

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

MDOT PROJECT MANAGER Nathan VanDrunen			JOB NUMBER (JN) 108197	CONTROL SECTION (CS) 84913
PROJECT DESCRIPTION Grand Region 2010 Detail Bridge Inspections				
ESTIMATED COST PER JN			CONSULTANT: Provide only checked items below in proposal.	
ESTIMATED HOURS PER JN				
Check the appropriate Tier in the box below				
<input type="checkbox"/> TIER I (\$25,000-\$99,999)	<input checked="" type="checkbox"/> TIER II (\$100,000-\$250,000)	<input type="checkbox"/> TIER III (>\$250,000)	MDOT PROJECT MANAGER: Check all items to be included in RFP. WHITE = REQUIRED GRAY SHADING = OPTIONAL	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Understanding of Service	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Safety Program</i>	
N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Organization Chart	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Past Performance	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	Location: The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.	
N/A	N/A	<input type="checkbox"/>	Presentation	
N/A	N/A	<input type="checkbox"/>	Technical Proposal (if Presentation is required)	
3 pages (MDOT forms not counted) (No Resumes)	7 pages (MDOT forms not counted)	19 pages (MDOT forms not counted)	Total maximum pages for RFP not including key personnel resumes	

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 Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced 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 checked="" type="checkbox"/> Prequalified Services – See page <u>1</u> 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 Required with Proposal)
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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 RFP's that originate in Bureau of Transportation Planning only**, a priced proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning (see address list, page 2). The priced proposal must be submitted in a sealed envelope, clearly marked "**PRICE PROPOSAL.**" The vendor's name and return address **MUST** be on the front of the envelope. The priced proposal will only be opened for the highest scoring proposal. Unopened priced proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your priced proposal being opened erroneously by the mail room.

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.

Qualifications 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 and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor 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

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet(s) is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked "**SEALED BID.**" The vendor's name and return address **MUST** be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

PROPOSAL SUBMITTAL INFORMATION

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER 4	PROPOSAL/BID DUE DATE 8/25/10	TIME DUE 11:00 a.m.
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PROPOSAL AND BID SHEET MAILING ADDRESSES

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

- MDOT Project Manager MDOT Other

Nathan VanDrunen, PE
 Grand Region Office
 1420 Front Ave. NW
 Grand Rapids, MI 49504

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

Lansing Regular Mail	OR	Lansing Overnight Mail
<input checked="" type="checkbox"/> Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services Div - B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933
<input type="checkbox"/> Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933

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 four (4) 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

The following two American Recovery and Reinvestment Act of 2009 (ARRA) notifications, **ARRA MONTHLY EMPLOYMENT REPORTS** and **REQUIRED CONTRACT PROVISIONS TO IMPLEMENT AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SECTIONS 902 AND 1515**, are attached to this Request For Proposal for your understanding. These two notifications are only applicable for those projects/contracts funded with ARRA funds and will be included in contract Exhibits.

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

- 5100D** – Request for Proposal Cover Sheet
- 5100G** – Certification of Availability of Key Personnel
- 5100I** – Conflict of Interest Statement
- 5100J** - Consultant Data and Signature Sheet (Required only for Non-Prequalified Work)

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

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.

MICHIGAN DEPARTMENT OF TRANSPORTATION

**SCOPE OF SERVICE
FOR
CONSTRUCTION SERVICES
IN-DEPTH BRIDGE INSPECTION**

CONTROL SECTION(S): 84913

JOB NUMBER(S): 108197

PROJECT LOCATION(S): Various locations throughout the Grand Region.

DESCRIPTION OF WORK:

Section 3 of the Bridge Inspector's Reference Manual (BIRM) defines an "In-Depth" inspection as a close-up, hands-on inspection of one or more members above the water level to identify any deficiencies not readily detectable using routine inspection procedures. The work defined in this scope is limited to performing an in-depth inspection of various bridge elements and preparing a report that details the inspection findings.

Attachment A contains the anticipated Work Package Listing, but is subject to change based on the needs and priorities of MDOT.

