

State of New Jersey
NEW JERSEY DEPARTMENT OF TRANSPORTATION
1035 PARKWAY AVENUE
P.O. Box 600
TRENTON, NEW JERSEY 08625-0600

Bridge Owners Symbol Goes Here - Symbol gives owners name and a graphic (need way to pull proper symbol from a DB of symbols. One for State, One for each County, One for each township that owns bridges. If no symbol, one needs to be created by consultant using text)

Photo of structure. Approximately 6" wide by 4" tall

add: MINOR

BRIDGE RE-EVALUATION SURVEY REPORT

RE-EVALUATION for any report beyond 1st Cycle

General Notes:

1. Although I have called out a few Pontis Items on this page, the need to pull data from Pontis will be considered standard from here forward.
2. This markup is based on a template of the report available in 2010, and is primarily intended to reflect our thinking on how to implement this report in a DB. Any DB based implementation will have to reflect the current model.

STATE STRUCTURE NO. ####-###
I-# OVER XX ROAD AND XX RIVER OR RAILROAD
XX BOROUGH AND/OR TOWNSHIP
XX COUNTY

Add below Structure No.:
County Structure No. 123456789012
(Note: Allow up to 15 digits including dashes and periods)

CYCLE No. 1 This comes from SI&A/Pontis item CI

MONTH DD, YYYY This comes from SI&A/Pontis item 90 (INSPDATE).

Consultant's Symbol Goes Here - Symbol gives owners name and a graphic (need way to pull proper symbol from a DB of Consultant symbols.)

Prepared By:
XYZ Consultant
321 Main Street
Trenton, NJ 08625-0600

NOTE: Red Text with Yellow Highlight is included throughout our template report to aid the consultants creating the reports. For this document, in some instances, this "Guidance Text" is left in the report to help with your understanding for the DB implementation process. This text SHOULD NOT appear in the actual finished report itself!

The fields at left should constitute the names and office addresses of the consultant or consultants working on this project. It will be the same for all reports in a given project. Up to six lines needs to be able to be input once for the project and then reflects on all reports in the project.

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Additional Entries as appropriate (based on sections checked off as being included in the report)

Maps, Historical Information, and Bridge Description are required for Format A and Format B Reports only (not required for Routine [Format C] Inspection Reports. See below for details.

NJDOT uses four main report types:

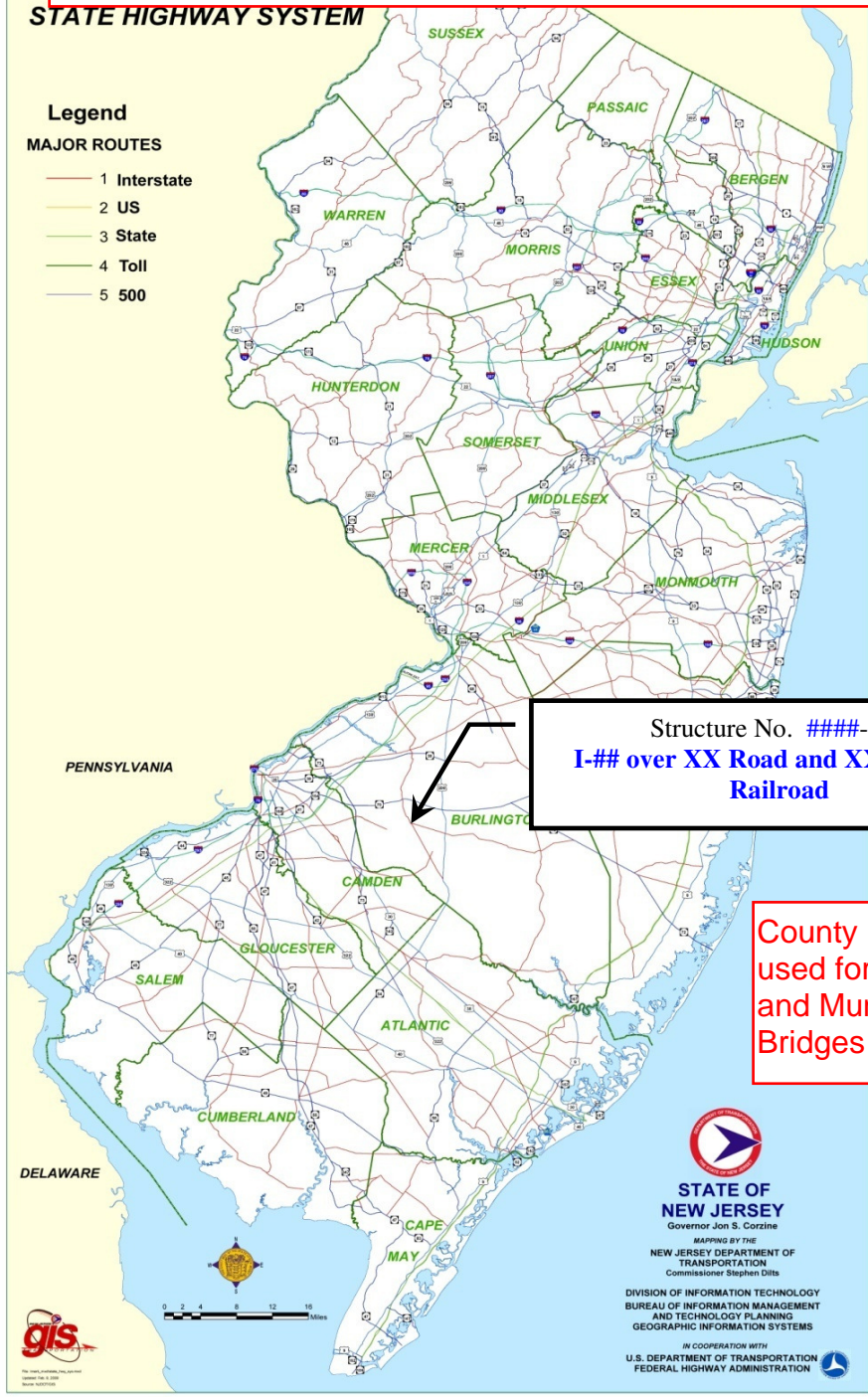
1. Format A: First-Cycle Inspection of a Structure (typically a newly-constructed bridge)
2. Format B: The first inspection on a structure after it has undergone major rehab. (deck replacement, widening, etc.).
3. Format C: A typical routine inspection report on a structure (most common)
4. Interim - An abbreviated Inspection report that is submitted in between routine inspection reports

