

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

	REQUISITION NUMBER		DUE DATE XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX
MDOT PROJECT MANAGER	JOB NUMBER (JN)	CONTROL SECTION (CS)	
DESCRIPTION			
MDOT PROJECT MANAGER: Check all items to be included in RFP WHITE = REQUIRED GRAY SHADING = OPTIONAL Check the appropriate Tier in the box below		CONSULTANT: Provide only checked items below in proposal	
<input type="checkbox"/> TIER I (\$25,000-\$99,999)	<input type="checkbox"/> TIER II (\$100,000-\$250,000)	<input type="checkbox"/> TIER III (>\$250,000)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Understanding of Service
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Organizational Chart
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team
Not required as part of Official RFP	Not required as part of Official RFP	<input type="checkbox"/>	Quality Assurance/Quality Control
<input type="checkbox"/>	<input 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 p=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)
3 pages (MDOT Forms not counted) (No Resumes)	7 pages (MDOT Forms not counted)	14 pages (MDOT forms not counted)	Total maximum pages for RFP not including key personnel resumes. Resumes limited to 2 pages per key staff personnel.

PROPOSAL AND BID SHEET EMAIL ADDRESS – mdot-rfp-response@michigan.gov

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least five (5) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors 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 FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet

5100J – Consultant Data and Signature Sheet (Required only for firms not currently prequalified with MDOT)

(These forms are not included in the proposal maximum page count.)

REQUEST FOR PROPOSAL

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest (Consultant/Vendor Selection Guidelines for Services Contracts” and “Guideline for Completing a Low Bid Sheet(S)*, if a low bid is involved as part of the selection process. **Reference Guidelines are available on MDOT’s website under Doing Business > Vendor/Consultant Services >Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

BUREAU OF HIGHWAYS BUREAU OF TRANSPORTATION PLANNING OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS
 NO YES DATED _____ THROUGH _____

<input type="checkbox"/> Prequalified Services – See page ____ of the attached Scope of Services for required Prequalification Classifications.	<input type="checkbox"/> Non-Prequalified Services – If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT’s Office of commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed. Form 5100J is required with Proposal for firms not currently prequalified with MDOT
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Qualifications Based Selection – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the section team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor’s job-order accounting system.

Qualification Review / Low Bid – Use Consultant/Vendor Selection Guidelines. See Bid Sheet instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted. The vendor that has met established qualification threshold and with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

Best Value – Use Consultant/Vendor Selection Guidelines, See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

Low Bid (no qualifications review required – no proposal required.) See Bid Sheet Instructions below for additional instructions.

BID SHEET INSTRUCTIONS

Bid Sheet(s) must be submitted in accordance with the “Guidelines for Completing a Low Bid Sheet(s)* (available on MDOT’s website). Bid Sheet(s) are located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the email address: mdot-rfp-response@michigan.gov. Failure to comply with this procedure may result in your bid being rejected from consideration.

**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
DESIGN SERVICES**
“As-Needed” Safety Inspection of In-Service Bridges

CONTROL SECTION: 84900

JOB NUMBER: 108205

PROJECT LOCATION: Various - The bridges for this project are situated in various locations statewide. The majority of the structures are located remotely in the North and Superior Regions of MDOT. See the STRUCTURE LIST for specific locations.

DESCRIPTION OF WORK:

To perform “as-needed” inventory, in-service bridge safety inspections, load ratings, and scour evaluations on structures owned by the Michigan Department of Natural Resources (MDNR) in accordance with National Bridge Inspection Standards (NBIS). This is termed “Bridge Inspection.”

**** Up to 2 firms may be selected**

PRIMARY PREQUALIFICATION CLASSIFICATION:

Bridge Safety Inspections

SECONDARY PREQUALIFICATION CLASSIFICATION:

Bridge Load Rating Analysis
Hydraulics

ANTICIPATED SERVICE START DATE: 12/3/2012

ANTICIPATED SERVICE END DATE: 12/3/2015

DBE REQUIREMENT: N/A

MDOT PROJECT MANAGER

Rich Kathrens, P.E.
Bridge Safety Inspection Engineer
6333 Old Lansing Rd.
Lansing, Michigan 48917
Office: (517) 322-5715
Fax: (517) 322-3385
E-mail kathrensr@michigan.gov

PURPOSE

In accordance with the Code of Federal Regulations 23-CFR-650, subpart C, each bridge within the state of Michigan is periodically inspected following the Federal Highway Administration (FHWA) NBIS. For the bridges identified on the STRUCTURE LIST, an Initial inspection, Load Rating Analysis and Scour Evaluation will be performed by a qualified consultant. As part of the initial inspection, all inventory forms shall be completed, and existing plans should be gathered for a complete bridge file. There are several steps in the process of this work and there may be a need for follow-up action.