PRIMARY PREQUALIFICATION CLASSIFICATION:

N/A – (See Qualification Requirements)

SECONDARY PREQUALIFICATION CLASSIFICATION:

N/A

ANTICIPATED START DATE: Oct 22, 2010

ANTICIPATED COMPLETION DATE: February 25, 2011

DBE REQUIREMENT: N/A

MDOT PROJECT MANAGER:

Nathan VanDrunen
MDOT Grand Region
1420 Front Avenue
Grand Rapids, MI 49503
PH: (616) 451-4884
FAX: (616) 451-0707
E-mail: vandrunenn@michigan.gov

QUALIFICATION REQUIREMENTS:

These in-depth inspections will require an experienced team of structural engineers. The CONSULTANT must provide personnel with qualifications that meet or exceed the requirements stated below. The CONSULTANT must staff the project with the number of personnel necessary to complete the project in the allotted time.

Changes made to the Project Manager/Team Leader that occurs after the authorization must be submitted in writing for MDOT's project manager's approval. Failure to comply with this requirement may result in termination of the contract.

The Project Manager/Team Leader will be responsible for writing the Inspection Report and will be the primary contact with MDOT's project manager.

The following qualifications are the minimum necessary for the required personnel and this must be documented with resumes and submitted with the proposal.

A. Project Manager and Inspection Team Leaders

1. Professional registration as an engineer, licensed to practice in the State of Michigan.
2. Five years of documented experience in the in-service inspections of bridges.
3. Completed the NHI two week class "Safety Inspection of In-Service Bridges" within the last five years. If the team leader(s) has attended this class more than five years ago, he/she must have taken the refresher course within the preceding five years.

Only one manager level position will be allowed and paid on this project.

B. Field Staff assisting the Inspection Team Leaders

1. A technical staff person with three years experience in inspection, design or construction of bridges
or:
2. Recent graduate engineer working at the Staff Engineer or entry level position

The above listed classes for the Inspection Team Leader(s) are encouraged, but not required for Field Staff.

DURATION & SCHEDULE

A. Work Plan & Schedule

The CONSULTANT must review the WORK PACKAGE LISTING to develop a Work Plan that details the process of inspecting the specific elements for each bridge listed. The breakdown of the hours/days of the inspected bridge elements will enable MDOT to coordinate the scheduling for use high reach equipment, lane closures, night work, and MDOT forces to assist with the inspection process.

The CONSULTANT is also required to develop a Project Schedule for the project showing major tasks during the fieldwork and report preparation. The Project Schedule must be

submitted in the form of a Gantt chart showing meeting dates, report submissions, etc. as milestones.

Following is a schedule of target dates for this project:

- | | |
|--------------------------------|--------------------|
| 1. Priced Proposal Submission: | September 10, 2010 |
| 2. Anticipated NTP: | October 22, 2010 |
| 3. Project Initiation Meeting: | October 25, 2010 |
| 4. Draft Report Submission: | December 31, 2010 |
| 5. Final Report Submission: | January 28, 2011 |

The CONSULTANT must be prepared to begin the field inspection work within two weeks after receiving the Notice to Proceed (NTP). MDOT's Project Manager may stop work at any time and reschedule the field inspection if there are significant disruptions to traffic.

The Work Plan and Schedule will be submitted as part of the Priced Proposal. Changes to the Work Plan or Schedule will be submitted to MDOT's Project Manager for approval. Coordination of lane closures and traffic control will be with the MDOT Project Manager, and the appropriate MDOT TSC. Lane closures will not be permitted during special local events/holidays without prior approval. A list of events, with dates, will be provided to the CONSULTANT for use during the development of the Work Plan and Schedule.

B. Meeting Dates

The CONSULTANT is required to attend a mandatory Project Initiation Meeting and all Progress Meetings. The expected period for these meetings is shown below, however, they may be adjusted, as mutually agreed to by MDOT's Project Manager and the CONSULTANT.

Project Initiation Meeting: One week after NTP (before beginning any fieldwork.)

Progress Meetings: (1) Bi-weekly during the Field Inspection Phase
(2) At the completion of the "draft" Report

See section MEETINGS for a description of the CONSULTANT's responsibilities.

ADDITIONAL WORK DESCRIPTION:

The work for each bridge is separated into two main components:

- A) Site Inspection
- B) Report Preparation including supporting documents.

The CONSULTANT will provide an In-Depth structural inspection for each bridge element as listed in the WORK PACKAGE LISTING. The report phase will identify current conditions of the bridge elements, the significance of the findings and make recommendations.

