

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

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			CONSULTANT: Provide only checked items below in proposal	
Check the appropriate Tier in the box below				
TIER I (\$25,000-\$99,999)	TIER II (\$100,000-\$250,000)	TIER III (>\$250,000)		
			Understanding of Service	
			<i>Innovations</i>	
			<i>Safety Program</i>	
N/A			Organizational Chart	
			Qualifications of Team	
			Past Performance	
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 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)	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 _____

Prequalified Services – See page ___ 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 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	PROPOSAL/BID DUE DATE	TIME DUE
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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

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

Lansing Regular Mail

OR

Lansing Overnight Mail

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

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

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.)

MICHIGAN DEPARTMENT OF TRANSPORTATION

**SCOPE OF SERVICE
FOR
EARLY PRELIMINARY ENGINEERING DESIGN SERVICES
“AS-NEEDED” IN DEPTH BRIDGE INSPECTION**

CONTROL SECTION(S): 84917

JOB NUMBER(S): 108198

PROJECT LOCATION(S):

The bridges which may be included are located throughout the Metro Region (Macomb, Oakland, St Clair, and Wayne Counties).

PROJECT DESCRIPTION:

To perform "In-Depth" inspection of MDOT owned bridge structures in accordance with National Bridge Inspection Standards (NBIS).

Section 3 of the Bridge Inspection Reference Manual (BIRM) defines an “In-Depth” inspection as a close-up inspection of one or more members above or below 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.

Full-time service will not be required at all times. This scope is for “as-needed” engineering services, based on the intermittent needs of the department. MDOT staff will submit requests to the consultant’s point of contact. Every attempt will be made to submit requests at least one week prior to the need for personnel; however, it is expected that requests will be responded to within 48 hours.

Up to two consultants will be selected for this “as-needed” scope. The number of projects assigned to each consultant will be determined by future workload.

Project includes visiting the site for each structure and maintaining traffic to evaluate the bridges.

PRIMARY PREQUALIFICATION CLASSIFICATION:

Bridge Safety Inspections

SECONDARY PREQUALIFICATION CLASSIFICATION:

Bridge Project Scoping

ANTICIPATED START DATE: October 7, 2011

ANTICIPATED COMPLETION DATE: September 30, 2012

DBE REQUIREMENT: None

MDOT PROJECT MANAGER

Olukayode Adefeso, P.E.
Metro Region Management Bridge Engineer
18101 W. Nine Mile Road
Southfield, Michigan 48075
PM Office: (248) 483-5214
Fax: (248) 569-7718
E-mail adefesoo@michigan.gov

GENERAL INFORMATION

The Bridge Management Section of the Metro Region, Michigan Department of Transportation (MDOT) is seeking a proposal from a “Pre-Qualified” Consulting Engineering Firm (CONSULTANT) to perform in-depth inspections of bridge structures on state trunkline roads in accordance with the most recent version of the National Highway Institute Bridge Inspection Reference Manual.

DURATION & SCHEDULE

Work Plan & Schedule

The CONSULTANT must review the Scope of Service to develop a Work Plan that details the process of inspecting the specific elements for a typical bridge. The Work Plan will be submitted as part of the Priced Proposal. Changes to the Work Plan will be submitted to MDOT’s Project Manager for approval.

Following is a schedule of target dates for this project:

- | | |
|--------------------------------|----------------------------|
| 1. Priced Proposal Submission: | October 30th, 2011 |
| 2. Anticipated NTP: | November 7th, 2011 |
| 3. Project Initiation Meeting: | November 10th, 2011 |
| 4. Project Closeout Meeting | October 30th, 2012 |

The CONSULTANT must be prepared to begin the field inspection work within one week after receiving Notice to Proceed (NTP).

Coordination of lane closures and traffic control will be with the MDOT Project Manager, and the Local MDOT TSC. Lane closures will not be permitted during special local events/holidays without prior approval.

Meeting Dates

The CONSULTANT is required to attend a Project Initiation Meeting and Progress Meetings, which will be held at the MDOT Metro Region Office, or at a location that is mutually agreed to. The expected period for these meetings are shown below, however, these may be adjusted by MDOT.

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

Progress Meetings: Biweekly during the Field Inspection Phase

The Project Initiation 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 that remain. Additional MDOT region and statewide staff may attend the meeting.

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

GENERAL DESCRIPTION OF THE WORK

The work for each bridge in this authorization is separated into two main components: A) Site Inspection B) Report Preparation including supporting documents.

The CONSULTANT will provide a thorough structural inspection for each bridge element as required per the as needed scope. The report phase will identify current conditions of the bridge elements, the significance of the findings, and make repair recommendations.

The following provisions are the minimum for this scope. The consultant may elect to suggest activities that will improve the inspection or save costs:

A. SITE INSPECTION

Each bridge must be visited by the CONSULTANT PM and / or QTL. 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 must 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 are 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 scaling, lane closures, emergency repairs, temporary supports, etc.). The CONSULTANT will provide documentation of the condition (beam measurements, pictures taken, etc.) to MDOT as quickly as possible. A list of contacts will be provided at the Project Initiation Meeting.