The deliverable for this authorization will be the “Bridge File.” This bridge file will have several components as noted below and will be attested to be accurate and complete by a professional engineer, registered in the State of Michigan.

DURATION & SCHEDULE

Project Schedule

By submittal of the priced proposal, the CONSULTANT is verifying that they can meet the schedule identified in this scope of work. The CONSULTANT is required to develop a project schedule for the inspection, load rating, and scour evaluation of the bridges shown on the attached STRUCTURE LIST. The Project Schedule must be submitted in the form of a Gantt Chart also showing the meeting dates as milestones.

Any changes to the schedule must be submitted to the MDOT PM for approval prior to the change. Failure to progress in alignment with the schedule will be considered as failing to meet the terms of this authorization and may result in the cancellation of the contract.

The CONSULTANT must be prepared to begin the field inspection work within one week after receiving the notice to proceed.

Project Dates

See Section V-D, Meetings for a description of the CONSULTANT’s responsibilities.

Priced Proposal Submission:	December 10, 2012
Anticipated NTP:	January 15, 2013
Complete Inventory and Inspection of MDNR Bridges in STRUCTURE LIST	June 1, 2013
Complete Load Ratings and Scour Evaluations of MDNR Bridges in STRUCTURE LIST	September 1, 2013
Project Close Out Meeting	TBD

STAFF QUALIFICATION REQUIREMENTS

By meeting the prequalification requirements for this project the CONSULTANT will insure that the staff performing the tasks related to the specific service prequalification meets the minimum qualifications as outlined in the MDOT’s “Consultant Prequalification Application Instructions”. The CONSULTANT will also meet the qualification requirements of the NBIS 650.309.

The CONSULTANT must have the QTL present on site during the NBI inspection to fulfill the requirements of the contract. The CONSULTANT is required to have as many teams as necessary to complete the inspections, load ratings, and scour evaluations by the required dates.

At a minimum the CONSULTANT will provide lead project team members who will provide the following roles on this project:

Project Manager: Administrative manager with authoritative control over the inspection teams and demonstrated MDOT project management experience. The Project manager will be with the primary contact with MDOT PM.

Bridge Safety Inspector(s): Qualified team leader(s) (QTL) completing the “routine” bridge safety inspections.

Quality Control Engineer: A licensed professional engineer charged performing the quality control tasks during the bridge safety inspection and load rating phases.

Load Rating Engineer: A licensed professional engineer charged with the overall responsibility for load rating.

Hydraulic Engineer: A licensed professional engineer charged with the overall responsibility of scour evaluations.

If there any approved team members listed above that are unable to finish the work of the entire project, suitable replacement members meeting those specific qualifications must be submitted to the PM, otherwise the authorization may be terminated. The CONSULTANT shall submit additional QTL(s) and PE(s) for approval with the initial submission of the proposal. However, if any one person identified in the proposal is rejected by MDOT, the entire proposal will be considered non-responsive and rejected.

The CONSULTANT can submit additional personnel to assist with completing the tasks listed in each phase (See section Description of Work).

GENERAL DESCRIPTION OF THE WORK

Bridge safety inspections, load ratings, and scour evaluations are done to insure the safe use of the structures by the motoring public. To accomplish this, the National Bridge Inspection Standards (NBIS), AASHTO *Manual for Condition Evaluation of Bridges* and, the *Bridge Inspection Reference Manual* are to be used as guidance to complete the inspections and provide necessary information. Additional guidance documents and manuals are listed in the appendix.

This project has been separated into three major phases; Inventory & Inspection, Load Rating Analysis, and Scour Evaluation. The phases are listed below with a summary of the major items of work for each phase. The procedures of this project must be in accordance CFR 650.313 Inspection Procedures. Each of these phases must be completed for successful completion of the project.

The STRUCUTRE LIST provided contains structures owned by Michigan Department of Natural Resources (MDNR). These structures have been preliminary evaluated by MDOT to

verify that they meet the requirements to be included in the National Bridge Inventory. These structures are typically located in remote locations.

