Michigan Department
Of Transportation
5100B (03/12)

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

	REQUISITION NUMBER	DUE DATE	TIME DUE
	956	7/23/2012	noon
MDOT PROJECT MANAGER Karl Hansen	JOB NUMBER (JN) M00230	CONTROL SECTION (CS) 17034	

DESCRIPTION
Load Rating Analysis for Sault Ste. Marie International Bridge

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
☐ **TIER 1 ($25,000-$99,999)**	☐ **TIER II ($100,000-$250,000)**	☑ **TIER III (>$250,000)**	
☐	☐	☑	Understanding of Service
☐	☐	☑	*Innovations*
☐	☐	☑	Organizational Chart
☐	☐	☑	Qualifications of Team
Not required as part of Official RFP	Not required as part of Official RFP	☑	Quality Assurance/Quality Control
☐	☐	☑	**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	☐	Presentation
N/A	N/A	☐	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 _____

☐ **Prequalified Services** – See page 2 of the attached Scope of Services for required Prequalification Classifications.

☐ **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**

☑ **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.**

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

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Michigan Department of Transportation
Sault Ste. Marie International Bridge Administration

SCOPE OF SERVICE
FOR
SPECIALTY SERVICES
BRIDGE LOAD RATING SERVICES
COMPLEX OR UNIQUE STRUCTURES

CONTROL SECTIONS: 17034

JOB NUMBER: M00230

PROJECT LOCATION: International Bridge Administration
934 Bridge Plaza
Sault Ste. Marie, MI 49783

PROJECT DESCRIPTION: Bridge Load Rating Services – Complex or Unique Structures

This scope of service is to perform structural analysis on the Sault Ste. Marie International Bridge. The Michigan Department of Transportation (MDOT) is seeking professional services for load rating of complex or unique bridges, 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.

The procedures shall be in conformance with National Bridge Inspection Standards (NBIS) and MDOT policies and procedures. All procedures shall be in accordance with the latest AASHTO Manual for Bridge Evaluation including amendments and interim specifications, as applicable, and the Federal Highway Administration (FHWA) – Bridge Inspectors' Reference Manual, as applicable.

The deliverable for this work will be attested to be accurate and complete under seals of Licensed Professional Engineers in Michigan and Ontario.

DBE REQUIREMENT: N/A

ANTICIPATED PROJECT START DATE: October 15, 2012

ANTICIPATED PROJECT COMPLETION DATE: October, 2016

PRIMARY PREQUALIFICATION CLASSIFICATIONS:
Bridge Load Rating Analysis
Complex Bridges

SECONDARY PREQUALIFICATION CLASSIFICATIONS: None

MDOT PROJECT ENGINEER MANAGER:

Karl Hansen, P.E., Bridge Engineer
International Bridge Administration
934 Bridge Plaza
Sault Ste. Marie, MI 49783
Phone: (906) 635-5255 ext. 135
Fax: (906) 635-0540
Email: hansenk@michigan.gov

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., AASHTO Manual for Bridge Evaluation, AASHTO Standard Specifications for Highway Bridges, MDOT Bridge Analysis Guide, etc.).

GENERAL INFORMATION:

The NBIS requires analyzing all highway bridges to determine load capacity. FHWA requires that analyses use the Load Factor or Load and Resistance Factor methods for those items reported to FHWA (see Attachment D), those being the Inventory Rating and Federal Operating Rating. MDOT requires that bridges be analyzed for ability to carry the higher legal loads in Michigan, and this analysis may be done using any accepted methodology according to the 2005 Bridge Analysis Guide with Interims; however, per agreement between the U.S. and Canadian owners, **the Load Factor method (LFR) will be used for this project**, with results reported in rating factor. HS-20 loading will be used for the inventory rating, the Federal (US) operating rating, and for comparison with the original design.

BACKGROUND INFORMATION:

The International Bridge was designed by Steinman, Boynton, Gronquist, and London in 1960 and built by Bethlehem Steel Company in 1962. It has sixty three spans with an overall structure length of approximately 9250 feet. The bridge carries two lanes of traffic over the St. Mary's River, between Sault Ste. Marie, Michigan and Sault Ste. Marie, Ontario. The structure consists of a combination of simply supported multi-beam spans, two-girder multi-spans, a simple-span deck truss, a 4-span continuous double-arch truss (with spans of 200, 430, 430, and 200 feet) on the US side of the border, and a 3-span single-arch truss (with spans of 200, 430, and 200 feet) on the Canadian side of the border.