The CONSULTANT may elect to suggest activities in the proposal that will improve the inspection or save costs. These suggestions will need approval from the MDOT PM.

A. SITE INSPECTION

Each bridge must be visited by the CONSULTANT PM and/or Team Leader. The purpose of this visit is to locate all areas of element deterioration, determine feasible repair recommendations, review anticipated traffic control measures and to ascertain quantities. Where necessary, ladders, high-reach equipment, under bridge crane and other miscellaneous equipment may be used to get close enough to adequately inspect and evaluate the structural element. (See Sections EQUIPMENT and SAFETY below).

The information collected in the field must be sufficient to determine quantities to document deterioration and locations of repairs and improvements. This information must be detailed in the field notes, forms, sketches, and photographs as appropriate and is to be included in the report.

During the site inspection, the CONSULTANT shall immediately notify the MDOT PM of any structural condition that may cause the bridge to be load restricted (such as holes in beams), or which may require other immediate action (such as deck soffit or fascia scaling, lane closures, emergency repairs, temporary supports, etc.). If the MDOT PM is unavailable, the CONSULTANT will contact the Associate Region Engineer of Development at (616-451-3091) and the appropriate Transportation Service Center (TSC) Maintenance Engineer. The CONSULTANT will provide documentation of the condition (beam measurements, pictures taken, etc.) to MDOT as quickly as possible. A list of contacts and their jurisdictions will be provided at the project kick off meeting.

1. Steel Beam End Inspection

For the structures listed in the WORK PACKAGE LISTING requiring Steel Beam End Inspection, below are the minimum items to be completed:

- a. All dirt, debris, and rust scale must be removed from the ends of each of the steel beams under all joints at piers and abutments. The steel shall then be inspected for section loss. Areas where section measurements are to be taken shall be cleaned by means of hand tools to a SSPC SP3 degree of cleanliness. Thickness readings on the web and the bottom flange are to be taken at the thinnest locations within 5 feet of the end of the beam.

These thickness readings will be compared with the original thickness and the percentages of section loss will be calculated (MDOT will supply the CONSULTANT with existing plans if available). This data will be tabulated in a specific format (as shown in ATTACHMENT - B, Steel Beam Section Loss Detail). If beam end repairs are necessary, then a plan of the super-structure must be made showing the location of the beam ends needing repair. This information can be shown on sketches showing size, shape, dimensions, and edge distances for each element with loss of section and shall be presented in the Appendix of the report.

- b. On structures with pin and hanger assemblies, the beam ends shall be cleaned as

- c. The CONSULTANT shall note the condition of all other steel superstructure elements including but not limited to stiffeners, intermediate diaphragms, end diaphragms, pier diaphragms, cross frames, other lateral bracing and bearings including sole plates and masonry plates. These elements shall be thoroughly inspected, and cleaning may be required.
- d. The CONSULTANT shall visually check for fatigue cracking on fatigue prone details such as welded cover plates, diaphragm connections, or any welding in tension zones that are transverse to the plane of stress. Dye penetrant use is required if there is a crack or suspected crack. This must be clearly documented with narrative and photographs. The consultant must inform the MDOT PM prior to testing so that arrangements to witness the process can be made.
- e. All surfaces where paint has been removed to bare steel shall be coated with primer prior to leaving the site.

2. Concrete Beam Inspection

For the structures listed in the WORK PACKAGE LISTING requiring Concrete Beam End Inspection, below are the minimum items to be completed:

- a. Reinforced Concrete Beams
Sound all reinforced concrete beams for delamination and unsound areas. All delaminated areas are to be marked out with chalk paint that will be evident in the photos. Sketches for each beam mapping the area of distress (cracks, delaminations, spalls etc.) are to be included in the appendix of the report. The percent total surface area distressed shall be calculated and shown on each sketch. Visually inspect all reinforced concrete beams for signs of cracking, spalling, exposed reinforcement and material defects. Check for flexural cracks and shear cracks. Note the condition of the end diaphragms and intermediate diaphragms. Note previous repairs. Pictures of the reinforced concrete beams must be taken and a written description of the deterioration and location must be documented for inclusion into the report.
- b. Prestressed Concrete Beams

Visually inspect all prestressed concrete beams for signs of cracking, spalling, exposed reinforcement and material defects. Check for flexural cracks and shear cracks. If prestressing strands are exposed it must be noted whether the strands are severed. Note the condition of the end diaphragms and intermediate diaphragms. Note previous repairs. Sketches for each beam mapping the area of distress (cracks, delaminations, spalls etc.) are to be included in the appendix of the report. Pictures of the prestressed concrete beams must be taken and a written description of the deterioration and location must be documented for inclusion into the report.

