



## **GENERAL INFORMATION**

Any questions relative to the Research Problem Statement must be submitted by e-mail to: [mdot-research@michigan.gov](mailto:mdot-research@michigan.gov). Questions must be received by **August 16, 2010 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 ORBP FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION:**

- 5100D – Request for Proposal Cover Sheet
- 5100G – Certification of Key Personnel
- 5100I – Conflict of Interest Statement
- ORBP Research Proposal Budget Form Worksheet
- ORBP Schedule of Research Activities Form
- ORBP Deliverables Table
- ORBP Implementation Project Recommendation Form

**OFFICE OF RESEARCH & BEST PRACTICES  
MDOT RESEARCH PROGRAM  
2010 PROBLEM STATEMENT**



**PROBLEM TITLE**

A Framework for Statewide Roadway Asset Management

ORBP NO.  
OR10-011

STRATEGIC PRIORITY NO.

CRITICAL ISSUE CODE

MDOT PROJECT CATEGORY

**PROBLEM TO ADDRESS**

**BRIEFLY DESCRIBE THE PROBLEM TO BE ADDRESSED AND WHY IT IS AN ISSUE FOR MDOT**

The Transportation Asset Management Council (TAMC) was established by Act 499 of 2004 to provide a uniform process of assessing the condition of Michigan's roads and bridges. In addition, the Act requires that the Michigan Department of Transportation (MDOT), county road commissions, cities and villages report their completed and planned expenditures on these facilities. With this information, TAMC is expected to recommend a statewide asset management strategy to the Michigan Transportation Commission and Michigan Legislature.

The purpose of this study is to develop estimates of the total cost to operate and maintain public roadway facilities in Michigan. This will require the researcher(s) to conduct a sample survey of roadway agencies across the state (MDOT, county road commissions, cities and villages) to determine the cost per mile for a comprehensive list of expenditures including: basic operations (e.g. installation and maintenance of signs, signals, pavement markings, culverts, guardrails, etc.), as well as routine maintenance and capital preventive maintenance activities. Researchers need to collect this information with regard to two major variables: (1) what is currently being spent to maintain facilities and (2) what should ideally be spent to maintain these same facilities in Good to Fair condition. Total cost per mile for both variables will be developed for each of the seven (7) major functional classifications.

Guidance will be provided to the researcher(s) to determine sampling participants (sources of data) at MDOT, county, and city/village levels. In addition, a listing of typical operational, routine maintenance and capital preventive maintenance activities will be provided. Regional boundaries of the state will be identified for sample data collection to ensure statewide representation.

In summary, data will be compiled into a form that enables the TAMC to apply cost per mile figures to statewide total miles in each functional classification category to address two primary questions: (1) what is currently being spent and (2) what should be spent to maintain the statewide network is Good to Fair condition? This data matrix will be constructed in such a way as to permit the annual updating of the cost data. This will permit both TAMC and MDOT to make reasonable and defensible comparisons of expenditures per mile compared to current and projected revenues of both a per mile and total system basis.

**RESEARCH OBJECTIVES AND TASKS**

**LIST THE RESEARCH OBJECTIVE(S) TO BE ACCOMPLISHED**

1. Develop and document the typical cost per mile to maintain and operate roads in Michigan by functional classification, agency type, and geographic location CURRENTLY BEING SPENT.
2. Develop and document the typical cost per mile to maintain and operate roads in Michigan by functional classification, agency type, and geographic region that would be REQUIRED to sustain the roads in a Fair to Good condition.
3. Determine the available revenues per mile to maintain and operate a roads in Michigan by functional classification, agency type, and geographic location CURRENTLY BEING PROVIDED.
4. Provide and compile the above data in a format that can be readily analyzed and updated now and annually thereafter.