I. Inventory & Inspection

The tasks listed below shall be complete for all structures listed in the STRUCTURE LIST

A. Bridge File

The original documents assembled and created during the Bridge Safety Inspection, Load Rating Analysis, and Scour Evaluation will be submitted in individual manila file folders labeled with the bridge id.

A copy of all the documents created by the Bridge Safety Inspection, Load Rating Analysis, and Scour Evaluation will be assembled in a binder and presented under cover of a letter stating that the inspections have been performed in accordance with this scope of services, and that all appropriate procedures and guidelines have been followed. This letter will also have the professional registration seal of the Consultant PM.

This project consists of completing the initial inventory and inspection. Data and plans may exist for these structures within the MDNR Management Units. The Consultant will research the MDNR District offices to verify the existing data. Coordination and contact information with the MDNR will be provided by the MDOT PM.

- a. If no existing plans can be located, the consultant will be responsible to prepare and provide sketches in MicroStation of bridge geometry information typically found on the General Plan of Structure Sheets.
- b. The CONSULTANT will prepare bridges file in accordance the AASHTO Manual of Bridge Evaluation (MBE). At the completion of the project the bridge files will contain the minimum information for each bridge inventoried, inspected, load rated and evaluate for scour: Plans, Structure Inventory & Appraisal Information, Bridge Safety Inspection Report, Work Recommendations, Photos, Stream Bed Cross Sections, Load Rating Assumption/Summary Sheets and Scour Evaluations.
- c. The information collected for the bridge file will also be provided electronically. The CONSULTANT QTL(s) must register with the MDOT to gain access to the Michigan Bridge Inspection System (MBIS) and the Michigan Bridge Reporting System (MBRS). Please contact Rich Kathrens (517) 322-5715, kathrensr@michigan.gov to gain access to these web applications. The QTL's name will appear on all inspection documents.

Information, such as plans, photos, calculations, etc. that cannot be entered into the MBIS/MBRS system will be assembled in electronic folders according to the Structure Number. The Structure Folders will contain the minimum subfolders: Inspection, Load Rating, Plans, and Hydraulics. This information will be provided to MDOT on a CD.

B. Field Inspection

The Consultant team will visit each bridge site and perform an inspection according to the NBIS description for a “Routine” inspection. This will be done with a visual inspection and non-destructive tests (NDT). Several reports, described below, will be completed by the QTL while performing this inspection.

- a. Structure Inventory & Appraisal (SI&A)
 - i. MDOT will provide a primary SI&A sheet. The Consultant will review and update the information on the SI&A during the project with the most current information. This information will be updated electronically using MDOT’s web based Michigan Bridge Inspection System (MBIS).
- b. Bridge/Culvert Safety Inspection Report (BSIR, CSIR)
 - i. The Consultant QTL will observe all of the bridge components and record their ratings. The Consultant will provide judgment ratings using MDOT’s BSIR Rating Guidelines and will provide comments which justify the ratings. This information will be updated electronically using MDOT’s web based Michigan Bridge Inspection System (MBIS).
 - ii. NBIS sets a maximum of 24 months between inspection intervals. It is the responsibility of the Consultant QTL determine the inspection frequency and notify the MDOT PM when a frequency is to be changed. The Bridge Inspection Frequency Guidelines will assist the Consultant QTL in setting the frequencies.
 - iii. If there is an area of concern that requires traffic control or special inspection / testing, the Consultant must notify the MDOT PM with a “Request for Action” (RFA) form. See “Request for Action” below. Traffic control is not required as a part of this scope.
 - iv. The Consultant QTL will perform a scour inspection around all structural elements that are located in water up to six feet deep utilizing the wade/probe or the boat/probe methods. The conditions found for scour will be reported on the BSIR. The portions of the substructure elements in water over six feet will be inspected by a diver under a separate scope.
- c. Work Recommendations Report
 - i. Work Recommendations Report is the communication of the inspector’s judgment of the need for maintenance or rehabilitation work necessary to keep the structure in service. The Work Recommendations Report will be completed using MBIS.
- d. Stream Bed Cross Section Report
 - i. The CONSULTANT will record the elevation of the stream bed with reference to an established datum on this form. These measurements must be taken at locations along the length of the bridge spans that are over a stream or river bed, upstream and downstream and recorded on the “Stream Cross Section Report”.