3. Concrete Deck (Surface/Underside)

For the structures listed in the WORK PACKAGE LISTING requiring Concrete Deck (Surface/Underside) inspection, below are the minimum items to be completed:

- a. The concrete deck surface/underside, barrier walls, and fascias will be inspected for wet areas, spalling, map cracking, delamination, rust along beam edges or any other evidence of deterioration.
- b. The concrete deck surface/underside, barrier walls and fascias will be sounded with a hammer or chain drag. Delaminated, spalled, and cracked areas will be marked with chalk or chalk paint to be visible in photographs (**The use of permanent paint is prohibited**). Photos and/or sketches of the areas must be taken showing the areas of deterioration and a written description of the findings must be documented for inclusion into the report.
- c. The percentage of each type of deck surface and soffit deficiencies will be noted in the report.
- d. Note as to whether the deck has previously been overlaid and if so, when and what type of material appeared to be used.

4. Substructure

- a. Sound all substructure concrete elements (pier columns, caps, abutments, backwalls, etc.) for delamination and unsound areas. All delaminated areas are to be marked with chalk or chalk paint to be visible in photographs (**The use of**

- b. Visually inspect all substructure units for signs of settlement, lateral movement, cracking, spalling, exposed reinforcement and material defects. Visually examine fractured concrete to determine if it contains slag aggregate. Note the condition of the backwalls, and check the bridge seat for undermining at bearing locations. For pier caps, check for flexural cracks and shear cracks. Note areas of previous repairs.
- c. The percentage of the total surface area distressed shall be calculated and noted in the report.

5. Non Destructive Testing

The CONSULTANT may determine that other non-destructive testing beyond what is mentioned in the Scope of Services is needed to make a better judgment. However, such testing (ultrasonic, magnetic particle testing, acoustic emission, etc.) must be approved by MDOT's PM. If the project manager approves the test, the CONSULTANT must submit a testing proposal. The testing proposal will show what tests are to be performed, what specific information is to be gained from testing and how the information is to be used. Proposals submitted with insufficient information will be denied.

B. REPORT

The deliverables for this scope of work will be the reports, photographs, printed worksheets, sketches, and notes. The report must include descriptions and observations of the inspection procedures, and conditions found during inspection.

Two (2) draft copies of each report will be provided to the MDOT PM. One of these will be marked up by MDOT with comments and returned to the CONSULTANT for review. A progress meeting will be held with the MDOT representatives and the CONSULTANT to review and discuss comments. The CONSULTANT will then incorporate revisions into the final report. MDOT reserves the right to request additional drafts for review if, in the opinion of the MDOT PM, the changes required are extensive. The contract will be unsatisfactory if the CONSULTANT fails to make changes to the report as required by the MDOT PM.

The CONSULTANT will submit two (2) 3-ring bound copies of the final report. The final report will also contain one Compact Disk (CD) with electronic copies of the final report and photographs.

1. Part 1

Part 1 of the binder is intended to eliminate repetition of the information common to each bridge. Each section will be divided by tabs showing the section name. Each page shall contain a footer with the Consultant's name and date in the lower right hand corner.

a. **Table of Contents**

b. **General Site Review Procedures**

This section will summarize the general procedures used during the site reviews. This information will include a table showing the site review dates for each bridge, bridge elements inspected, equipment used, traffic control procedures and site review procedures. Any significant variations from this typical information, can be stated in the **Site Review Findings** section for a specific bridge.