This document shows all fields that are typically included in our Format A, B, and C reports. For any fields (or sections) that are not included in a particular format, we have made note.

This document does not provide any details on Interim Reports. Interim Reports consist of a brief report format that will not require any of its own fields, but will rather pull several sections from this report.

LOCATION MAP

This section is only included in Format A and Format B reports (Not Format C, Routine Inspection Reports).

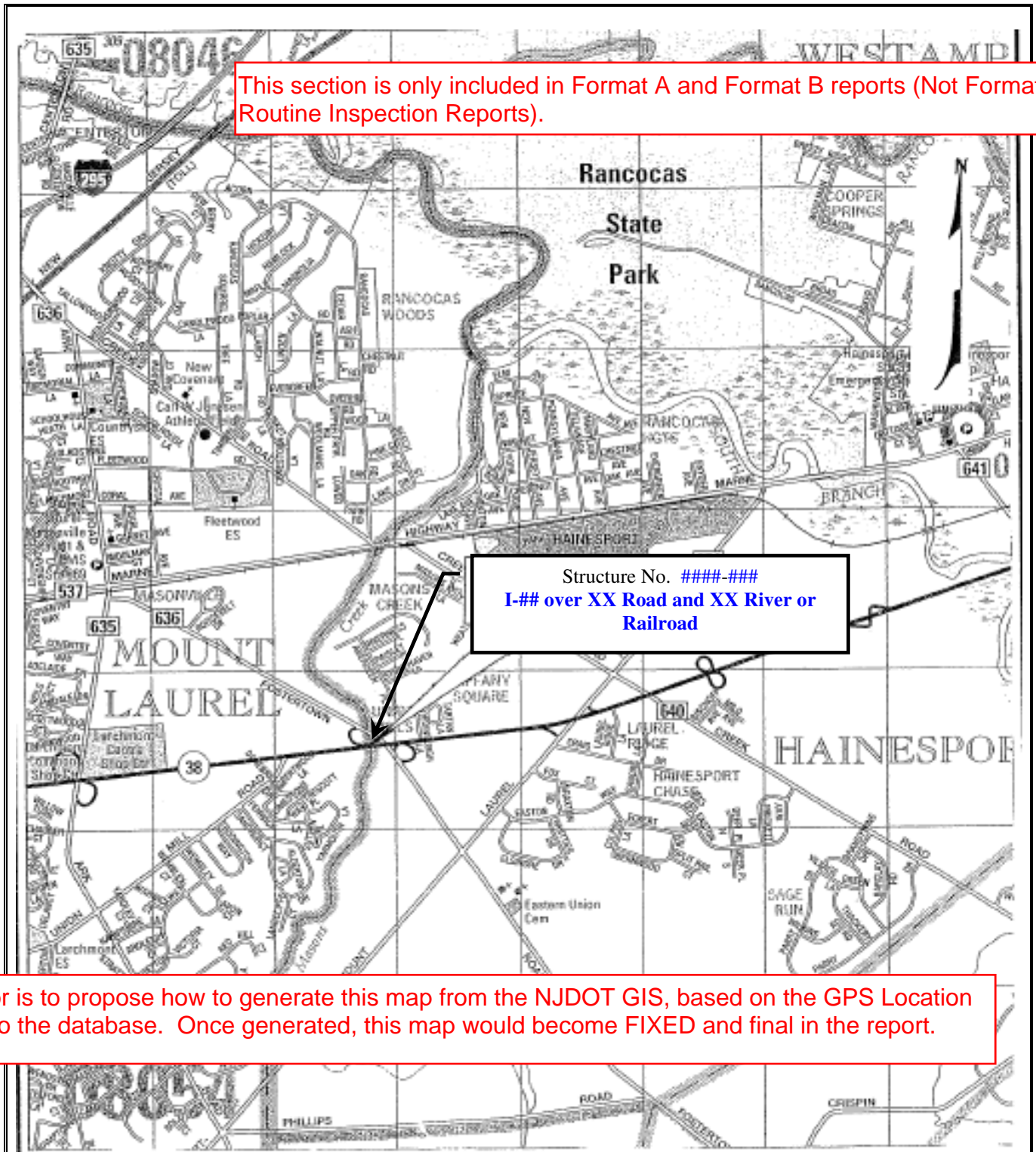


Structure No. ####-###
I-## over XX Road and XX River or Railroad

County Map will be used for County and Municipal Bridges

New Jersey Department of Transportation		GENERAL SITE MAP	GPS Location	
			Latitude	YY.YYYYYY
Insp. Date:	MM/DD/YYYY		Longitude	-ZZ.ZZZZZ

LOCATION MAP



Vendor is to propose how to generate this map from the NJDOT GIS, based on the GPS Location input to the database. Once generated, this map would become FIXED and final in the report.

New Jersey Department of Transportation		LOCAL SITE MAP	GPS Location	
			Latitude	YY.YYYYY
Insp. Date:	MM/DD/YYYY		Longitude	-ZZ.ZZZZZ

**N.J.D.O.T. - STRUCTURAL EVALUATION
RE-EVALUATION BRIDGE SURVEY REPORT**

CYCLE NO. 1

STRUCTURAL DATA:

Bridge No.: #### - ### County Str. No. 123456789012345	Year Built:	Widened/Rehab:
Route No.:	Length:	Width:
Mile Point:	Date of this Evaluation: MM/DD/YYYY	
Municipality:	By:	
	Date of Previous Evaluation: MM/DD/YYYY	
County:	By: Not included in Format A, 1st Cycle Reports	
	Special Equipment Used:	
Name: I-## over XX Road and XX River or Railroad	Date of FCM/Pin hanger Inspection: MM/DD/YYYY	