PROJECT SCHEDULE:

Because of the length, complexity of the structure, number of spans, and international traffic the cost and time to conduct the load rating will be strategically spread over a time period of five years. The table below is intended as a guide for submitting a five year timeline with proposed work by year and hours. The flow of work by year as listed in the table is not required to be duplicated and submitted by the CONSULTANT; however, work must be logically planned and programmed such that it is relatively spread out during the five year period as shown in the table.

Year	US Spans	Length	Hours	CDN pans	Length	Hours	Total
2012	1-11	819	263	55-63	702	350	613
2013	12-19	1265	660	47-54	851	528	1188
2014	20-23	1264	700	42-46	716	374	1074
2015	24-26	736	220	39-41	834	330	550
2016	27-30	663	457	31-38	1325	278	735
Total	1-30	4,747	2300	31-63	4,428	1970	4270

CONSULTANT RESPONSIBILITIES:

The work consists of the following major tasks:

A. Meet with MDOT Project Engineer Manager to review project.

B. Obtaining the required software including:
   a. AASHTOWare™ Virtis software, version 6.3.1 or current version
   b. STAAD.Pro 2007 Software (or current version) with STAAD.beava

C. Review the BSIR, bridge file, previous inspection reports, plans and shop drawings to ensure that the information is current.

D. Creating a model of each span in Virtis that can be included in the MDOT Virtis structure library where possible. Substructures are not included in this analysis.

E. For spans that cannot be modeled in Virtis, rate using alternate means. STAAD.pro 2007 with STAAD.beava is the preferred alternate method of analysis. Hand calculations or other software approved by MDOT Project Engineer Manager may be used in specific cases where significant cost savings are possible.

F. Notifying the MDOT Project Engineer Manager immediately if the structure may require reduction to load posting or Overload Class status. Creating and providing to MDOT detailed explanations for any change to load posting or Overload Class status, including strengthening or repair recommendations as appropriate

G. Compiling results and preparing summaries for MDOT as shown in the attached example

H. Quality Assurance and Quality Control; procedures shall be performed each year.

I. Miscellaneous Structural Analysis/Review as required by the MDOT Project Manager.

J. Tracking progress and prioritizing work based on MDOT Project Engineer Manager

Complete the requirements of this project include, but are not limited to the following:

A. Meet with the MDOT Project Engineer Manager to review project, location of data sources and contact persons, and review relevant MDOT operations. The Project Kick-off Meeting will be held at the International Bridge Administration office. The CONSULTANT shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the bridge load ratings by the project completion date.

   a. The CONSULTANT representative shall record and submit type-written minutes for all project related meetings to the MDOT Project Engineer Manager within two weeks of the meeting. The CONSULTANT shall also distribute the minutes to all meeting attendees.
   b. Attend any project-related meetings as directed by the MDOT Project Engineer Manager.
   c. The MDOT Project Engineer Manager shall be the official MDOT contact person for the CONSULTANT **and shall be made aware of all communications regarding this project**. The CONSULTANT must either address or send a copy of all correspondence to the MDOT Project Engineer Manager. This includes all Subcontractor correspondence, correspondence with Virtis Technical Support and verbal contact records.
   d. MDOT will furnish the CONSULTANT with the following material for each bridge:
      i. Structure Inventory and Appraisal (SI&A) form
      ii. As Built Plans on CD in .tif format and/or hard copies of plans
      iii. Bridge Safety Work Reports (BSIR)
      iv. Detailed Bridge Work Reports, if applicable
      v. XML file containing MDOT standard vehicles for analysis using Virtis
   e. In addition, MDOT will provide the following (all available on MDOT's website):
      i. Bridge Analysis Guide 2005 Edition with Interims
      ii. Bridge Analysis Assumption Form (electronic version)
      iii. Bridge Analysis Summary Form (electronic version)
      iv. Bridge Design Guides and Manual
      v. Michigan Structure Inventory and Appraisal Guide
      vi. Research Report R-1511
   f. The CONSULTANT will be responsible for obtaining the following:
      i. AASHTO Manual for Bridge Evaluation
      ii. AASHTO Standard Specifications for Highway Bridges, 2002 Edition with Interims
      iii. AASHTO LRFD Bridge Design Specifications, 4th Edition with Interims
      iv. Adobe Acrobat Software
   g. The Project Kick-off Meeting will be held within one week of Notice to Proceed.