- This information must be compared to the previous data and design drawings in the form of a graph.
- ii. The data collected must be entered electronically on a Stream Bed Cross Section form, and the hard copy will be placed in the Bridge File.
- e. Photographs and Posting Document
- i. Photographs must be taken and submitted as part of the Inspection Report to document the current elevation and profile views of the bridge and any unusual conditions. The photographs must be digital images printed paper and captioned with a description of what the photo is showing. A copy of the electronic files will also be submitted in jpeg format on CD with the Inspection Report
 - ii. Bridges that are load posted must have a picture taken of the load posting sign with the bridge in the background. This picture will be stapled to the SI&A form and submitted to the MDOT PM.
- f. Request for Action Report (RFA)
- Unusual circumstances or situations that could effect the continued safe operation of the bridge will be communicated immediately. The CONSULTANT QTL must determine whether the bridge can safely remain in service until the next inspection date with no further observations required. **The CONSULTANT will notify, via phone, the MDOT PM for any situations that require immediate actions, such as partial or complete bridge closure.**

The CONSULTANT QTL will be given a list of all of the 24 hour emergency responders for MDOT at the pre-inspection meeting for use when structural deterioration warrants emergency closure of the structure.

Communication of these situations is accomplished formally by using a RFA. The CONSULTANT must properly complete this form and deliver it to the MDOT PM in a timely manner to ensure this communication takes place.

- i. The Consultant will complete the RFA and submit it to the MDOT PM. The Consultant will also note on the BSIR General Notes section that an RFA was submitted for this structure
- ii. The CONSULTANT will also prepare spreadsheet which tabulates all the RFAs that were submitted as part of this project. The spreadsheet will provide the structure number, a brief description for the RFA and the status of the RFA.

II. Load Rating Analysis

The NBIS requires that all bridges have an initial load rating calculated, and the rating re-evaluated when the condition or loading of the bridge has changed. Deterioration of structural components over time may get to the point where the structure may have to be load restricted. It is the Inspection QTL's responsibility to assess the overall condition of the structure, render a judgment as to need for a re-evaluation, and document his/her judgment in the general comments section of the BSIR.

The Load Rating analysis consists of bridges and culverts, including calculating the Federal Inventory, Federal Operating, and Michigan Operating Load Ratings, Load Posting requirements and Overload Class. Should the initial rating determine that load posting or Overload Class reduction is necessary, more detailed analyses may be required. Services will be required as directed by the MDOT Project Engineer Manager; durations of time will be established at the time of request.

- A. The Consultant shall rate each bridge using the Virtis software wherever possible. The bridges shall be modeled using the "Girder System" method where the complete framing plan is described. The structure typical section shall be completely modeled as well. The Load Factor or Load and Resistance Factor method shall be used. The input into the Virtis program should reflect any significant deterioration indicated by the BSIR or the field inspection. The following ratings shall be computed:
 - a. The Inventory Rating (NBI Item 66)
 - b. The Federal Operating Rating (NBI Item 64)
 - c. The Michigan Operating Rating (MDOT Item 64M), in US tons - This rating shall be computed using truck selection and distribution factors from the 2005 MDOT Bridge Analysis Guide with Interims for LFR and as per MDOT Research Report R-1511 for LRFR.
 - d. Based on the load rating analysis, the Consultant will recommend the correct coding for the following:
 - i. Structure Open, Posted, or Closed (NBI Item 41)
 - ii. Bridge Posting (NBI Item 70)
 - iii. Operating Rating Method (NBI Item 63)
 - iv. Inventory Rating Method (NBI Item 65)
- B. If the structure is unable to be modeled using the Virtis software due to limitations of the software, then the CONSULTANT shall rate the structure using hand calculations or other software once approved by the MDOT Project Engineer Manager. The items required in (A) of this scope of work will need to be completed using this alternate method.
- C. The CONSULTANT shall notify the MDOT Project Manager **immediately** if the structure requires reductions to the load posting on the SI&A form. After MDOT Project Manager review, the MDOT Project Manager may ask the consultant to develop detailed explanations for any structures requiring any change to load posting.
- D. The CONSULTANT shall deliver the following electronic and printed output to the MDOT PM for each bridge analyzed:

- a. Load Rating Assumption and Summary Sheet - Any assumptions made in the analysis (material properties, section losses, etc.) shall be listed. Non-redundant or fracture critical structures/elements should be identified on the assumption sheet. These sheets will be completed using MDOT's Michigan Bridge Reporting System (MBRS).
- b. Any hand calculations, spreadsheets, etc. used to determine input into Virtis. If formulas are hidden, a brief description of the procedure should be included. Where possible, this information shall be printed as a *.pdf from the program used rather than scanned. Scanned images will be accepted as *.pdf when necessary.
- c. Virtis exported *.xml file, Virtis program output (where inputted into Virtis) - This will be limited to that which directly documents the ratings and shall be limited to 50 sheets per structure, although as few sheets as possible is preferred. Intermediate output sheets that do not directly document the ratings may be omitted.
- d. Other program input and output (where Virtis cannot be used) - This will be limited to that which directly documents the ratings and shall be limited to 50 sheets per structure, although as few sheets as possible is preferred. Intermediate output sheets that do not directly document the ratings may be omitted.