2. **Part 2**

Following the general information will be a section containing the information specific to each bridge. Each section will be divided by tabs. Each page shall contain footer with the Consultant's name and date in the lower right hand corner.

a. **Site Review Findings:**

This section will include as a minimum, discussion of the following areas:

- 1) Overall assessment of the condition of the bridge elements. Elaborate on the type, quantity and percent of the deficiencies.
- 2) Sketches of the bridge elements identifying size and location of the distressed areas.
- 3) Site issues, i.e., geometrics, maintenance of traffic, utilities, scour, etc. If no site issues that would impact the rehabilitation of the structure were identified, a statement is to be made that all areas were investigated and no issues were found.
- 4) Testing results and implications to the repair options. If no testing was performed, this will be stated in the report.

b. **Recommendations:**

Based on the findings of each structure, submit repair recommendations within the reports. The repair recommendations shall include, but not be limited to, the location and type of repair warranted, the applicable quantities, and the level of urgency of the repair.

c. **Photographs:**

All photos will be in digital format. A photo log of the bridge and the surrounding areas must be included in the report. All pictures must be printed on 8 1/2" x 11" media with a maximum of two photos per sheet and labeled with a description.

d. **Field Notes and Sketches**

e. Lab Test Reports (if applicable)

MEETINGS

A mandatory Project Initiation Meeting will be held with the CONSULTANT before the start of the site inspection work. The CONSULTANT PM will be required to attend the meeting that will be held at the MDOT, Grand Region Office or at a location that is mutually agreed to.

The Project Initiation Meeting is intended to exchange information, discuss the general procedures for communication, and review the schedule. Safety and applicable emergency procedures will also be discussed, as well as open questions that remain. Additional MDOT Region and Statewide staff may attend the meeting.

Bi-Weekly Progress Meetings will be held during the field inspection phase. The Team Leader and inspection staff is expected to attend these meetings. An additional Progress Meeting will be held at the completion of the “draft” Report. The CONSULTANT PM and Team leader are expected to attend this meeting. These meetings will be held at the MDOT, Grand Region Office or at a location that is mutually agreed to.

The CONSULTANT will keep notes of these meetings and provide minutes to the MDOT PM within one week after the meeting.

EQUIPMENT

The CONSULTANT will be responsible for obtaining and operating the high reach equipment for inspection under the bridge. However, MDOT will provide an under bridge inspection crane for the CONSULTANT’s use in certain situations, for example, high river and railroad crossings.

Contact the MDOT PM a minimum of 21 days in advance for scheduling use of the equipment. The schedule of structure inspections may need to be modified depending on statewide availability of the under bridge crane. During the inspection, the Consultant is responsible for traffic control and all aspects of personal safety of his or her staff.

The CONSULTANT must provide the following equipment as suitable for the inspection of the bridge. The cost of the use of this equipment during the inspection is considered included in the Not to Exceed price.

1. Bucket Truck

The CONSULTANT will use a hydraulic manlift to gain access to the underside of the bridges that are not over water. The unit must be capable of quickly positioning the inspector to any location on the underside of the bridge for inspection or to prepare the area for inspection or NDT. Ladders will only be allowed for infrequent use where they will be faster than the manlift.

The CONSULTANT will be responsible for insuring the vehicle is safe for operation and

is operated in a safe manner utilizing all required safety equipment.

2. NDT

The inspection process does not require a lot of testing but sounding concrete for delaminations, checking for suspected cracks in steel, and measuring for section loss in areas of heavy corrosion is required.

The following equipment is necessary to perform these tests:

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

3. Cell Phone

While in the field, the Team Leader must have a cellular telephone. These numbers must be provided to the MDOT PM at the Project Initiation Meeting.

4. Camera

The CONSULTANT must have a digital camera that can clearly record the images necessary to convey the condition of the bridge.

5. Hand Tools

The CONSULTANT must provide the hand tools necessary to complete the inspection. Some of these are ladders, waders, hammers, lighting, marking chalk paint, measuring tapes, etc.

TRAFFIC CONTROL

A. Traffic Control & Permits

The traffic control during the site review will be the responsibility of the CONSULTANT. Permits for the traffic control and for working in the MDOT Right of Way must be obtained from the appropriate TSC prior to the start of work. Traffic control will follow standard MDOT procedures and typicals. The CONSULTANT will be responsible for obtaining all permits and notifying the appropriate TSC Permit Engineer in writing (with a

copy to the MDOT PM) of the time and location of the work. A copy of the proposed traffic control must also be submitted for approval with the permit. Nighttime lane closures for deck inspection may be allowed at the discretion of the MDOT TSC Traffic and Safety Engineer. Approval for nighttime work must be obtained prior to the start of work.