B. The CONSULTANT will contact Michigan Technological University Center for Technology and Training for licensing of Virtis. They are reachable at (906) 487-2102 or via email at loadrating@mtu.edu.

C. The CONSULTANT shall compare the BSIR and SI&A forms to the provided plans for consistency. Inconsistencies shall be reported to the MDOT Project Engineer Manager prior to computing the load rating. The MDOT Project Engineer will locate incomplete plan sets and missing required information if available.

D. The CONSULTANT shall rate the bridge using the Virtis software wherever possible. The bridge 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 as described in Appendix D. The input into the Virtis program should reflect any significant deterioration indicated by the BSIR or the field work. Determination of significant deterioration should be reviewed with the MDOT Project Manager prior to performing the analysis. 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 rating factor - This rating shall be computed using truck selection and distribution factors from the 2005 MDOT Bridge Analysis Guide with Interims for LFR or LRFR.
d. The Michigan Overload Class (MDOT Items 193) including the S, R or unrestricted flag. This class is determined according to the Michigan Structure Inventory and Appraisal Guide and as follows:
    i. Analyze the bridge for 20 trucks (Michigan Overload Truck 01-20 Class A. If the Rating Factor for each of these trucks is >1, then the bridge is Class A and steps b and c may be skipped. There is some room for engineering judgment, if only 1 or 2 of the trucks do not pass for Class A and the rating factor for each of them is > 0.97, then the bridge may be classified as Class A.
    ii. If the bridge does not pass for Class A, then the bridge shall be analyzed for Class B trucks (Michigan Overload Truck 01-20 Class B). It is only necessary to analyze those vehicles where the rating factor for Class A was < 1. For example, if only five trucks were found to have a Class A Rating Factor < 1, then only those five need be analyzed for Class B loads. There is some room for engineering judgment, if only 1 or 2 of the trucks do not pass for Class B and the rating factor for each of them is > 0.97, then the bridge may be classified as Class B.
    iii. If the bridge does not pass for Class B, then the bridge shall be analyzed for Class C trucks (Michigan Overload Truck 01-20 Class C). It is only necessary to analyze those vehicles where the

rating factor for Class B was < 1. For example, if only five trucks were found to have a Class B Rating Factor < 1, then only those five need be analyzed for Class C loads. There is some room for engineering judgment, if only 1 or 2 of the trucks do not pass for Class C and the rating factor for each of them is > 0.97, then the bridge may be classified as Class C.

iv. If the bridge cannot pass for Class C, even allowing for engineering judgment, then the bridge will be classified as Class D. The bridge should be analyzed for the maximum axle loads allowed for each Overload Truck configuration, and this information should be given to the MDOT Project Engineer Manager immediately and included in the final submittal.

e. Based on (a thru d) above, 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)

E. 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 STAAD.Pro with STAAD Beava. A STAAD.Pro model will be created, analyzed and submitted in place of the Virtis *.xml file as described in (D). Hand calculations or other software may be approved by the MDOT Project Engineer Manager if a significant cost savings is identified over the use of STAAD.Pro. The items required in (D) of this scope of work will need to be completed using this alternate method.

F. The CONSULTANT shall notify the MDOT Project Engineer Manager **immediately** if the structure requires reductions to the load posting or Overload Classification identified on the SI&A form. After MDOT Project Engineer Manager review, the MDOT Project Engineer Manager may ask the consultant to develop detailed explanations for any change to load posting or Overload Class status, including strengthening or repair recommendations as appropriate

G. The CONSULTANT shall deliver the following printed output to MDOT:

a. Initial Structural Design Criteria Report. The report, separately bound, shall be submitted within 30 days of award, and outlined (as applicable) as follows:

Structural Design Criteria - CONTENTS

1. GENERAL REQUIREMENTS
1.1 Introduction
1.2 Codes, Standards and Specifications
1.3 Units and Dimensions
2. RATING SUMMARY
2.1 Introduction
2.2 Inventory and Operating Rating Levels
2.3 General Load Rating Equation
2.4 Condition Factors
2.5 System Factors
2.6 Reinforced Concrete Members
2.7 Local Details
2.8 Principal Tensile Stress – Service Limit State
2.9 Shear, Torsion, and Flexure for Negative Moment Regions – Ultimate Limit State
2.10 Substructure Elements
2.11 Bearings
2.12 Expansion Joints
3. DESIGN LOADINGS
3.1 Dead Loads
3.2 Live Loads
3.3 Thermal Loads
3.4 Creep and Shrinkage
3.5 Construction Equipment and Locked-In Stresses
3.6 Wind Loads
3.7 Seismic Loads
3.8 Vessel Impact Loads
3.9 Seismic Loads
3.10 Differential Support Settlement
3.11 Load Combinations
4. MATERIALS
4.1 Concrete
4.2 Reinforcing Steel
4.3 Prestressing Steel
5. SUMMARY