	By:	
Structure Type:	Date of Underwater/Fathometric Inspection: MM/DD/YYYY	
	By:	
	Date of Special Testing: MM/DD/YYYY	
	Date of Elec./Mech. Inspection (Level: II): MM/DD/YYYY	
	Scour Critical: Yes / No	

WORK DONE: Not included in Format A, 1st Cycle Reports

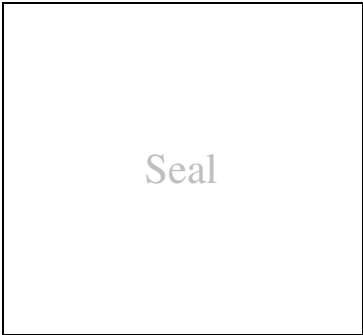
OVERALL PHYSICAL CONDITION: Based on least of Items 59,60,62

OVERALL CONDITION (ITEM 67):

Inspection Team Leader: (full name) _____	Initials: _____
Certifying Engineer: (full name) _____	
N.J. P.E. Number: _____	

I certify that this report is an accurate description of the subject structure, to the extent determinable by visual inspection and testing performed.

Signature: _____
Date: _____



For reports printed electronically, must show the following in this box "Original Signed and Sealed" Consultant would need to be able to chack/uncheck something to show this. They also need to be able to print a "clean" sheet for actual sealing.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

<u>COMPONENT/MATERIAL</u>	<u>CONDITION RATING</u>	<u>REMARKS</u>
DECK (XXXXX)	Excellent / Very Good / Good/ etc.	
APPROACHES (XXXXX)	Excellent / Very Good / Good/ etc.	
SUPERSTRUCTURE (XXXXX)	Excellent / Very Good / Good/ etc.	
SUBSTRUCTURE (XXXXX)	Excellent / Very Good / Good/ etc.	
WATERWAY/CHANNEL	Excellent / Very Good / Good/ etc.	
SAFETY FEATURES	####	
DECK GEOMETRY	9 / 8 / 7 / etc.	XXXXXX
UTILITIES	Excellent / Very Good / Good/ etc.	

The minimum vertical underclearance is ##.## ft. under XXXXXXXXXX

The lateral underclearances are: Left: ##.## ft. Right: ##.## ft.

For waterways include horizontal and vertical clearances of the main channel span.