III. Scour Evaluation

Every bridge over a waterway, whether existing or under design, will be evaluated as to its vulnerability to scour in order to determine the prudent measures to be taken for its protection.

- C. Existing Bridges. All existing bridges over waterways should be evaluated for the risk of failure from scour during the occurrence of a super flood on the order of magnitude of a 500-year flood. (See HEC 18, Chapter 5.)
 - a. An initial screening process should identify bridges susceptible to scour and establish a priority list for evaluation. (See HEC 18, Chapter 5.)
 - b. Bridge scour evaluations should be conducted for each bridge to determine whether it is scour critical. A scour critical bridge is one with abutment or pier foundations which are rated as unstable due to:
 - i. observed scour at the bridge site or
 - ii. a scour potential as determined from a scour evaluation study. (See HEC 18, Chapter 5.)
 - c. The procedures in Chapter 5 of HEC 18 should be followed in conducting and documenting the results of scour evaluation studies.
 - d. At the completion of the scour evaluation the Consultant will make recommendations on the coding of SI&A Item 113, Scour Criticality.
- D. Scour Critical Existing Bridges. A plan of action should be developed for each existing bridge determined to be scour critical. (See HEC 18, Chapter 5.)
 - a. The plan of action should include instructions regarding the type and frequency of inspections to be made at the bridge, particularly in regard to monitoring the performance and closing of the bridge, if necessary, during and after flood events. (See HEC 18, Chapter 7.)

- b. The plan of action should include a schedule for the timely design and construction of scour countermeasures determined to be needed for the protection of the bridge. (See HEC 18, Chapter 7.)
- c. Scour action Plans will be entered using MDOT's web based application (MBIS).

Meetings

The following meetings are anticipated during this project. Each meeting is expected to take ½ day for the CONSULTANT QTL(s) to attend the meeting, including travel and ½ day to complete the associated paperwork. The meeting location will be agreed upon between the MDOT PM and CONSULTANT. The expected dates for these meetings are shown below; however, these may be adjusted as mutually agreed to by the MDOT PM and the CONSULTANT.

Anticipated NTP:	January 15, 2013
Project Kick-off Meeting:	January 22, 2013
Progress Meetings: (First week of the months listed)	March 2013 May 2013 July 2013 September 2013
Project Closeout Meeting:	TBD

For all of the periodic meetings listed, the CONSULTANT will prepare an agenda and submit it to the MDOT PM prior to the meeting. The CONSULTANT will also keep notes of the meeting and provide "Meeting Minutes" within one week after the meeting.

Pre-Inspection Meeting: This meeting is intended to exchange information regarding the general procedures for communication, review the schedule, discuss emergency procedures and communication, and discuss any open questions to that point before the first inspection begins.

Progress Meetings: The CONSULTANT QTL(s) will meet with the MDOT PM on a regular basis as determined at the pre-inspection meeting to review the progress of the inspections and to submit the draft inspection reports from the previous period.

The CONSULTANT will include a copy of all the non-emergency Request for Action forms completed during the previous inspection period and will review these in the meeting with the MDOT PM.

The QTL(s) and the MDOT PM will review the QA reports and the Consultant's QC records and determine if any changes are necessary to the CONSULTANT's procedures.

Project Closeout Meeting: This meeting is intended as a review of any outstanding contract requirements and final presentation of the deliverables. The completed "Consultant Performance Evaluation" form will be given to the CONSULTANT and reviewed.

Project Quality Control

The CONSULTANT will submit a project quality control plan with their proposal that will accomplish at a minimum the following:

- A. Confirm that all QTLs and PEs have the required documents and certificates to substantiate their qualifications.
- B. Confirm that the inspection process and load rating procedures meet the requirements of the NBIS.
- C. Review 10% of the completed work to insure that all reports are complete, accurate, and consistent.

Administrative Reports

In addition to the inspection reports above, the following administrative reports are required.