b. Assumption Sheet - Any assumptions made in the analysis (material properties, section losses, etc.) shall be listed. See appendix for a blank example. This sheet will be given as a fillable pdf file. Non-redundant or fracture critical structures/elements should be identified on the assumption sheet.

c. Any hand calculations, spreadsheets, etc. used to determine input into Virtis. If formulas are hidden, a brief description of the procedure should be included.

d. Virtis program output (where inputted into Virtis) - This will be limited to that which directly documents the ratings. Intermediate output sheets that do not directly document the ratings may be omitted. Results of Overload Class do not need to be printed

e. Other program input and output (where Virtis cannot be used) - This will be limited to that which directly documents the. Intermediate output sheets that do not directly document the ratings may be omitted. Results of Overload Class do not need to be printed.

f. A completed Bridge Analysis Summary Form - See the appendix for a blank example form. MDOT will complete the "Reviewed By" and "Database Updated By" fields after the CONSULTANT's submittal. This sheet will be given as a fillable pdf file. This sheet shall be marked with the CONSULTANT's logo. Non-redundant or fracture critical structures/elements should be identified on the summary sheet.

The above printed output (items b through f) shall be submitted together, bound in three ring binder(s).

The CONSULTANT shall deliver the following electronic output to MDOT for each bridge analyzed:

a. Initial Structural Design Criteria Report.

b. Assumption Sheet - Any assumptions made in the analysis (material properties, section losses, etc.) shall be listed. See appendix for a blank example. This sheet will be given as a fillable pdf file. This structure should be input using Adobe Acrobat, and not scanned in, to limit file size. Typed signatures will be sufficient as the paper copy will be signed. This file will be submitted as a *.pdf. Non-redundant or fracture critical structures/elements should be identified on the assumption sheet.

c. 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.

d. Virtis exported *.xml file, STAAD.Pro or other program input file

e. Virtis output, STAAD.Pro output or other Program input and output, as *.pdf. Intermediate calculations do not need to be provided. When other programs are used, load and capacity information should be provided at locations of interest, including but not limited to 10^{th} points of the spans. Results from the Standard Analysis (Federal Inventory, Federal Operating, Michigan Operating and Michigan Legal Loads) should be in a separate file from the Overload Class results.

f. A completed Bridge Analysis Summary Form - See the appendix for a blank example form. Printed signatures will be sufficient as the paper copy will be signed. This sheet will be given as a fillable pdf file. This structure should be input using Adobe Acrobat, and not scanned in, to limit file size. Typed signatures will be sufficient as the paper copy will be

signed. This file will be submitted as a *.pdf. This sheet shall be marked with the CONSULTANT's logo. Non-redundant or fracture critical structures/elements should be identified on the summary sheet.

The above electronic material shall be submitted on a cd. All files for a structure shall be located in a folder bearing the structure name.

I. Quality Assurance and Quality Control should occur as per the CONSULTANT's QA/QC Plan.

J. At the request of the MDOT Project Engineer Manager, structural analysis or review may be performed including, but not limited to: verifying accuracy of software or calculations, analyzing portions of structures and recommending repairs/modifications to increase structural capacity.

K. On the first of each month in which work has been performed by the CONSULTANT, the CONSULTANT Project Manager shall submit a monthly project progress report to Karl Hansen, MDOT Project Engineer Manager. The monthly progress report shall follow the guidelines in Attachment. The monthly progress report may be submitted electronically.

MDOT/IBA RESPONSIBILITIES:

A. Schedule and/or conduct the following:
   a. Project related meetings.

B. Provide the following if available:
   a. Structure Inventory and Appraisal (SI&A) form
   b. As Built Plans on CD in .tif format and/or hard copies of plans
   c. Bridge Safety Work Reports (BSIR)
   d. Detailed Bridge Work Reports, if applicable
   e. Bridge Analysis Guide 2005 Edition with Interims
   f. Bridge Analysis Assumption Form (attached)
   g. Bridge Analysis Summary Form (attached)
   h. Bridge Design Guides and Manual
   i. Michigan Structure Inventory and Appraisal Guide

C. Make Project Assignments and Provide Deadlines as Needed.

D. Providing known issues with the Virtis Software and work-arounds as appropriate.

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.