This section is only included in Format A and Format B reports (Not Format C, Routine Inspection Reports).
 They consist of the following:

- Component (such as Superstructure)
- Material (description of component - such as: Single span, reinforced concrete slab under an average of 2.5' fill) - shown as XXXXX above
- Condition Rating (from Pontis)
- General remarks

CONCLUSIONS AND RECOMMENDATIONS:

- Section 1.** Provide the overall condition of the structure and indicate which item controls (Item 59, 60, 62, or Inventory Rating).
- Section 2.** Provide comments on any components rated at 6 or below. Comments should provide general summary of the defects causing the condition rating of 6 or less.
- Section 3.** Indicate any changes since the previous cycle. Provide justification for any upgrades or downgrades of Items 58, 59, 60, 61 or 62.
- Section 4.** Provide a list and description of any fracture critical members. Provide a brief summary of in-depth FCM inspection findings if applicable.
- Section 5.** Comment on conditions that require revisions to the load rating calculations.
- Section 6.** Provide statement on scour potential. For scour critical bridges, include proposed countermeasures with costs under major work section below. Include the findings of "Underwater Inspection Report". If underwater inspection was done during current or previous (last) cycle, include a copy of the report.
- Section 7.** Indicate reasons why the structure is structurally deficient and/or functionally obsolete, if applicable. Provide a major work statement and major work details (including escalated costs). For scour critical structures, include improvement costs from NJDOT Memorandum dated May 2, 2008 titled "Bridge Scour Countermeasures Conceptual Design and Cost Estimates for Inspection Reports". Provide an interim work statement and interim work details (including escalated costs, in order of priority).
- Section 8.** Indicate any required priority repair work, and reference to priority repair letter at end of report.
- Section 9.** Provide recommendations for interim inspections, monitoring of any elements, etc.

Use all applicable sections. If a section is not applicable to a particular structure, delete the entire row from the template.

Sections 3 and 5 are only applicable to Format B and C Reports, Not Format A, First Cycle

This section needs the following structure:
Major Work Statement
Major Work Detail
Interim Work Statement
Interim Work Detail
Priority Repair Work Statement
Each Priority Repair Listed - see next page for detail

Priority Repairs

The way Priority Repairs are handled by the new system will need to be carefully structured as Priority Repair letters (some States call them flag letters) will be issued out of this data.

Therefore, Priority Repairs actually exist as sub-documents that also have a life of their own. This needs to be provided for.

For each item:

TAG the priority.

Our current Priority Repair categories are:

Priority E (or could be 0) - Emergency - do immediately

Priority 1 - High - do within 30 days

Priority 2 - Medium - do within 90 days

Priority 3 - normal maintenance items

(Note: We have noticed that other states use more priority designations, for example one for roadway items. At present, the above is our system.)

TAG the TYPE of priority

We have seen lists from other States. We will adopt a variation of one of these.

Additional items - per priority (There must be the ability to define each piece of work separately)

- Date
- Consultant Statement of Problem
- Consultant Statement of proposed solution
- Consultant Statement of proposed INTERIM solution (only show if checked)
- Owners Statement of recommendation
- State (or County when reviewing a Township culvert?) Statement of recommendation
- Provide ability to combine several into one letter (however, we will require Priority Repairs for each structure to stand alone, so there will be no need to try to combine across structures).

Additional items - needed in order for each priority letter to be system issued:

Date Letter issued

Assigned to

Date assigned

Date Work Completed

What was Done

By whom

Checkoff to indicate Interim solution is resolved

Checkoff to indicate (final) solution is resolved

Structure No.: ####-### Route: ## Cycle No.: 1
Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

HISTORICAL INFORMATION:

Indicate the structure number, the structure name, and the year constructed. Indicate the reason for a new structure (replacement, new roadway or extension, new ramp, elimination of at-grade crossing, etc). Indicate the authority maintaining the structure.

This section is only included in Format A and Format B reports (Not Format C, Routine Inspection Reports).

BRIDGE DESCRIPTION: See Sample Reports for additional clarification

Indicate the municipality and county of the structure.

Indicate the designer and design specification(s) used. Indicate the design live loads, as well as the allowable design stresses for each material.

Indicate the type of structure

Indicate the span length, total length and NBIS length of the structure.

Indicate the features of the deck, including thickness, width(s), reinforcement, parapets, railings, median, sidewalks, lanes, shoulders, etc.

Indicate the features of the superstructure, including beams (quantity and type), span type (simply-supported, continuous), bearing type, etc.

Indicate the features of the substructure, including abutment types, pier types, etc. Provide width of waterway opening(s), if applicable.

This section is only included in Format A and Format B reports (Not Format C, Routine Inspection Reports).

Structure No.: ####-### Route: ## Cycle No.: 1
Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SI&A AND PONTIS DATA:

The next few pages are the Pontis data output. This format of how these pages will look in the new system is negotiable.
(Note: We will provide you with sample sheets (BRG) that suggest a screen by screen approach to organizing this data based on a combination of Federal and NJDOT fields.)

Structure No.: ####-### Route: ## Cycle No.: 1
Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

LOAD RATING SUMMARY SHEET (LRSS)

(Form NJ-BI-101 Created 1/14/2010)

Project Information:

Group: _____ Agreement No.: _____ Contract ID: _____ Agree/Mod No.: _____

Rating Information:

Method: LRF: Yes / No LFR: Yes / No ASR: Yes / No Other (Specify): _____

Rating Date: _____ Computer Software Used: _____ Version: _____

Load Testing: Yes / No Cycle Rating Performed: _____ Design Load: _____

Structure Information:

Plans Available? Yes / No Contract Designation: _____

Overlay? Yes / No Considered in Rating? Yes / No Type/Thickness: _____

Section Losses? Yes / No Considered in Rating? Yes / No Item 59: _____

For LRF Use Only:

Surface Roughness Factor: _____ Condition Factor: _____ System Factor: _____

ADTT (one direction): _____ Resistance Factor: _____ FCM: Yes / No

Load Rating Engineer (LRE):

Name: _____ Firm: _____ Initial: _____

Load Rating Reviewer (LRR) certification as per the NBIS Title 23 CFR Section 650.309(c):

Name: _____ N.J. P.E. No.: _____

Firm: _____

I certify that this rating is an accurate representation of the subject structure, considering all deterioration and/or changes to loading conditions, to the extent determinable by research and visual inspection and testing performed. I am charged with the overall responsibility for bridge capacity evaluation for the above mentioned structure.