**LIST THE MAJOR TASKS TO ACCOMPLISH THE RESEARCH OBJECTIVES:**

**ESTIMATED PERSON HOURS**

- |   |                              |
|---|------------------------------|
| 1. Develop a data matrix of the activities and costs associated with the maintenance and operation of roads in Michigan by functional classification, agency type, and geographic location.   | 400                          |
| 2. Develop a sampling procedure, survey and interview protocols, and collect the needed cost data from the various agencies. Agencies include: state, county (road commissions) and local (cities), etc.  | 116                          |
| 3. Determine the required actual costs (investment) needed to maintain, and operate the roads of Michigan by functional classification, agency type, and in different geographic locations needed to sustain the roadway system in Fair to Good condition.  | 560                          |
| 4. Acquire and compile the data into a matrix type spreadsheet file that can be readily updated with new data, expanded with the miles of roads per category to determine overall system expenditures, needs and projected revenues and a comparison between the figures.   | 320                          |
| 5. Prepare a final research document that includes a summary of research results, deliverables, any pertinent guidelines, and recommendations or actions required (i.e., action plan). Develop a narrated Power Point presentation showing the results of the study. Prepare training materials and PowerPoint that can be presented to decision makers. Develop a marketing strategy for contacting, educating, and informing our stakeholders, politicians and decision makers. | 204                          |
|   | Total estimated hours: 1,600 |

**ESTIMATED COST AND TIMELINE**

ESTIMATE THE COST OF THIS RESEARCH STUDY (Please provide a cost range [min. and max.] associated with the person hours by task above)  
\$100,000 - \$250,000

PROVIDE A PROPOSED TIMELINE FOR THE PROJECT (At minimum, the expected duration of the project)  
12 months

#### BUDGET INFORMATION

(For each FY, list suggested minimum and maximum budgets as targets. Indirect Cost Rate is for ORBP use only.)

TOTAL BUDGET (BY FY)	FY1	FY2	FY3	FY4	INDIRECT COST RATE
\$100,000 - \$250,000					

#### DELIVERABLES

WHAT DELIVERABLES SHOULD BE RECEIVED AT THE END OF THIS PROJECT? (e.g., usable technical product, design method, techniques, training, workshops, report, manual of practice, policy, procedure, specification, standard, software, hardware, equipment, training tools, etc.)

1. Cost data of current expenditures per mile to maintain, and operate roadways by functional classification, agency type, and geographic location.
2. Required cost per mile to maintain and operate roadways by functional classification, agency type and geographic region that needs to be spent in order to maintain the roadway system in a Fair to Good condition.
3. A matrix type electronic spreadsheet capable of being updated for changing costs, capable of showing overall system wide expenditures, and the ability to show the difference between actual expenditures and required expenditures for both the system and individual roads - by activity, functional classification, agency type, and geographic location.
4. A methodology for updating this data file on an annual basis with changes in variable costs.
5. A final research document that includes a summary of research results, deliverables, any pertinent guidelines and recommendations or actions required (i.e. action plan).
6. A narrated Power Point presentation showing the results of the study.
7. Training materials and marketing strategy for decision makers.
8. PowerPoint training for decision makers on next steps.

MDOT INVOLVEMENT (What will MDOT provide for this project and when)

MDOT will assist the researcher in determining the appropriate list of maintenance activities, functional classifications, appropriate contact agencies and potential regional locations. At the beginning of the project (first three months and as needed), MDOT may provide maintenance cost information for comparison purposes.

#### URGENCY, PAYOFF POTENTIAL AND IMPLEMENTATION

DESCRIBE HOW THE PROPOSED RESULTS OF THIS PROJECT CAN BE IMPLEMENTED AT MDOT

Working with TAMC, MDOT would be able to assist with project management and expertise.

DESCRIBE HOW MDOT WILL BENEFIT FROM THE IMPLEMENTATION OF THIS PROJECT AND WHO THE BENEFICIARIES WILL BE. INCLUDE A DISCUSSION OF HOW MDOT DIVISIONS, OTHER THAN THAT OF THE PROBLEM SUBMITTER, WILL BENEFIT AND HOW.

The results of the research are critical to the efforts of TAMC as a whole and individually to MDOT Operations and Planning, county road commissions, cities and villages. The results will enable MDOT and local agencies statewide to better communicate to state and local officials the financial resources needed to efficiently and effectively manage Michigan's streets and highways.