The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

ATTACHMENT A

CS Various - JN

MONTHLY PROGRESS REPORTS

The first page of this attachment is the necessary layout of the Monthly progress reports and the last three pages are a completed example.

Control Section 00000
Job Number 00000C
Structure Number S00
Date 00/00/00

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

B. Anticipated work items for the upcoming month.

C. Real or anticipated problems on the project.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

E. Items needed from MDOT.

F. Copy of Verbal Contact Records for the period (attached).

SAMPLE

Control Section Various
Job Number 100000
Structure Number Various
Date 07/31/95

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

1. During the last month we completed the bridge load rating analysis on the following 10 structures and submitted them to Thomas Nelson, Jr. on 05/01/95:

B01-0-11111
Multi-Stringer Steel Structure – 1 Span
B02-0-11111
Multi-Stringer Steel Structure – 4 Spans
H-15 Deck Analysis – 1 Structure
B03-0-11111
Multi-Stringer Prestressed Concrete Structure – 1 Spans
10% Quality Control Review – 1 Span
R01-0-11111
Multi-Stringer Steel Structure – 4 Spans
R02-0-11111
Multi-Stringer Steel Structure – 1 Span
S01-0-11111
Multi-Stringer Steel Structure – 1 Span
S02-0-11111
Multi-Stringer Steel Structure – 4 Spans
H-15 Deck Analysis – 1 Structure
S03-1-11111
Multi-Stringer Prestressed Concrete Structure – 1 Span
S03-2-11111
Multi-Stringer Prestressed Concrete Structure – 1 Span
S04-0-11111
Flared Beam Structure – 3 Spans

B. Anticipated work items for the upcoming month.

1. Complete analysis for:
S08-0-11111
B04-0-11111
2. Attend the meeting regarding the Ameritech lines on the bridge, scheduled for 08/12/95.

C. Real or anticipated problems on the project.

1. We foresee no problems at this time.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

1. Structure S08-11111 was moved to the top of the priority list due to current need as identified by Thomas Nelson, Jr. on 6/01/95.

E. Items needed from MDOT.

1. Proposed Overlay thickness for S08-0-11111.

F. Copy of Verbal Contact Records for the period (attached).

1. Discussed bridge and ramp geometries with Tom Myers of MDOT Traffic and Safety Division on 07-24-95.

VERBAL CONTACT RECORD

Control Section 12345
Job Number 11111C
Structure Number S02
Date 07/31/95

Joe Engineer talked to Tom Myers and decided to use a 0.05'/ft super on ramp A leading into the bridge.

ATTACHMENT B
BRIDGE ANALYSIS ASSUMPTIONS

Bridge ID: _____ of _____ Most recent BIR date: ___ / ___ / _____

Is deterioration accounted for in load rating: no / yes: _____

_____

Year Constructed/Reconstructed*: _____ Work performed: _____

_____

Superstructure Component**: _____ Fy/fc': _____ / _____ksi

Composite: yes or no Number of beams: _____ Shop Dwgs verified: yes / no

Size of Beams/Beam #'s and spans: _____

Deck thickness: ____ in fc': __ ksi Fy: __ ksi Deck Design load > H15: yes / no

Barrier Type/weight: _____ / ___ plf (L) _____ / ___ plf (C) _____ / ___plf (R)

Wearing surface material/thickness/unit weight: _____ / ____ in / _____ pcf

Sidewalks or brush blocks width/thick: ___ / ___ in (L) ___ / ___ in (C) ___ / ___ in (R)

Clear roadway: _____ ft ____ in Design by LRFD: yes or no Rating Method: _____

Additional loads: _____

_____

Unique factors that affect capacity: _____

_____

_____

* If the structure has been reconstructed, only include the information from previous constructions that is still relevant. Complete enough forms to identify all relevant information.
** See item 43 of the Michigan Structure Inventory and Appraisal Coding Guide

Analyzed By- Signature and Date _____ _____

Checked By- Signature and Date _____ _____

ATTACHMENT C

BRIDGE ANALYSIS SUMMARY

Bridge ID _____

The above structure was analyzed using: _____

Version or Other: _____

The analysis is based on field inspection dated: _____

The controlling component and failure mode are:

NEW INVENTORY CODING

NBI Item 63- Operating Rating Method	1-LF in Metric Tons	
NBI Item 64F- Federal Operating Rating		Metric Tons
MDOT Item 64MA- Michigan Operating Method	1-LF in Tons	
MDOT Item 64MB- Michigan Operating Rating		US Tons
MDOT Item 64MC and D- Michigan Operating Truck	18	D - Designated
NBI Item 65- Inventory Rating Method	1-LF in Metric Tons	
NBI Item 66- Federal Inventory Rating		Metric Tons
NBI Item 41- Open Posted Closed		
NBI Item 70- Bridge Posting		
NBI Item 141- Posted Loading		US Tons
MDOT Item 193A- Michigan Overload Class		
MDOT Item 193C- Overload Status		

Analyzed By- Signature and Date RLC _____ 4/15/10 _____

Checked By- Signature and Date _____ _____

Database Updated By- Initials and Date _____ _____

ATTACHMENT D

RATING METHODS FOR COMPUTING AND REPORTING CODING GUIDE ITEMS 63, 64, 65 AND 66

LRFR = Load and Resistance Factor Rating
LFR = Load Factor Rating
ASR = Allowable Stress Rating
RF = Rating Factor
MT = Metric Tons

DESIGN OR RECONS. SPEC. USED	EXIST. AND VALID LOAD RATING	LOAD RATING OR RE-RATING METHOD OPTIONS	LOADING	CODING GUIDE ITEMS			
				63	64	65	66
LRFD	None or Invalid	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
		LFR [1]	MS18	6	RF	6	RF
		LFR [1]	MS18	1	MT	1	MT
		ASR [4]	MS18	7	RF	7	RF
		ASR [4]	MS18	2	MT	2	MT
	LRFR	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
	LFR or ASR	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
		LFR	MS18	6	RF	6	RF
		LFR	MS18	1	MT	1	MT
		ASR [3, 4]	MS18	7	RF	7	RF
		ASR [3, 4]	MS18	2	MT	2	MT
	Load Testing	Load Testing	Equiv.MS18	4	MT	4	MT
LFD or ASD	None or Invalid	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
		LFR	MS18	6	RF	6	RF
		LFR	MS18	1	MT	1	MT
		ASR [4]	MS18	7	RF	7	RF
		ASR [4]	MS18	2	MT	2	MT
	LRFR	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
	LFR or ASR	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
		LFR	MS18	6	RF	6	RF
		LFR	MS18	1	MT	1	MT
		ASR [3, 4]	MS18	7	RF	7	RF
		ASR [3, 4]	MS18	2	MT	2	MT
	Load Testing	Load Testing	Equiv.MS18	4	MT	4	MT

ATTACHMENT D Continued

DESIGN OR RECONS. SPEC. USED	EXIST. AND VALID LOAD RATING	LOAD RATING OR RE-RATING METHOD OPTIONS	LOADING	CODING GUIDE ITEMS			
				63	64	65	66
Comb. of Specs. (LRFD, LFD, ASD) or Unknown	None or Invalid	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
		LFR	MS18	6	RF	6	RF
		LFR	MS18	1	MT	1	MT
		ASR [4]	MS18	7	RF	7	RF
		ASR [4]	MS18	2	MT	2	MT
		Load Testing	Equiv.MS18	4	MT	4	MT
	LRFR	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
	Load Factor Rating (LFR) or Allowable Stress Rating (ASR)	LRFR	HL-93	8	RF	8	RF
		LRFR	MS18[5]	3 [2]	MT	3 [2]	MT
		LFR	MS18	6	RF	6	RF
		LFR	MS18	1	MT	1	MT
		ASR [3, 4]	MS18	7	RF	7	RF
		ASR [3, 4]	MS18	2	MT	2	MT
	Load Testing	Load Testing	Equiv.MS18	4	MT	4	MT

SENSITIVE SECURITY INFORMATION (SSI) WARNING
The introduction to each deliverable shall contain, verbatim, the following warning:

"This structural analysis of the International Bridge represents Sensitive Security Information (SSI). These documents are of a security-sensitive nature and are not to be made available under any Right to Know or Freedom of Information Request without a documented need to know. Copy numbers are for tracking documents and for forwarding errata information to official copy holders. Unauthorized possession or use of these documents without prior written consent of the International Bridge Administration (IBA) is a violation of State and Federal Laws. Misuse of SSI may result in severe penalties. In accordance with 49 CFR Part 1520, it is recognized that the Coast Guard may share SSI with the Federal, State and local agencies as well as others that need to know the information to protect the security of personnel and property against terrorism and other unlawful acts, while declaring the information unavailable to the public. Critical material should be safeguarded at all times from disclosure to persons who do not have a need to know."