Sign and Seal if
Rating Performed
in this Cycle

Only sign, date, and seal if ratings completed this cycle

Sign

Date

Ratings are not performed every cycle. If ratings are performed in current report cycle, then the signature, date, and seal must be provided. If ratings are not performed in current cycle, these fields should remain blank (all other fields on the sheet, including LRR, LRE Initials, LRR Firm, and NJ P.E. License Number, should always be filled, regardless of when rating was performed).

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

LOAD RATING SUMMARY SHEET (LRSS) (cont.)

Rating Comments:

List any assumptions. List any comments on posting requirements. Indicate the specific reason(s) for rating the bridge. Indicate all superstructure members that have not been considered in this rating. If non-standard rating software is used, indicate methodology used for rating calculations. List any considerations that may simplify future ratings. Add lines as necessary.

The Load Factor/Working Stress and LRFR ratings, computed in accordance with the FHWA directive dated November 1993 and AASHTO Manual for Bridge Evaluation, 2008, as modified by Section 43 of the New Jersey Department of Transportation Design Manual, Bridges and Structures, are as follows:

<u>Material</u> add/delete as necessary	<u>Compressive Strength f'c</u>	<u>Allowable Stresses (Psi)</u>			
		<u>Yield</u>	<u>Inventory</u>	<u>Operating</u>	
Concrete					
Concrete (Beam)					
Structural Steel					
Reinforcing Steel					

<u>Member</u>	<u>Truck Type (Tons)</u>	<u>Rating (Tons) / Rating Factor</u>							
		<u>Load Factor/ Working Stress</u>				<u>LRFR</u>			
		<u>As-Built</u>		<u>As-Insp.</u>		<u>As-Built</u>		<u>As-Insp.</u>	
		<u>Inv.</u>	<u>Op.</u>	<u>Inv.</u>	<u>Op.</u>	<u>Inv.</u>	<u>Op.</u>	<u>Inv.</u>	<u>Op.</u>
Interior Stringer * Center Span, S-6 Cond. Rating = #	HS-15 (15T)								
Include the location(s) and remaining section (in inches) of any section loss, if applicable.	HS-20 (36T)								
	3 (25T)								
	3S2 (40T)								
	3-3 (40T)								
	HL-93 (15T)	---	---	---	---				
Interior Stringer * South Span, S-3 Cond. Rating = #	HS-15 (15T)								
Include the location(s) and remaining section (in inches) of any section loss, if applicable.	HS-20 (36T)								
	3 (25T)								
	3S2 (40T)								
	3-3 (40T)								
	HL-93 (15T)	---	---	---	---				

* Controlling Member

Structure No.: ####-### Route: ## Cycle No.: 1
Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

DRAWING(S):

These pages contain typical drawings (including soundings and clearances).
We will specify that these be either TIF, BMP, or PDF files.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

<p style="text-align: center;">Photographs for Inspection Reports must include (IN ORDER):</p> <ol style="list-style-type: none"> 1. North or East Elevation 2. South or West Elevation 3. Roadway looking North or East 4. Roadway looking South or West 5. Upstream channel, taken from centerline of waterway beneath centerline of structure (if applicable) 6. Downstream channel, taken from centerline of waterway beneath centerline of structure (if applicable) 7. Underside (at least one photo for each type of superstructure, culvert, etc.) 8. Defects requiring a Priority E, I, or II repair. 9. Typical defects of elements rated at 6 or below (if applicable) 10. Any condition requiring monitoring from cycle to cycle (crack propagation, bearing rotation, settlement, etc.) 11. Posting signs (if applicable) 12. Work done since previous inspection (routine or interim, if applicable). Also include any work done on an emergency basis at time of inspection. 13. Special Equipment used for inspection (if applicable) 	<p>Photo No: 1-01</p>
---	------------------------------

Location:	Selected from standard list
Description:	

<div style="border: 1px solid red; padding: 10px;"> <p>The title Photo No. 1-## we would prefer to be below rather than to the right. This will leave more room for a wider photo. (the number 1 refers to the cycle number).</p> <p>OR, there could be 2 formats for photos - one for landscape orientation, and one for portrait orientation</p> <p>There needs to be the ability to display a panoramic photo in some manner, possibly as one photo per page running vertically. In this case, think of the above all being rotated 90 degrees.</p> </div>	<p>Photo No: 1-02</p>
---	------------------------------

Location:	
Description:	

