receive an e-mail reply/notification from MDOT when the proposal is received. Please retain a copy of this e-mail as proof that the proposal was received on time. **Consultants are responsible for ensuring the MDOT receives the proposal on time.**

****Contact Contract Services Division immediately at 517-373-4680 if you do not get an auto response****

Required Bookmarking Format:

- I. Request for Proposal Cover Sheet Form 5100D
 - A. Consultant Data and Signature Sheet, Form 5100J (if applicable)
- II. Understanding of Service
 - A. Innovations
- III. Qualifications of Team
 - A. Structure of Project Team
 - 1. Role of Firms
 - 2. Role of Key Personnel
 - B. Organization Chart
 - C. Location
- IV. Quality Assurance / Quality Control Plan
- V. Resumes of Key Staff
- VI. Pricing Documents/Bid Sheet (if applicable)

2/14/12

Michigan Department of Transportation

SCOPE OF SERVICE FOR RESEARCH SERVICES

TITLE: Evaluating the Use of Tow Plows in Michigan
OR#: OR14-006
University Only

LOCATION: Statewide

WORK DESCRIPTION: Research on Evaluating the Use of Tow Plows in Michigan

ANTICIPATED START DATE: 3/30/13

ANTICIPATED COMPLETION DATE: 6/30/15

MDOT RESEARCH PROJECT ADMINISTRATION MANAGER:

Andre Clover, P.E.
8885 Ricks Road
Lansing, Michigan 48917
E-MAIL: mdot-research@michigan.gov

GENERAL INFORMATION:

1. PROBLEM TO ADDRESS:

The process of clearing snow and ice from roads is both time consuming and expensive in terms of resources, fuel, and equipment costs. The need exists to continually review current practices to determine a more cost and/or operationally effective method to perform winter operations. One piece of equipment that has recently been adopted by other states to become more effective is the Tow plow. The Tow plow is a trailer mounted snowplow with a 26' blade. Using in-cab controls an operator of a plow truck equipped with a Tow plow can steer the axles and swivel the tongue of the Tow plow into an adjacent lane. There is an in-cab control allowing the operator to lift and lower the blade and most Tow plows are equipped with liquid/solid deicing chemical hoppers which are also controlled from inside the cab. The tow plow operates at any angle up to 30 degrees. At 30 degrees the Tow plow will protrude 13' from the side of a truck. A truck with a 12' front plow and a Tow plow will be able to clear a 25' path.

MDOT is in the process of purchasing a Tow plow and the need exists to evaluate the effectiveness of the Tow plow of removing snow and ice from the roadway. The safety and mobility of the traveling

public also needs to be studied and evaluated as this piece of equipment has the potential to clear 2 lanes of traffic in a single pass, thus, effectively slowing traffic in both lanes to 35 mph or below.

2. RESEARCH OBJECTIVES:

1. Understand the current state of practice for Tow plows across the nation
2. Learn the benefits/draw backs of utilizing a Tow plow
3. Understand the most effective and efficient use of Tow plows in Michigan
4. Development of training materials for operators on the safe and effective use of Tow plows

3. IMPLEMENTATION BENEFIT TO MDOT:

The results of this project will be used to help make decisions on future purchases of Tow plows and, if purchased, the safest and most effective areas to deploy Tow plows. MDOT will benefit by having increased knowledge of the current state of practice for utilizing Tow plows. We will also benefit from having a detailed cost benefit analysis when considering future purchases and a comparison of the effectiveness of a Tow plow during winter operations as compared to a traditional truck and wing setup.

4. DESIRED QUALIFICATIONS IN AN INVESTIGATOR(S):

Knowledge of winter operations and equipment, capability to perform cost/benefit analysis, and experience at developing training programs

CONSULTANT RESPONSIBILITIES:

1. Perform a survey of winter weather states to determine which states utilize Tow plows, survey is to investigate items such as type of road the Tow plow is used on, truck configuration (horsepower, hydraulic capacity and type of valves, hitch plate capacity, salt distribution method on the truck, and lighting configuration of Tow plow and truck).
2. Compare the effectiveness of a Tow plow to a traditional truck/wing plow setup during several winter events, comparison should include items such as; time to meet level of service, route cycle time, mobility of public during plowing operations, etc.
3. Provide a cost benefit analysis of utilizing a Tow plow vs. a traditional truck/wing plow setup including cost to purchase equipment, any additional costs for modifications to our current winter maintenance truck, maintenance of equipment, amount of materials being used, etc.
4. Develop recommendations for MDOT management as to the safest and most effective areas to utilize Tow plows.
5. Develop training materials for operators on the safe and effective use of Tow plows as well as a recommendation for changes to the current winter maintenance truck specification to accommodate a Tow plow.