#### POSSIBLE INVESTIGATOR(S)

DESIRED QUALIFICATIONS IN AN INVESTIGATOR

Experience in working with politicians, decision makers and governmental units. Experience in preparing PowerPoint presentations. Experience in preparing training materials. Experience in marketing strategy. Experience with infrastructure budgets and implementation of these budgets.

## **PART VI – PROPOSAL INFORMATION AND SCORING**

**Formal proposals are required 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/vendor’s proposal. The section numbering correlates to the score sheet, Form 5100C. Therefore, the consultant/vendors should format their proposals consistent with the outline provided.

### **1. UNDERSTANDING OF SERVICE: 40 POINTS (REQUIRED)**

Describe your understanding of the service and/or innovations and safety or other issues you intend to propose. This information is to be based on the scope of services.

Include any work item that you believe should be added to the scope of services, or any work item that is in the current scope of services which you believe should be altered. Describe the benefit to the service, the increase/decrease in hours and the increase/decrease to the cost of the research project due to the revision to this work item.

The RFP will indicate if this section is required. If it is not required and the consultant/vendor provides it, no additional points will be added to the scoring.

### **2. QUALIFICATIONS OF TEAM: 30 POINTS (REQUIRED) – All proposals require this section.**

The scoring for qualifications of team scoring will be one score based on the following information:

#### **2.1 Structure of the Project Team (Personnel and Roles)**

Describe the structure of the project team including the roles of all key personnel and subconsultant/vendors. For each subconsultant/vendor, describe role in service and include what percent of the named role that the subconsultant/vendor is expected to provide.

The consultant/vendor is contractually obligated to supply the key personnel proposed for this service. This includes maintaining them at the capacity level proposed. Any change in key personnel or their capacity level must have written approval of MDOT.

If applicable to the service, provide a communication plan of how the service team will communicate services information and resolve issues. Some RFPs may state that a communication plan is required.

## 2.2 Staff Service Experience

Provide resumes for each of the key staff of the prime and subconsultant/vendors. The format shown in Form 1242 may be used for reference. In addition to general resume information, the following information should be provided for service experience that is similar to the service being solicited:

- General description of the service
- Role of person in the service
- Service budget
- Year service was completed
- Name of client (agency or company)
- Role of consultant/vendors in the service (It is not required that the submitting consultant/vendors have a role)
- Name and phone number of person to contact for client
- If the service is a service related to a construction project, provide the route name, limits of construction, construction budget, general description of type of construction

The resume is limited to two pages per key staff member.

## 2.3. Organization Chart (Only include if required in RFP)

If required in the RFP, provide an organization chart of your service team including subconsultant/vendor(s). This chart must include the names of the key personnel selected for this service, their roles on the service, the name of the consultant/vendor by which they are employed, and lines of communication. The RFP may include a list of required key personnel for this service. The organization chart should show the personnel who meet these requirements. Also, indicate the people who will be points of contact with the MDOT project manager.

## 3. PAST PERFORMANCE: 30 POINTS (REQUIRED) – All proposals require this section.

MDOT will review relevant performance evaluations for the past five years for prime and subconsultant/vendors that are being proposed. If the consultant/vendor has not previously worked for MDOT or has only had a few services opportunities that have been evaluated, this area should be used to provide other references for the Selection Team to contact. These would be in addition to those provided in the resumes in Section 2 and are limited to work completed in the past five years by the consultant/vendor.

Consultant/vendors are not required to submit prior evaluations with proposals, but should be aware that MDOT is reviewing prior evaluations.

**4. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN: 5 POINTS (REQUIRED)**

Outline your consultant/vendor’s QA/QC plan for this service. Include background information of your selected QA/QC manager for this service. The person performing the quality control review must have extensive experience with MDOT standards and practices.

**5. LOCATION: 5 POINTS (REQUIRED)**

This section will be scored for all solicitations. The consultant selection criteria will include a consideration of what percentage of the contracted work will be performed in Michigan. Consultant/vendor is required to provide the location of where the work will be performed by prime and/or subconsultant/vendors. The percentage of work performed in Michigan must be listed for prime and/or subconsultant/vendors. The Selection Team will score the percentage of work performed in Michigan on all selections unless the project is for on-site inspection or survey activities. For those services, provide the location of the office(s) and key staff and where the service work will be managed/coordinated (indicating how far key personnel will have to travel to get to the site). If the work will be performed at various locations, provide this information.