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

NEW JERSEY DEPARTMENT OF TRANSPORTATION (Owner)
STRUCTURAL EVALUATION
FIELD NOTES

Inspectors: _____ Name: I-## over XX Road and XX River or Railroad
 Crew Chief: _____
 Temperature: ##°F Weather: _____
 Special Equipment Used: _____

RATINGS: (Highlight or bold the applicable rating which is coded for overall condition of structure)

- N Not applicable.
- 9 Excellent Condition.
- 8 Very Good Condition – no problems noted.
- 7 Good Condition – some minor problems.
- 6 Satisfactory Condition – some minor deterioration of structural elements.
- 5 Fair Condition – minor section loss to primary structural elements.
- 4 Poor Condition – advanced section loss to primary structural elements.
- 3 Serious Condition – seriously deteriorated primary structural elements.
- 2 Critical Condition – facility should be closed until repairs are made.
- 1 Imminent Failure Condition – facility closed. Study of repairs is feasible.
- 0 Failed Condition – facility is closed and beyond repair.

GPS COORDINATES		
@ XXXXXXXXX corner		
Lat.	N	YY.YYYYY
Long.	W	-ZZ.ZZZZZ

GENERAL

Type of Bridge: _____

Year Built: _____ Year of Widening / Major Repairs: _____

No. of Lanes: On _____ Under _____

Vertical Clearances: Over Deck: _____

Minimum Under: _____

Maximum Under (Item 10): _____

Horizontal Underclearance: Total Horizontal Clearance: _____

Right _____

Left _____

Overall Physical Condition of Structure: _____

Individual database entries must be provided for all the fields above as none of the data above is from Pontis (with the exception of the Bridge Name).

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

DECK

SI&A Item 58 Condition Rating: _____

SPAN # _____

Non-Applicable Field Notes sheets should not be included in reports.

RATING	COMPONENT	REMARKS
	Wearing Surface / Top of Deck	
	Underside of Deck	
	Median	
	Curbs	
	Sidewalks / Safetywalks	
	Parapets/ Balustrades	
	Railings / Fencing	
	Deck Joints / Filler Material	
	Drains and Scuppers	
	Light Stands	
	Utilities	
	Others	

**Additional
Remarks:**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

ROADWAY

SI&A Item BA Rating: _____

SI&A Item 72 Rating: _____

RATING	COMPONENT	REMARKS
	Top of Roadway	
	Curbs	
	Sidewalks/ Safetywalk	
	Median	
	Parapets/Balustrades	
	Railings	
	Guide Rail Condition	
	Approach Roadway Vertical and Horizontal Alignment	
	Approach Roadway Embankment	
	Utilities	
	Others	

**Additional
Remarks:**

Note: ROADWAY field notes are to be used for Culverts (with fill or without fill), or for Arches and Frames ONLY when fill is present. The field notes should indicate the overall condition of both approaches and the roadway over the structure.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

CULVERT

SI&A Item 62 Condition Rating: _____

SPAN # _____

Multiple sheets may be necessary for additional spans.

RATING	COMPONENT	REMARKS
	Roof Slab	
	Side Walls/ Center Walls	
	Floor Slabs	
	Headwalls	
	Wingwalls	
	Others	

**Additional
Remarks:**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

APPROACHES

SI&A Item BA Rating: _____

SI&A Item 72 Rating: _____

APPROACH South or West

RATING	COMPONENT	REMARKS
	Approach Slab / Pavement	
	Approach Shoulder	
	Approach Roadway Vertical and Horizontal Alignment	
	Guide Rail Condition	
	Sidewalks	
	Curbs	
	Utilities	
	Approach Roadway Embankment	
	Others	

Additional Remarks:

Note: APPROACHES field notes are not applicable for Arches, Culverts and Frames with fill; instead use ROADWAY sheet only.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

APPROACHES

SI&A Item BA Rating: _____

SI&A Item 72 Rating: _____

APPROACH (North or East)

RATING	COMPONENT	REMARKS
	Approach Slab / Pavement	
	Approach Shoulder	
	Approach Roadway Vertical and Horizontal Alignment	
	Guide Rail Condition	
	Sidewalks	
	Curbs	
	Utilities	
	Approach Roadway Embankment	
	Others	

Additional Remarks:

Note: APPROACHES field notes are not applicable for Arches, Culverts and Frames with fill; instead use ROADWAY sheet only.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: _____

SPAN # _____

Multiple sheets may be necessary for additional spans.