Failure of any of the above will be found in noncompliance with the contract.

DELIVERABLES:

Cost benefit analysis, training materials, recommendation for best locations to deploy Tow plows

MDOT RESPONSIBILITIES:

MDOT will provide maintenance expense data, winter operations information including guidelines, policies, procedures, etc

COORDINATION PROCEDURES

Work will be completed in compliance with the Research Implementation Manual

CONSULTANT PAYMENT

All billings for services must be directed to the Department and follow the current Research Implementation Manual. This document contains instructions and forms that must be followed and used for billing. Payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract with the Consultant.

Direct expenses, if applicable, will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted with the billing for all eligible expenses on the project in accordance with the Reimbursement Guidelines. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this project.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT project manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the priced proposal submitted by the Consultant and must have prior written approval by the MDOT project manager.

Compensation for services will be reimbursed on actual cost basis.

PROPOSAL INFORMATION AND SCORING

Formal proposals are required and shall include the information as outlined in these Guidelines. This section is the information required in the proposal that will be used to score the qualifications of each consultant's proposal. The section numbering correlates to the score sheet. Therefore, the consultant should format their proposals consistent with the outline provided.

1. UNDERSTANDING OF SERVICE: 40 POINTS

Describe understanding of the service intended to be proposed. This information is to be based on the scope of services.

Problem Statement and Background Summary- demonstrates good understanding of problem, looks objectively at problem, specifies problem limits and restricts scope appropriately, and cites relevant literature.

Research Plan- cites specific objectives clearly, technical approach responds to all written and implied requirements, difficult areas are identified and details to overcome are given, represents novel idea or technical approach, plan is feasible, and effort is consistent with scope of problem.

Products and Implementation- proposal clearly defines products to be delivered at completion, includes practical, realistic implementation plan.

MDOT Involvement- MDOT involvement is not excessive and is clearly defined and quantified.

2. **QUALIFICATIONS OF TEAM: 30 POINTS –**

Describe the structure of the project team including the roles of all key personnel and subcontractors. For each subcontractor describe role in service and include what percent of the task that the subcontractor is expected to provide. Provide résumés for each of the key staff of the prime and subcontractor.

Facilities- proposer has adequate access to equipment and/or laboratory required in study.

Staffing- personnel availability is clearly defined, shows a depth of qualified personnel, proposer has ability to manage a project of this size an sufficient resources to complete study, qualifications are directly related to the requirements of the project, plans for specific key personnel assignment included, and there is a reasonable balance between subcontractor and prime contractor.

Required Statistical Qualification- In general, MDOT’s research is in the category of applied research. Regardless what is the primary field of an applied research project, statistical analysis tools are the typical ones for handling the data to conduct applied research. For this reason, the research team must have the needed statistical knowledge and experiences for conducting applied research. The required knowledge level for a research team in statistical analyses, if defined in the RFP under the heading possible investigators, is classified into one of the following four categories:

- Level I: Master Degree or higher in Statistics and working experience in statistical analyses is required
- Level II: Undergraduate degree in Statistics and working experience in statistical analyses is required
- Level III: At least one college series of statistics courses and working experience in statistical analyses is required
- Level IV: at least one college statistics course and working experiences under statisticians is required
- Level V: No statistical analysis

Proposals not documenting statistical training and experience levels required in the RFP may be classified as non-responsive.

3. **RELEVANT PAST PERFORMANCE: 30 POINTS**

The project manager will contact references and review relevant performance evaluations from the past 5 years.

Record of past accomplishment- proposer satisfactorily completed past projects, was cooperative and flexible, and ended past projects according to the original budget and time schedule.

4. QUALITY ASSURANCE/QUALITY CONTROL (QAQC) PLAN: 5 POINTS

The proposer provided an outline of a QA/QC process. The QA/QC Manager is experienced with MDOT standards and practices.