As a guideline for the scoring percentage of work performed in Michigan, please use the following:

<u>Percentage of Work To Be Done in Michigan</u>	<u>Score</u>
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 (REQUIRED)**

The total price of the proposal will be scored using a scale determined by the MDOT Selection Team.

**TOTAL POINTS: 150**

**Notification**  
**ARRA MONTHLY EMPLOYMENT REPORTS**  
**Note: This Notification is only applicable for those projects/contracts funded with ARRA funds. If you have questions, please contact MDOT Contract Services Division at (517) 335-0071.**

The American Recovery and Reinvestment Act of 2009 (ARRA), requires states receiving stimulus funds for highway projects to provide monthly reports to the Federal Highway Administration (FHWA) regarding the number of employees of the prime contractors, all-tier subcontractors and consultants on ARRA funded projects.

The cost for complying with this Notification must be borne by the prime contractor, and all-tiers of subcontractors and consultants, as part of their overhead and is deemed to be included in the payments made under this contract.

Within 10 days after the end of each month in which work is performed on this contract, all prime contractors and consultants must provide the Engineer a monthly report on MERS at <https://sso.state.mi.us/> providing employment information on each ARRA project, which will include, for work performed in that preceding month:

- The total number of employees who performed work on this contract.
- The total number of hours worked by employees who performed work on this contract.
- The total wages of employees who performed work on this contract.

*Prime Consultants are responsible for reporting on all subconsultants' employment information in MERS, as the sub consultants will not have access to do so.*

In addition, the prime contractor must provide a total payment amount made to any subcontractor who is a certified DBE in that preceding month.

This Notification shall be included as a part of each subcontract executed by the prime contractor, and all-tiers of subcontractors and consultants.

If necessary to conform to guidance provided by FHWA concerning the ARRA reporting requirements, the prime contractor, and all-tiers of subcontractors and consultants will revise their reporting as directed by the Engineer.

**Failure to comply with the reporting requirements under ARRA would jeopardize the Department's continued receipt of ARRA funding.**

**Accordingly, if a contractor or any-tier of subcontractor or consultant fails to comply with this Notification, the Department may withhold contract payments until compliance is achieved. If the Department is compelled to incur costs because of such a breach, the amount of those costs may be deducted from payments otherwise to be made under this contract. Additional sanctions may include reduction or elimination of prequalification ratings and removal of bidding privileges.**

**NOTIFICATION  
REQUIRED CONTRACT PROVISIONS TO IMPLEMENT AMERICAN  
RECOVERY AND REINVESTMENT ACT (ARRA) SECTIONS 902 AND 1515**

**Note: This notification is only applicable for those projects/contracts funded with ARRA funds. If you have questions, please contact MDOT Contract Services Division at (517) 335-0071.**

In accordance with requirements under section 902 of the American Recovery and Reinvestment Act of 2009 (ARRA), the following language is made a part of this contract and is to be made a part of all tier subcontracts or consultant contracts:

The U.S. Comptroller General and his representatives have the authority:

- (1) To examine any records of the contractor or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or subcontract; and
- (2) To interview any officer or employee of the contractor or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions.

The Comptroller General and his representatives have the authority and rights provided under Section 902 of the ARRA with respect to this contract. As provided in section 902, nothing in section 902 shall be interpreted to limit or restrict in any way any existing authority of the Comptroller General.

In accordance with the requirements of section 1515(a) of the ARRA any representatives of the Inspector General have the authority:

- (1) To examine any records of the contractor or grantee, any of its subcontractors or sub-grantees, or any State or local agency administering such contract, that pertain to, and involve transactions relating to the contract, subcontract, grant, or sub-grant; and
- (2) To interview any officer or employee of the contractor, grantee, sub-grantee or agency regarding such transactions.

Nothing set forth in section 1515 of the ARRA shall be interpreted to limit or restrict in any way any existing authority of an inspector general.