B. Railroad Flagging & Permits

If it is necessary to work over an active railroad during the site review phase, the CONSULTANT will be responsible for obtaining the necessary permits and flagmen. Costs for any permit fees or flagmen fees will be considered an expense and must be detailed in the traffic control section of the Proposal and on the invoice.

C. Region Traffic Control Requirements

A list of road specific lane closure durations and time restraints will be distributed at the project initiation meeting.

SAFETY

MDOT requires safe working operations. The CONSULTANT shall perform field operations in accordance with MIOSHA regulations and accepted safety practices.

The CONSULTANT must provide all of the necessary personal safety equipment (hard hat, reflective vest, steel toed shoes, eye protection, etc.) for each employee at the work site. All equipment must be in sound working order, meeting applicable inspections for safe operation.

It is not the responsibility of MDOT to verify the CONSULTANT's safety practices. However, the MDOT PM has the authority to have any individual who is found working unsafely, during the inspection services associated with the project, removed from the MDOT right of way. If the CONSULTANT is found to be working unsafely, the MDOT PM can stop all operations and terminate the contract.

EXISTING RECORDS AND DATA

MDOT will furnish the CONSULTANT access to any available pertinent information related to the structure(s) being inspected.

Information furnished to the CONSULTANT shall not be released or distributed to any outside agency without prior written permission from the MDOT PM.

CONSULTANT PAYMENT – Actual Cost Plus Fixed Fee:

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 the 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.

GENERAL

Release of information: The CONSULTANT may not release any information about the bridge or the inspection to anyone outside of MDOT. The CONSULTANT is not allowed to make copies of the information in the bridge files unless given prior written approval from the MDOT Project Manager.

References and Guidelines: The CONSULTANT is expected to be familiar with the following reference material:

- AASHTO Publications:

Manual for Condition Evaluation of Bridges
AASHTO Manual for Maintenance Inspection of Bridges

- Federal Highway Administration (FHWA) Publications:
 - Inspection of Fracture Critical Bridge Members
 - Bridge Inspectors Reference Manual (BIRM)
 - Underwater Inspection of Bridges
- National Bridge Inspection Standards (NBIS)
- American Welding Society
- MDOT Traffic and Safety Workzone Typicals
- Manual on Uniform Traffic Control Devices for Streets and Highways

APPENDICES

ATTACHMENT A – WORK PACKAGE LISTING

ATTACHMENT B – Detailed Beam Survey Report

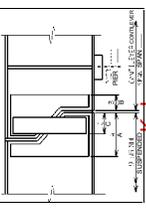
Attachment A - Work Package Listing

Bridge ID	Facility Carried	Featured Intersection	Location	Year Built/ Overlay	NBI Inspection Date
34062-X01	GTW RR (ABN)	M-21	1.0 Mile West of Pewamo	1932	04/21/09
41024-S05	Morse Lake Avenue	I-96	1.9 Miles West of M-50	1959	03/25/09
41024-S07	Segwun Road	I-96	1.7 Miles West of Ionia County Line	1959	10/15/09
41025-S09	I-196 WB	I-96 EB	Grand Rapids	1963	08/05/10
41025-S14	Cascade Road	I-96	1.0 Mile South of M-21	1961/1980	08/20/10
41027-S04	I-296 WB (US-131 SB)	I-296 EB (US-131 NB)	Grand Rapids	1963/1987	11/03/09
41031-X01	CSX RR	M-37	0.5 Miles South of M-11	1948	03/18/09
41131-R05	Wealthy Street	US-131	Grand Rapids	1962/1990	05/20/09
41131-S15	I-296 EB (US-131 NB)	I-296 WB (US-131 SB)	Grand Rapids	1963/1990	11/19/08
61072-S03	Sherman Road	US-31	2.3 Miles North of I-96	1960/1995	07/29/09
61151-S01	Broadway Avenue	US-31 BR	3.9 Miles Northwest of US-31	1955	11/24/08
61152-S01	Airline Road	US-31	US-31 & I-96 Interchange	1961/1987	08/26/09
61152-S02	Airline Road	US-31 Ramp from I-96	US-31 & I-96 Interchange	1961/1987	08/26/09
70016-S02	Ridge Street	US-31	Ferrysburg	1957	05/10/10
70016-S04	Taft Road	US-31	2.0 Miles North of M-104	1958	05/12/10