5. LOCATION: 5 POINTS

The percentage of work hours performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activity. The combination of location and percentage of work performed in Michigan should not exceed 5 points.

Percentage of Work To Be Done in Michigan Score	
95% to 100%	5
80% to 94%	4
50% to 79%	3
25% to 49%	2
10% to 24%	1
Less than 10%	0

6. PRICE: 40 POINTS

Cost score is based on the lowest cost proposed divided by the current proposer cost multiplied by 40. Lowest bid shall receive 40 points.

TOTAL POINTS: 150

Research Proposal Budget Form Worksheet

Project Title	
Research Organization	
Date	

									FY1	FY2	FY3	FY4	TOTAL	
SALARIES & WAGES -- MUST COMPLY WITH OMB CIRCULAR A-21														
Specify number of hours to be worked and hourly rate for each individual below: Examples of role of individual are Principal Investigator, Technician, Grad Student, etc. Annual wage increases must not exceed 2%														
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub-Total Salary & Wages									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

FRINGE BENEFITS -- MUST COMPLY WITH OMB CIRCULAR A-21										
Indicate Employee, appropriate negotiated rate for each and description of who the rate applies to. (e.g. - Sam Smith, 25%, Summer Faculty. The rate is negotiated between the university and it's cognizant agency										
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub-Total Fringe Benefits					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SUBCONTRACTOR -- MUST COMPLY WITH OMB CIRCULAR A-21										
A copy of the subcontractor's budget must be attached. An MDOT approved subcontract is required for subcontractor costs in excess of \$25,000 prior to payment of invoices that contain subcontractor work. List all subcontractors on a separate line.										
Subcontractor Name & Amt.										\$0.00
Subcontractor Name & Amt.										\$0.00
Sub-Total Subcontractor					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TRAVEL -- MUST COMPLY WITH OMB CIRCULAR A-21										
Must be in accordance with IDS contract requirements.										
In-State Travel (Destinations within Michigan)										
Provide a separate table itemizing costs.										\$0.00
Out-of-State Travel (Prior approval required)										
Provide a separate table itemizing costs.										\$0.00
Sub-Total Travel					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

SUPPLIES -- MUST COMPLY WITH OMB CIRCULAR A-21 (Few items not allowed are: computers, printers, monitors, fax machines, printer paper, toner cartridges, pens, pencils, legal pads, clips, rubber bands, post-it notes, books, notebooks, binders, folders, diskettes, postage stamps, chairs, office furniture, calendars, paper punches, business cards, staplers, waste cans, etc.)

Provide details if cost exceeds \$2,000. Individual line items in excess of \$1,000 require a detailed explanation regardless of total cost

(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
Sub-Total Supplies										\$0.00

CAPITAL EQUIPMENT -- MUST COMPLY WITH OMB CIRCULAR A-21 - Purchased specifically for this project
List items with a value in excess of \$500. Equipment in excess of \$5,000 requires prior approval.

(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
Sub-Total Equipment										\$0.00

OTHER EXPENSES -- MUST COMPLY WITH OMB CIRCULAR A-21 (Few items not allowed are: memberships in professional & scientific organizations, local telephone lines, cell phones, etc.) Any project expense which does not fall into another category. Provide detailed explanation of the expense and applicable breakdown of costs (e.g. graduate student tuition).

(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
(Description)										\$0.00
Sub-Total Other Expenses										\$0.00

Total Sub-Totals \$0.00 \$0.00 \$0.00 \$0.00 \$0.00

INDIRECT COSTS -- MUST COMPLY WITH OMB CIRCULAR A-21
Indirect cost rates are negotiated between the university and it's cognizant agency. Indicate the type of negotiated indirect rate used and the percentage (e.g. On Campus Research, 52%)

(Type)		(%)								
			FY1	FY2	FY3	FY4				
Enter \$ Amt per FY							\$0.00	\$0.00	\$0.00	\$0.00
Total Indirect Costs							\$0.00	\$0.00	\$0.00	\$0.00

TOTAL PROJECT COSTS										\$0.00
UNIVERSITY MATCHING FUNDS										\$0.00
TOTAL MDOT PROJECT COSTS										\$0.00