Monthly Progress Reports
CONSULTANT Quality Control reports

These reports must be completed and submitted to the MDOT PM at the Status Meetings. This information will be used by the MDOT PM to compare progress of the inspections with the schedule.

Responsibilities of MDOT

The following activities and information will be provided by the MDOT PM, where applicable, to the CONSULTANT.

- A. Provide the Consultant with access to MDOT's web based applications, Michigan Bridge Inspection System (MBIS) and the Michigan Bridge Reporting System (MBRS). Assign the structures for data entry.
- B. Coordinate access with the MDNR to the hard copy bridge files which have:
 - a. Previous design plans and calculations
 - b. Previous Inspection reports
 - c. Previous stream bed cross section reports.
 - d. Previous work recommendations.

Coordinate access for the CONSULTANT to any pertinent information in the bridge files and database that may be necessary to complete the inspection. See Section VII-D, **Release of Information**, for restrictions on dissemination of the material.

The MDOT PM will perform QC evaluations with the CONSULTANTS on ten percent of the structures inspected.

PAYMENT SCHEDULE:

Compensation for this Scope of Services shall be on an **actual cost plus fixed fee** basis.

CONSULTANT PAYMENT:

Compensation for this project shall be on an **actual cost plus fixed fee** basis. This basis of payment typically includes an estimate of labor hours by classification or employee, hourly labor rates, applied overhead, other direct costs, subconsultant costs, and applied fixed fee.

All billings for services must be directed to the Department and follow the current guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's website. 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. Typically, billings must be submitted within 60 days after the completion of services for the current billing. The final billing must be received within 60 days of the completion of services. Refer to your contract for your specific contract terms.

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 Region Engineer/Bureau Director and 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 Region Engineer/Bureau Director and the MDOT Project Manager.

This scope is for "as needed" services. As such, the hours provided are only an estimate. The Consultant will be reimbursed a proportionate share of the fixed fee based on the portion of the authorized total hours in which services have been provided to the Department. **The fixed fee allowed for this project will be 11.0%**. Fixed fee on "as needed" projects is computed by taking the percent of actual labor hours invoiced to labor hours authorized, then applying that percentage to the total fixed fee authorized.

GENERAL

Personal Safety Equipment

The CONSULTANT will be required to provide all personal safety equipment for those people working in the field. Some of the required items are hardhats, safety shoes, safety vests, gloves, safety harnesses, eye protection, etc.

Any person found to not have the required safety equipment will be asked to leave the MDOT right of way. If there are repeated cases of this, the authorization with the CONSULTANT will be terminated.

Inspection Equipment

The CONSULTANT must provide the following equipment as suitable for the inspection of the bridge. The use of this equipment during the inspection is considered part of the Lump Sum price.

- A. Inspection Vehicle
The CONSULTANT will provide a vehicle with high visibility marking and lighting for use during inspection. This vehicle will provide transportation for the inspection staff and the necessary equipment.

- B. Boat
The CONSULTANT is required to have a small boat with a motor available for the purpose of inspecting those bridges which are over water and are too deep to wade. This is typically a small aluminum boat or inflatable Zodiac style of boat with a small motor.

The CONSULTANT will be responsible for insuring the boat is safe for operation and is operated in a safe manner utilizing all required safety equipment.

- C. Computer
The CONSULTANT is required to have a computer with internet connection. A laptop computer for use in the field would be helpful but is not required.

The computer must have access to a printer to print the report documents for the field and the final report.

- D. Non-Destructive Testing (NDT)
The inspection process does not require a lot of testing but spot checking by sounding concrete for delaminations, checking for suspected cracks in steel, and measuring for section loss in areas of heavy corrosion is required. If Non-Destructive Testing is required over live traffic, the CONSULTANT shall contact the MDOT PM. The MDOT PM will arrange for an in-depth inspection. In-depth inspections and traffic control are not a part of this contract.

The following equipment is necessary to perform these tests:

- Calipers and thickness gauges
- Dye penetrant test kit
- Chain drag or sounding rod or hammer

- E. Cell Phone
While in the field, the QTL must have a cellular telephone. The phone numbers must be provided to the MDOT PM at the Pre-Inspection meeting.
- F. Camera
The CONSULTANT must have a digital camera that can clearly record images of pertinent items found during the inspection. One color copy of the pictures must be given to MDOT as part of the Inspection Report along with the electronic file.
- G. Hand Tools
The CONSULTANT must provide the hand tools necessary to complete the inspection. Some of these are ladders, waders, hammers, lighting, marking paint, measuring tapes, etc.