RATING	COMPONENT	REMARKS
	## Stringers / Girders/ Floorbeams/ Trusses/ P/S. Beams (Stringers numbered XXXX to XXXX)	
	Diaphragms / Cross Frames	
	Bearings	
	Deflection and Vibration	
	Others	

**Additional
Remarks:**

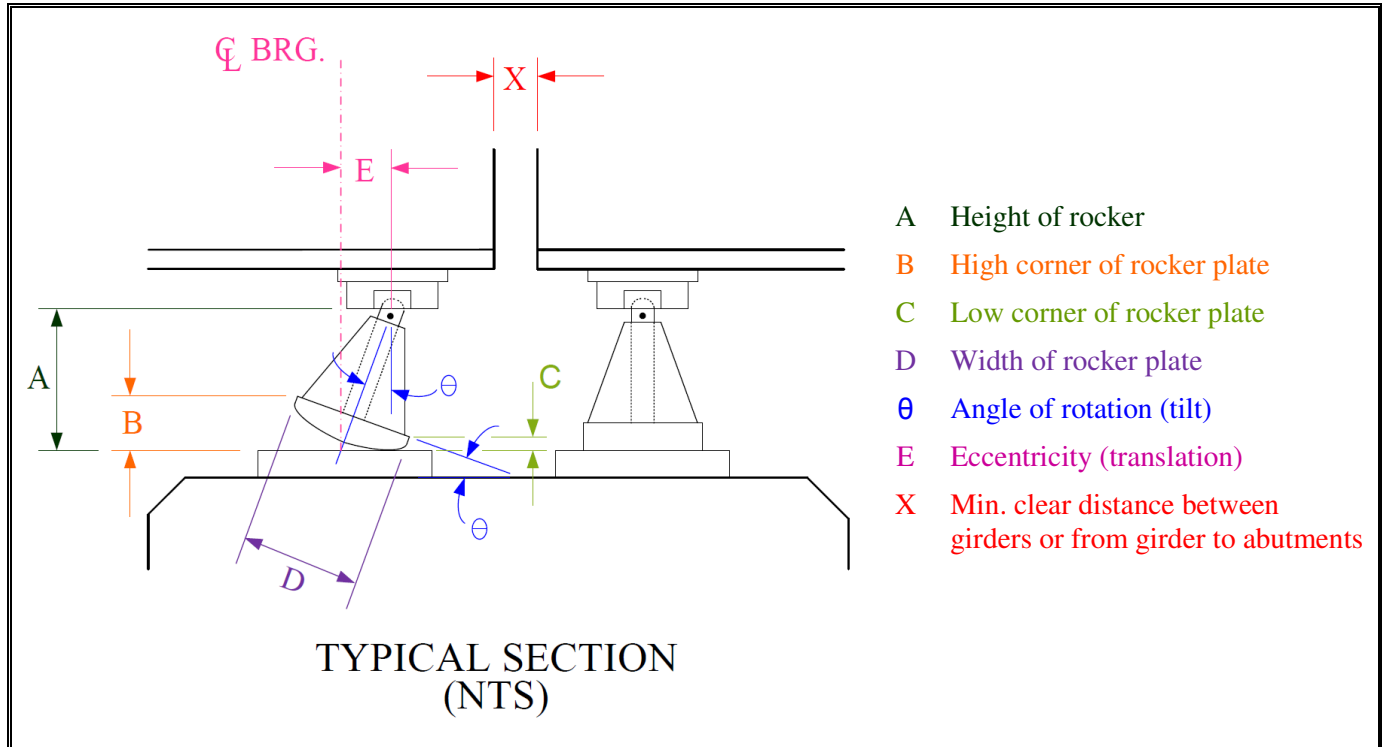
FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = X%

Category	Detail Description and Location
N/A	

SUPERSTRUCTURE
(ROCKER BEARINGS)

SI&A Item 59 Condition Rating: _____



- A Height of rocker
- B High corner of rocker plate
- C Low corner of rocker plate
- D Width of rocker plate
- θ Angle of rotation (tilt)
- E Eccentricity (translation)
- X Min. clear distance between girders or from girder to abutments

DIMENSIONS – HISTORICAL RECORD

Date	Cycle	Bearing Location	Temp. (°F)	A (in.)	B (in.)	C (in.)	D (in.)	θ (deg.)	E (in.)	X (in.)

Note: Place measurements from current cycle at top of table. The report must contain measurements from a minimum of 4 cycles (current and three previous, if available). Use additional page(s) if necessary.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUPERSTRUCTURE
(PIN AND HANGER)

SI&A Item 59 Condition Rating: _____

Multiple sheets may be necessary for additional spans.

SPAN #: _____ STRINGER #: _____ TEMPERATURE: _____
 ACCESS: _____
 LOCATION OF PIN & HANGER: _____

RATING	COMPONENT	REMARKS
	Left Hanger Plate	
	Right Hanger Plate	
	Upper Pin	
	Lower Pin	
	Stringer No. 1	
	Stringer No. 2	
	Wind Lock	

GENERAL NOTES & DIMENSIONS

Location of Cracks	
Warping, Cracking, or Distortion of Left Hanger Plate	
Warping, Cracking, or Distortion of Right Hanger Plate	
Lateral Slippage of Upper Pin at Hole	<p style="text-align: center;">Typical Pin & Hanger Connection (NTS)</p>
Lateral Slippage of Lower Pin at Hole	
Pin Size	
Pin Nut Size	
Hanger Plate Size	
Reinforcing Plate Size	
Length of Cantilever Stringer	
Length of Suspended Stringer	
Vert. Distance between Upper & Lower Pins	
Horiz. Distance between Upper & Lower Pins	
Horiz. Gap between Web Plates at Upper Pin Level (A)	
Horiz. Gap between Web Plates at Lower Pin Level (B)	

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: _____

(ARCH)

Multiple sheets may be necessary for additional spans.