The CONSULTANT must render a professional judgment as to the need for structural analysis of the given structure and recommend any temporary load restrictions and /or changes to the inspection frequency. The exception to this is when a crack occurs in an area that requires additional traffic control to test for the crack. In this case, the CONSULTANT must notify the MDOT PM with a "Request for Action" (RFA) form documenting the location of the crack and indicating how quickly the examination must take place.

All efforts shall be made by the CONSULTANT to perform a complete "In-Depth" inspection while on site.

1. Steel Beam End Inspection

For the structures 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 No. 1, Detailed Beam Survey Report). 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 end shall be cleaned as described in section (a). Thickness readings on the web and the bottom flange are to be measured at the thinnest locations within 5 feet of the end of the beam. Thickness readings must also be measured at the pin plates and link plates. If these are areas of heavy flaking rust, the consultant will clean as necessary to measure for any section loss. Structures with riveted pin plates shall be inspected and measured for section loss. If this is not feasible with an ultrasonic thickness gage due to material build up or bulging between the plates, the CONSULTANT shall notify the MDOT PM, and note it in the report. Check pin and hanger assemblies for proper operation. The CONSULTANT shall note whether the pin and hanger

assembly meets current standards. Note the condition of the pin plates, and if the beam ends are in contact due to pin and hanger closure.

- 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 on paper with narrative and photographs. The CONSULTANT must inform the MDOT PM prior to the testing so that arrangement may be made to witness the process.
- e. All surfaces where paint has been removed to bare steel shall be coated with primer prior to leaving the site.

2. Concrete Deck (Surface/Underside)

For the structures requiring Concrete Deck (Surface/Underside) inspection, below are the minimum items to be completed.

- a. The concrete deck surface/underside 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 will be sounded with a hammer or chain drag, and delaminated, spalled, and cracked areas will be marked with paint to be visible in photographs. Photos of the area must be taken and a written description of the deterioration 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. If possible, note as to whether the deck has previously been overlaid and if so, when and what type of material.

3. Substructure / Railing

- a. Sound all substructure and railing concrete elements (pier columns, caps, abutments, backwalls, etc.) for delamination and unsound areas. All delaminated areas are to be marked with paint that will be evident in the photographs. Sketches for each substructure and railing element mapping the areas of distress (cracks, delamination, spalls, etc.) are to be included in the appendix of the report. The percent of the total surface area distressed shall be calculated and shown on each sketch.

- b. Visually inspect all substructure and railing 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. Pictures of the substructure and railing elements must be taken and a written description of the deterioration and location must be documented for inclusion into the report.

4. Non Destructive Testing

The CONSULTANT may determine that other non-destructive testing beyond what is mentioned in the Scope of Service is needed to make a better judgment. However, such testing (ultrasonic, magnetic particle testing, acoustic emission, etc.) must be approved by MDOT's Project Manager. 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.

5. Scour

Stream and river bed scour has to be evaluated periodically to ensure that the foundation for the bridge has adequate support. The CONSULTANT will perform a scour check around all structural elements that are located in water up to six feet deep utilizing hands and probes. Substructure elements that are in water over six feet will be inspected by a diver under a separate contract.

Information on stream scour must be included in the report and, if there is any loss of bearing or undermining of a footing, this must be reported to the MDOT PM using a "Request For Action" (RFA) form. If the loss of bearing is sufficient to cause concern for the structural element to support the bridge, the CONSULTANT will notify the MDOT PM on an emergency basis.

B. REPORT PREPARATION

The deliverables for this scope of work will be the reports, photographs, printed worksheets, sketches, and notes. The reports 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 Project Manager. 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 reports. MDOT reserves the right to request additional drafts for review if, in the opinion of MDOT's Project Manager, the changes required are extensive. The contract will be unsatisfactory if the consultant fails to make changes to the reports as required by MDOT's Project Manager.

The CONSULTANT will submit two (2) copies of the final report for each bridge. The final report will also contain one Compact Disk (CD) with an electronic copy of the final report in pdf format and photographs.

1. 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 ½” x 11” media with a maximum of two photos per sheet and labeled with a description.

2. 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 the type of repair warranted, the applicable quantities, and the level of urgency of the repair.

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 14 days in advance for scheduling use of the equipment.

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 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. Boat

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

The CONSULTANT will be responsible for operation in a safe manner utilizing all

required safety equipment.

3. Computer

The CONSULTANT is required to have a laptop computer for field use and it must have Microsoft Excel and Word XP (2002 format) and Adobe Acrobat to use the electronic forms provided by MDOT.

4. 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

5. Cell Phone

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

6. Camera

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

7. Hand Tools

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

TRAFFIC CONTROL

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 Region prior to the start of work. Traffic control will follow standard MDOT Maintenance Work Zone Traffic Control Guidelines. The CONSULTANT will be

responsible for obtaining all permits and notifying the MDOT PM of the time and location of the work. Nighttime lane closures for deck inspection may be allowed, at the discretion of the MDOT Region Traffic and Safety Engineer. Approval for nighttime work must be obtained prior to the start of work.

