

## REQUEST FOR PROPOSAL

The Michigan Department of Transportation is seeking professional services for the project contained in the attached Research Problem Statement.

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](http://www.michigan.gov/mdot/0,1607,7-151-9625_32842---,00.html).

---

### RFP SPECIFIC INFORMATION

Problem Title: Review and Revision of Overload Permit Classification

ORBP Number: OR10-010

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

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER <b>8</b>	PROPOSAL DUE DATE <b>March 19, 2010</b>	TIME DUE <b>5:00 PM, EST</b>
---	--	---------------------------------

---

### PROPOSAL AND BID SHEET MAILING ADDRESSES

Mail the multiple proposal package to:

Calvin Roberts, P.E., Engineer of Research and Best Practices

First Class Mailing Address

Michigan Department of Transportation  
Office of Research and Best Practices  
P.O. Box 30050  
Lansing, Michigan 48909

OR Overnight/Express Services Address

Michigan Department of Transportation  
Office of Research and Best Practices  
425 West Ottawa  
Lansing, Michigan 48933

---

Mail one additional copy of the proposal to the Contracting Office indicated below.

First Class Mail:

ORBP Contract Administrator  
Contract Services Division  
Michigan Department of Transportation  
PO Box 30050  
Lansing, MI 48909

OR Lansing Overnight Mail:

ORBP Contract Administrator  
Contract Services Division  
Michigan Department of Transportation  
425 W Ottawa  
Lansing, MI 48933

---

### BUDGET

Tier I  
(\$25,000 - \$99,999)

Tier II  
(\$100,000 - \$250,000)

Tier III  
(>\$250,000)

---

### 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 **March 12, 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**

Review and Revision of Overload Permit Classification

ORBP PROBLEM STATEMENT REF # OR "NEW"  
OR10-010

CRITICAL ISSUE CODE  
7 - INFRASTRUCTURE

MDOT PROJECT CATEGORY  
a. Bridges & Structures

**PROBLEM TO ADDRESS**

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

MDOT allows trucks that exceed our legal loads to cross bridges if they apply for a permit. More than 30,000 permits have been processed each year since 2002, providing a vital service to Michigan's economy. However, the permitting system must be robust enough to ensure that the safety of the motoring public is maintained without unduly restricting commerce. In order to process these requests, the Bridge Operations Unit (BOU) in the Construction and Technology Division classifies all bridges, and the Transports Permits Unit (TPU) of the Real Estate Division classifies the truck and then compares the two results. The computer program and methodology used to classify both bridges and trucks was last reviewed and modified in 1991. Since that time, changes have occurred in the business practices of each Division. A new method of bridge design and analysis has been adopted by the Federal Highway Administration (FHWA), the Michigan Department of Transportation (MDOT) and the BOU. Load and Resistance Factor Rating (LRFR) will be required for analysis of new structures beginning in October 2010. This method replaces Load Factor Rating (LFR), which is anticipated to remain the method for existing structures. Additionally, a new program for processing permits has been adopted by the TPU.

Currently, structures are placed into Overload Class by checking all service limit states as identified by the 2005 MDOT Bridge Analysis Guide with 2009 Interim Updates (BAG) and the 2008 American Association of State Highway and Transportation Officials (AASHTO) Manual for Bridge Evaluation (MBE). The method of analysis 20 vehicle configurations are checked, as identified by the BAG. Vehicles are placed into Overload Class by comparing the maximum moments of the vehicle for span lengths between 15-ft to 160-ft to the moments produced by the 20 standard permit configurations mentioned previously and given by the BAG. Additionally, gage spacings greater than 8-ft are allowed to carry additional load as identified by the BAG. The formula given in the BAG was based on LFR distribution factors and does not account for LRFR. Structures that do not apply to this constraint are marked as Restricted by the BOU and TPU and require a specific analysis, increasing the turn around time for the client and the analysis cost incurred by the BOU. Additionally, vehicles may be restricted from routes based on span lengths that are not present on the route, which leads to increased turn around time for the client and additional analysis cost incurred by the BOU.