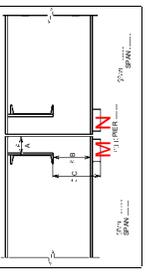


DETAILED BEAM SURVEY REPORT
(WELDED GIRDER OR ROLLED BEAM)

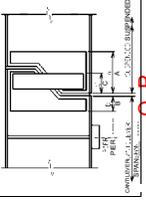
USE this form when TRAFFIC ON BRIDGE IS: WEST or EAST Bnd.



IF AT...PIER...
ex. span 1 w.



IF AT...PIER...
ex. span 2 w.



IF AT...PIER...
ex. span 2 w.

FACILITY CARRIED: _____
INSPECTED BY: _____
DATE: _____
REGION: _____
STRUCTURE NO.: _____

COMMENTS & references to photos and sketches

COMMENTS & references to photos and sketches

ALWAYS CIRCLE ABOVE TO NOTE APPLICABLE CASE USED IN FORM

span span 1 w. span 2 w.

PIER WEST/EAST

span span 1 w. span 2 w.

BEAM LINE #	WEB LOSS MEASUREMENTS		FLANGE LOSS MEASUREMENTS		REPORT		WEB LOSS MEASUREMENTS		FLANGE LOSS MEASUREMENTS		BEAM LINE #
	THICKNESS	HEIGHT RANGE	ACTUAL THICKNESS	LOSS LENGTH RANGE	LOSS	TRAFFIC	THICKNESS	HEIGHT RANGE	ACTUAL THICKNESS	LOSS LENGTH RANGE	
14 S						WEST / EAST					14 S
13 S											13 S
12 S											12 S
11 S											11 S
10 S											10 S
9 S											9 S
8 S											8 S
7 S											7 S
6 S											6 S
5 S											5 S
4 S											4 S
3 S											3 S
2 S											2 S
1 S											1 S

K M O

L N P

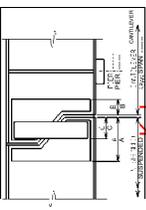
any freehand drawing this span

any freehand drawing this span

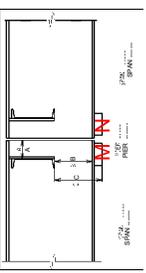


DETAILED BEAM SURVEY REPORT
(WELDED GIRDER OR ROLLED BEAM)

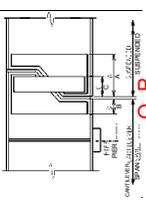
USE this form when TRAFFIC ON BRIDGE IS: **SOUTH or NORTH Bnd.**



IF at pin & hanger... THIS Side of pier



IF at... PIER ...



IF at pin & hanger... THIS Side of pier

FACILITY CARRIED: _____
INSPECTED BY: _____ DATE: _____
STRUCTURE NO. _____ REGION: _____

ALWAYS CIRCLE ABOVE TO NOTE APPLICABLE CASE USED IN FORM

span S
ex. span 2 S

PIER S
ex. PIER 1 S

span S
ex. span 2 S

COMMENTS & references to photos and sections

COMMENTS & references to photos and sections

BEAMLINE #	WEB LOSS MEASUREMENTS		FLANGE LOSS MEASUREMENTS		REPORT CASE		WEB LOSS MEASUREMENTS		FLANGE LOSS MEASUREMENTS		BEAMLINE #
	THICK LOSS	HEIGHT RANGE	ACTUAL	LOSS WIDTH RANGE	THICK LOSS	HEIGHT RANGE	THICK LOSS	HEIGHT RANGE	ACTUAL	LOSS WIDTH RANGE	
	START	END	START	END	START	END	START	END	START	END	
1 W											1 W
2 W											2 W
3 W											3 W
4 W											4 W
5 W											5 W
6 W											6 W
7 W											7 W
8 W											8 W
9 W											9 W
10 W											10 W
11 W											11 W
12 W											12 W
13 W											13 W
14 W											14 W

K M O

L N P

any freehand drawing this span