Traffic Control

Traffic control for closing a lane is not required for this project. The inspection is expected to be done from the shoulders or the median. Some safety equipment for working on the shoulder is necessary such as traffic cones, flashers on the vehicles, flexible roll-up sign for “Men Working Ahead”, etc. If the shoulders are too narrow to do the inspection safely, the CONSULTANT is to recommend a supplemental in-depth inspection.

Release of Information

The CONSULTANT may not release any information about the bridge or the Inspection to anyone outside of MDOT. Failure to abide by this stipulation could result in penalties as a result of the Homeland Security Act.

The CONSULTANT is allowed to make copies of only that information in the bridge file as approved during the Pre-Inspection Meeting unless given written approval from the MDOT PM.

References

The Consultant is to have the following reference material and be familiar with their contents.

- National Bridge Inspection Standards (NBIS) Federal Code of Regulations, 23 CFR 650.
- AASHTO Manual for Bridge Evaluation (MBE), Second Editions 2011
- Michigan Structure Inventory and Appraisal Coding Guide, latest edition.
- Pontis Bridge Inspection Manual, latest edition.
- FHWA Publications:
 - Bridge Inspector’s Reference Manual (BIRM), latest edition.
 - Culvert Inspection Manual, Report No. FHWA-IP-86-2.
 - Inspection of Fracture Critical Bridge Members, Report No. FHWA-IP-86-26.
 - Recording and Coding Guide for the Structure Inventory and Appraisal of Nation’s Bridges, Report No. FHWA-PD-96-001, December 95.

Terms and definitions

- The following terms and definitions apply to this Scope of Services
- Bridge Owner (Owner): The person within MDNR responsible for ensuring bridge inspection is completed to the requirements of the Nation Bridge Inspection Standards.
- MDOT PM (Project Manager): The person administering the contract for MDOT.
- CONSULTANT PM (Project Manager): The person responsible for administration of the contract for the consulting firm.
- Inspection Qualified Team Leader (QTL): Person meeting the “team leader” qualifications of the NBIS 650.309 to do bridge inspection.
- NBIS: National Bridge Inspection Standards, 23-CFR-650
- MBIS: Michigan Bridge Inspection System, a web application for the entry of bridge inspection reports.
- MBRS: Michigan Bridge Reporting System, a web application for the retrieval of bridge inspection data.
- Bridge Inspection: Periodic safety inspection of bridge structures to “Routine” standards of the NBIS.

APPENDICES

The following Publications, Guidelines, Bridge advisories, Manuals and Guides can be found at the Michigan Department of transportation, Bridge Operations Webpage http://michigan.gov/mdot/0,1607,7-151-9625_24768---,00.html

Bridge Advisories

Forms and Reports

- Sample Bridge Safety Inspection Report (BSIR), MDOT form 2502
- Sample Structure Inventory & Appraisal (SIA), MDOT form 1717a
- Sample Work Recommendation Form
- Sample CoRe Element Form
- Sample Request for Action Form

Manuals and Guides

- MDOT Bridge Analysis Guide, including Assumption & Summary Sheets.
- MDOT Bridge Inspection Frequency Guidelines.
- MDOT Bridge Deck Repair Matrix.
- MDOT Bridge preservation work activity list.
- MDOT Bridge Scour Cross Section Worksheet.