The current process must be examined to identify deficiencies including but not limited to the 20 standard vehicle configurations, additional limit states (shear, etc), the effect of different load configurations required by the multiple codes and different span configurations. A new process will be recommended that maintains the reliability of the system and allows for efficient transportation of goods. This process must take into account business practice which requires a quick turn around of permit applications. It must also provide a methodology that could be implemented by local agencies as permits are not limited to state owned routes. Software will be developed to replace the program developed in 1991. This software must operate as a standalone program and be capable of editing by third party developers for inclusion in other programs used by the department and include API (Application Program Interface) documentation.

**RESEARCH OBJECTIVES AND TASKS**

LIST THE RESEARCH OBJECTIVE(S) TO BE ACCOMPLISHED

1. Review current Overload Permitting procedure from the structure and vehicle perspective. Compare this procedure to current National Best Practices, MDOT and local agency business needs, and reliability of the system.
2. Create an interim report summarizing the current method, identifying deficiencies of the current procedure and proposing a method to be approved by MDOT.
3. Create a software program to replace the current BridgeOv program that addresses all vehicle and structural variables outlined in the problem statement.
4. Educate MDOT staff and Local Agency Bridge Owners.

LIST THE MAJOR TASKS TO ACCOMPLISH THE RESEARCH OBJECTIVES:

ESTIMATED PERSON HOURS

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. 1a. Review current Overload Permitting procedure from the structure and vehicle perspective. Interview key MDOT staff.</li> <li>1b. Verify the deficiencies noted by in Task 1a and the impact of the deficiencies by comparing the current process to a sample of the MDOT bridge inventory taking into account factors including but not limited to: year of construction, functional classification, material type and design loading. A research database with standard MDOT structures is available for use with the AASHTOWare Virtis program.</li> </ol> | <p>1a. 80 hours</p> <p>1b. 240 hours</p> |
| <ol style="list-style-type: none"> <li>2. Submit draft interim report identifying areas of current process that require improvement. As part of this report, develop an action plan to create a proposed process for MDOT</li> </ol>  | <p>2. 240 hours</p>                      |

Overload Permitting. The action plan should outline how the proposed process will impact current practice and the implementation of the proposed process.

- 3. 3a. Incorporate MDOT comments from Task 2. Develop the software tool for implementation of the proposed process. 3a. 240 hours
- 3b. Test and verify the software 3b. 80 hours
- 3c. Verify the proposed process against the review performed in Task 2. 3c&d. 240 hours
- 3d. Provide software documentation of coding for possible future edits and third party developers including API documentation.
  
- 4. Prepare material and give a minimum of two training sessions for MDOT staff and Local Agencies Bridge Owners on use of the software tool and the proposed process. 4. 80 hours
  
- 5. Prepare Final Report including proposed revisions to the BAG for the process as modified in task 3a 5. 80 hours

**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)

PROVIDE A PROPOSED TIMELINE FOR THE PROJECT (At minimum, the expected duration of the project)  
 May 2010 to May 2011

**BUDGET INFORMATION**

(For each FY, list suggested minimum and maximum budgets as targets for RFP posting)

TOTAL BUDGET(BY FY)	FY1	FY2	FY3	FY4	INDIRECT COST RATE
---------------------	-----	-----	-----	-----	--------------------

**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.)  
 Overload Software Tool - a stand alone software tool is needed, coding documentation for software tool, Final Report, Training Material including software training manual, Proposed Revisions to the BAG.

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

Responds to questions regarding current practice, provides research database of subset of MDOT bridges for use with AASTHOWare Virtis, reviews and comments on proposed action plan, software and training sessions. Provides location for training and notifies stakeholders of training.

**URGENCY, PAYOFF POTENTIAL AND IMPLEMENTATION**

DESCRIBE HOW THIS PROJECT WILL BE IMPLEMENTED AT MDOT

This project will be implemented at MDOT by both the Bridge Operations Unit in the Construction and Technology Division and the Transport Permits Unit in the Real Estate Division. It will also be presented as a recommended practice for local agencies.

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.

MDOT will benefit from the implementation of this project by maintaining reliability of the bridge network while meeting National Bridge Inspection Standards, AASHTO and FHWA requirements regarding load rating of permit vehicles. This will benefit local agencies by educating them about a permitting tool. Industry will benefit by quicker MDOT response time on permit requests.

**POSSIBLE INVESTIGATORS**

DESIRED QUALIFICATIONS OF AN INVESTIGATOR

Investigators should consist of an individual or team of individuals having experience with LFR and FRFR codes, software design (bridge or structural software design is preferred), AASHTOWare Virtis database.

## **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.