IX. SPECIAL SECURITY PROVISION

All personnel of the International Bridge Administration and/or its contractors must be in possession of a valid Transportation Worker Identification Credential (TWIC) Card in order to work on and/or within the limits of U.S. Government Property. Therefore, any member of the consultant team that will need to access the bridge and/or bridge piers located on the U.S. Army Corps of Engineers property, must be in possession of a TWIC Card.

THE CONSULTANT agrees that all information related to this work, including but not limited to copies of plans, and/or documents relating to the work, is confidential and agrees to maintain all information related to this project as confidential and shall not disclose any information related to this work except as provided in a. or b., immediately below. The obligations of confidentiality will not apply to:

a. Information for which the International Bridge Administration (IBA) gives specific prior written permission for publication or use.
b. Information that is required to be disclosed based on court order.

Due to the extremely sensitive nature of bridge security system information that THE CONSULTANT will have access to, if Consultant violates the confidentiality provision of this contract, Consultant agrees to be financially responsible for consequential damages, including but not limited to costs associated with assessing the potential threat to the security system and the cost to change, alter, or replace the security system as a result of confidential information being released, incurred by the IBA as a result of Consultant disclosing confidential information related to the security system.

The IBA and THE CONSULTANT will agree on the Key People to be assigned to the Work Team prior to any work being performed. THE CONSULTANT will not replace any Key People assigned to the Work Team without prior written approval from the IBA.

The IBA has the right to disapprove proposed replacements, and THE CONSULTANT is required to find alternative replacements that are acceptable to the IBA. The replacement of Key People from the Work Team without the IBA's prior written approval will be considered a breach of the Contract, and the IBA may terminate this Contract under the termination provisions of Section 25(b). If a member of the Work Team who is one of the Key People leaves the Work Team, THE CONSULTANT will replace that person with a person who is acceptable to the IBA within thirty days, unless an extension of time is granted by the IBA. Failure by THE CONSULTANT to find an acceptable replacement to the Work Team within thirty days or within the time extension granted by the IBA, if any, will be considered a breach of this Contract, and the IBA may terminate this Contract under the termination provisions of Section 25(b). "Key People" are defined as those people whose qualifications and experience are essential to providing quality SERVICES. "Work Team" means the personnel assigned by THE CONSULTANT and the subconsultant(s) who are responsible for the completion of the SERVICES.

THE CONSULTANT will be required to provide documentation verifying complete criminal background checks of all Key People on the Work Team to the IBA, prior to people having access to documents or information. If any of the Key People have a criminal record that is unacceptable to the IBA for any reason, THE CONSULTANT will be required to find a replacement(s) that are acceptable to the IBA.

X. WESTERN HEMISPHERE TRAVEL INITIATIVE

THE CONSULTANT must ensure all members of the work team comply with the regulations of the Western Hemisphere Travel Initiative Documentary Requirements to Enter the United States:

"Travelers who wish to enter the United States after June 1, 2009 will be required to present one of the following documents to a U.S. Custom and Border Protection Officer:

- U.S. or Canadian Passports;
- Trusted Traveler Card (NEXUS, SENTRI, or FAST);
- U.S. Passport Card;
- State- or province-issued Enhanced Driver's Licenses (when and where available);
- Form 1-872 American Indian Card, or (when available) enhanced tribal cards."

Client Furnished Information and Responsibilities

The International Bridge Administration, as owner of the bridge, is responsible for maintenance and operation of the bridge and will coordinate and schedule work to conform with bridge maintenance and operational requirements.

The International Bridge Administration will also supply a person or person(s) to coordinate access to the bridge structure and bridge facilities. The International Bridge Administration will also provide traffic control as needed during performance of the work.

Access to the bridge shall be the responsibility of the CONSULTANT, who will furnish all equipment required to inspect the bridge. The exception to this is use of the MDOT reach-all and the use of the Administration's bridge travelers to access the underside of the bridge as necessary. In both cases, the Administration will provide their own operator of this equipment.