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 this will be considered an expense and must be detailed on the consultant invoice.

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 removed from 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 is not be released or distributed to any outside agency without written permission from MDOT's Project Manager.

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 scope 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 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 variation to this rule should be included in the price proposal submitted by the CONSULTANT and must have prior written approval by the MDOT Project Manager.

The fixed fee for profit allowed for this project will be 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 written approval from the MDOT Project Manager.

References

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

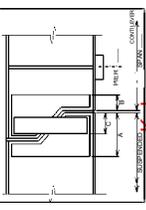
1. National Bridge Inspection Standards (NBIS) Federal Code of Regulations, 23 CFR 650.
2. AASHTO Manual for Condition Evaluation of Bridges, 1994, and subsequent interim changes or the most recent version.
3. Michigan Structure Inventory and Appraisal Coding Guide, latest edition.
4. Pontis Bridge Inspection Manual, latest edition.
5. FHWA Publications:
 - a. Bridge Inspector's Reference Manual (BIRM), latest edition.
 - b. Culvert Inspection Manual, Report No. FHWA-IP-86-2.
 - c. Inspection of Fracture Critical Bridge Members, Report No. FHWA-IP-86-26.
 - d. Recording and Coding Guide for the Structure Inventory and Appraisal of Nation's Bridges, Report No. FHWA-PD-96-001, December 95.

Attachment Number 1 – Detail Beam Survey Report

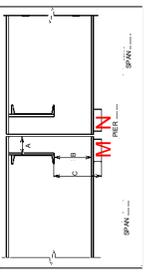


DETAILED BEAM SURVEY REPORT
(WELDED GIRDER OR ROLLED BEAM)

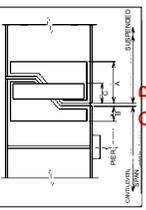
USE this form when TRAFFIC ON BRIDGE IS: WEST or EAST Bnd.



IF at pier & hanger, THIS Side of pier



IF at pier



IF at pier & hanger, THIS Side of pier

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

COMMENTS & references to photos and sketches

ALWAYS CIRCLE ABOVE TO NOTE APPLICABLE CASE USED IN FORM

PIER 1 W
ex. Pier 1 W

PIER 2 W
ex. Pier 2 W

span W
ex. span 2 W

WEB LOSS MEASUREMENTS		FLANGE LOSS MEASUREMENTS	
THICKNESS	HEIGHT RANGE	ACTUAL THICKNESS	LOSS LENGTH RANGE
LOST	START and END	LOSS WIDTH RANGE	START and END

WEB LOSS MEASUREMENTS		FLANGE LOSS MEASUREMENTS	
THICKNESS	HEIGHT RANGE	ACTUAL THICKNESS	LOSS LENGTH RANGE
LOST	START and END	LOSS WIDTH RANGE	START and END

WEB LOSS MEASUREMENTS		FLANGE LOSS MEASUREMENTS	
THICKNESS	HEIGHT RANGE	ACTUAL THICKNESS	LOSS LENGTH RANGE
LOST	START and END	LOSS WIDTH RANGE	START and END

BEAM LINE #	REPORT LOCATION	TRAFFIC	BRIDGE ID
14 S	WEST	WEST	14 S
13 S	WEST	WEST	13 S
12 S	WEST	WEST	12 S
11 S	WEST	WEST	11 S
10 S	WEST	WEST	10 S
9 S	WEST	WEST	9 S
8 S	WEST	WEST	8 S
7 S	WEST	WEST	7 S
6 S	WEST	WEST	6 S
5 S	WEST	WEST	5 S
4 S	WEST	WEST	4 S
3 S	WEST	WEST	3 S
2 S	WEST	WEST	2 S
1 S	WEST	WEST	1 S

BEAM LINE #	REPORT LOCATION	TRAFFIC	BRIDGE ID	BEAM END #	PIER	SPAN	FLANGE LOSS MEASUREMENTS	WEB LOSS MEASUREMENTS	COMMENTS & references to photos and sketches
14 S	WEST	WEST	14 S	14 S	PIER 1 W	span W			
13 S	WEST	WEST	13 S	13 S	PIER 2 W	span W			
12 S	WEST	WEST	12 S	12 S	PIER 2 W	span W			
11 S	WEST	WEST	11 S	11 S	PIER 2 W	span W			
10 S	WEST	WEST	10 S	10 S	PIER 2 W	span W			
9 S	WEST	WEST	9 S	9 S	PIER 2 W	span W			
8 S	WEST	WEST	8 S	8 S	PIER 2 W	span W			
7 S	WEST	WEST	7 S	7 S	PIER 2 W	span W			
6 S	WEST	WEST	6 S	6 S	PIER 2 W	span W			
5 S	WEST	WEST	5 S	5 S	PIER 2 W	span W			
4 S	WEST	WEST	4 S	4 S	PIER 2 W	span W			
3 S	WEST	WEST	3 S	3 S	PIER 2 W	span W			
2 S	WEST	WEST	2 S	2 S	PIER 2 W	span W			
1 S	WEST	WEST	1 S	1 S	PIER 2 W	span W			

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