STRUCTURE LISTING

Facility Carried	Featured Intersection	Bridge Name	County Name	Latitude	Longitude	Year Built	Bridge Length (feet)	Structure Material
N. Deadhorse Rd	Wemers Creek	Wemers Creek	Alger	46.1666	-87.0675		33	Steel / Timber
Whitefish Access Site	Whitefish River	Whitefish River Access	Alger	46.2839	-87.1028		22	Timber
Metser Grade (Star Siding Rd.)	Star Creek	Star Creek	Alger	46.3683	-86.3948	1993	31	Timber
Big Ericks Rd	Huron River	Big Erick's	Baraga	46.8646	-88.0825	1992	73	Timber
Big Bay Rd	Chink's Creek	Chink's Creek	Baraga	46.8502	-88.0565	2010	42	Steel
Old US41	Lateral Creek	Old Highway Bridge	Baraga	46.5696	-88.3029		40	Concrete
Triple A Rd	W.Br. Huron River	W.Br. Huron River	Baraga	46.7436	-88.0272	1998	20	Steel
Craig Lake	High Life Creek	High Life Creek	Baraga	46.6092	-88.1929		31	Timber
River Bend Rd	Amheim Ditch Inl. Str.	Amheim Ditch Inlet	Baraga	46.9180	-88.5206	1975	31	Steel
Trembly Drive	Hatt Creek	The Culverts	Cheboygan	45.5196	-84.4645	1994	45	Steel
Scenic Trail	E. Branch Ausable	Lewiston Grade	Crawford	44.7357	-84.6418	2000	22	Timber
W. Karen Lake Rd	E. Branch Ausable	W. Karen Lake	Crawford	44.7282	-84.6441		31	Concrete
Maki Rd	Friday Creek	Maki Rd	Delta	46.0720	-87.0537	1971	23	Timber
Hazel Swamp Rd	Otter River	Otter River Bridge	Houghton	46.8181	-88.7128	1997	45	Timber
Poyhonen Rd	Misery River	Misery River	Houghton	46.8968	-88.8873	2004	41	Timber
Donken-Tapiola Rd	Small Bear Creek	Small Bear	Houghton	46.9309	-88.7353		20	Timber
State Parkway	Huron River	Placeway	Livingston	42.4955	-83.7345	1978	62	Steel
Murphy Creek Road	Murphy Creek	Davis Bridge	Luce	46.4675	-85.4053		40	Steel
Silver Creek Road	Silver Creek	Silver Creek	Luce	46.3986	-85.6336		29	Timber
Campground Rd.	Shoe-Pac	Shoe-pac	Mackinac	46.1851	-85.8001		26	Timber
Orchard Hill Rd	Hog Island Creek	Orchard Hill	Mackinac	46.0957	-87.6609		20	Steel
Norton Camp Rd	Hendrie River	Norton Camp	Mackinac	46.2189	-85.2125		24	Timber
Black River Falls Rd	Black River	Black River Falls	Marquette	46.3927	-87.7986		32	Steel / Timber
Mead Rd	Ford River	Ford River	Marquette	46.0295	-87.5369		85	Steel / Timber
Escanaba River Rd	Sawmill Creek	Sawmill Creek	Marquette	46.1338	-87.3976		26	Steel / Timber
Uncle Tom Rd	E.Br. Escanaba River	E.Br. Escanaba River	Marquette	46.3666	-87.4538		41	Steel / Timber
Sand River Rd	Sand River	Sand River	Marquette	46.4508	-87.1505		24	Timber
County Rd	Black River	Black River	Marquette	46.4008	-87.8430		20	
Revall Rd	Devils Creek	Devils Creek	Menominee	45.5092	-87.4011	1995	32	
N. Fox Rd	Deer Creek	N. Fox Rd	Menominee	45.5308	-87.3167	2005	24	Concrete
Snakey Lk Rd	Burke Creek	Burke Creek	Menominee	45.3567	-87.8051	1999	32	Concrete
Westman Dam Rd	Hayward Lake Dam	Hayward Dam	Menominee	45.4361	-87.4456	1952	55	Timber
Bowden Rd	N.Br. Thunderbay River	Bowden Rd	Montmorency	45.1514	-84.0283		30	Steel / Timber
Weir Rd	Gamble Creek	Weir Rd	Ogemaw	44.4045	-84.0303	2005	57	Steel / Timber
Ranch Rd	Rifle River	Rifle River	Ogemaw	44.3994	-84.0355	1994	50	Timber
Ranch Rd	Gamble Creek	Gamble Creek	Ogemaw	44.4147	-84.0286	1994	30	Timber
Washburn Rd	Townline Creek	Townline Creek	Roscommon	44.1676	-84.8449		40	Steel
Highwater Truck Trail	Manistique River	Cookson	Schoolcraft	46.0861	-86.0601	1996	150	Timber
Dougal Creek Road	Duck Creek	Shaky	Schoolcraft	46.0948	-86.0624	1992	43	Steel
Mead Creek Campgroun	Mead Creek	Mead Creek	Schoolcraft	46.1825	-85.9869	1992	24	Timber
Forest Road	Hudson Creek	Hudson Creek	Schoolcraft	46.3978	-86.0102		33	Steel
Wegner-Taylor Dam Rd	Wegner-Taylor Dam	Wegner-Taylor Dam	Schoolcraft	46.4899	-86.0842	1982	28	Timber
Gamer Rd	VanHove Tract Access	VanHove	Tuscola	43.6372	-83.6078		69	Concrete