SPAN # _____

RATING	COMPONENT	REMARKS
	Intrados of Arch (Soffit) Arch Ribs	
	Spandrel Columns/ Extrados	
	Spandrel Walls	
	Others	

**Additional
Remarks:**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUPERSTRUCTURE
(RIGID FRAME)

SI&A Item 59 Condition Rating: _____

Multiple sheets may be necessary for additional spans.

SPAN # _____

RATING	COMPONENT	REMARKS
	Intrados of Frame	
	Legs of Frame	
	Spandrel Walls	
	Others	

**Additional
Remarks:**

PAINT INSPECTION

*Environment: _____

Date of Last Painting: _____

- 1. Rural or Industrial, Mild exposure
 - 2. Industrial, Severe Exposure
 - 3A. Marine, Mild Exposure
 - 3B. Marine, Severe Exposure
- *Ref. NJDOT Design Manual Sec. 1.24.19

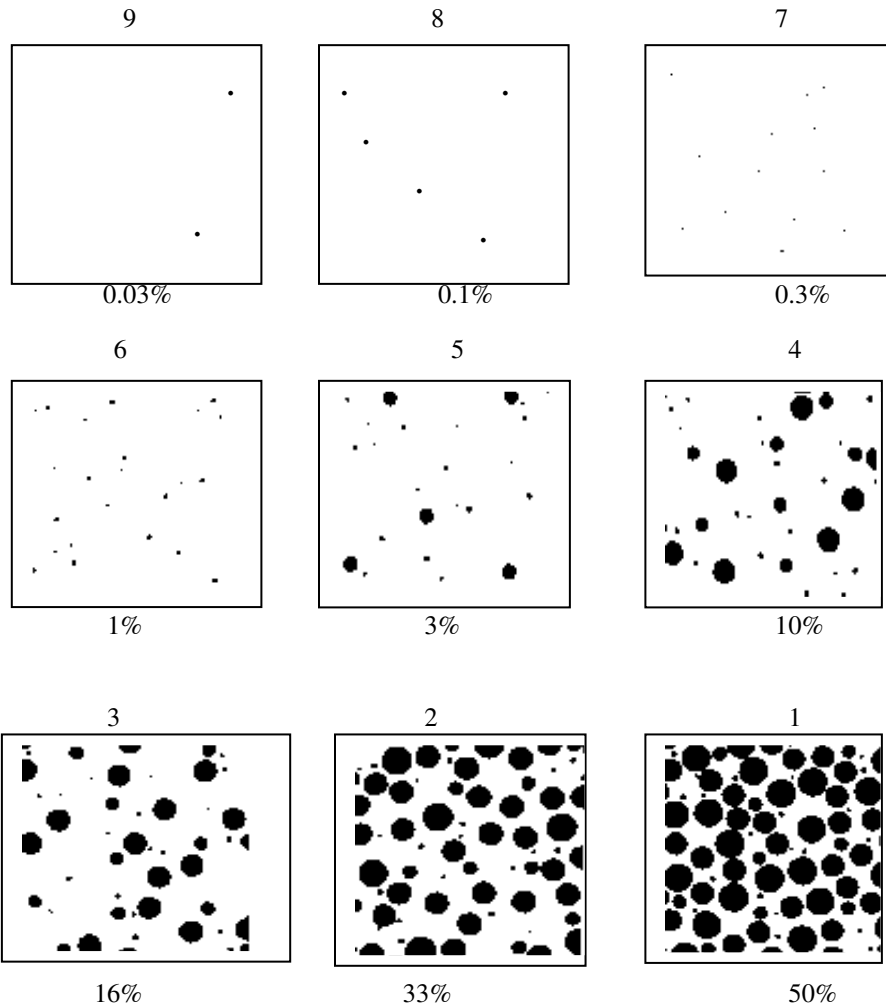


FIG. 1 Examples of Area Percentages

Notes: Blistered Paint areas are counted as rust

10 = 0% Rust
0 = 100% Rust

Use the closest rating to the actual field condition based on the average for the bridge. Indicate any areas of severe rusting in remarks.

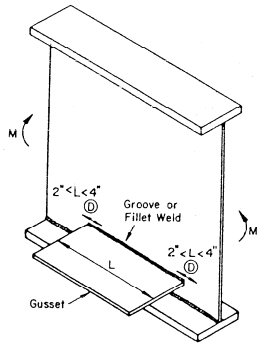
For structures composed of weathering steel, this sheet should be used to rate the effectiveness of the iron oxide coating (see Appendix G from the state coding guide). For beam ends, use the controlling rating (paint or oxide coating).

INSPECTION RATINGS (0 THROUGH 10 OR N/A)

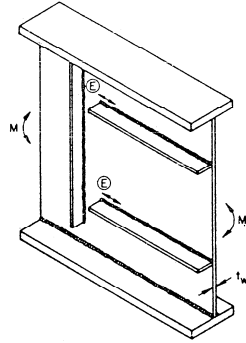
Fascia Beam: _____ Fascia Bottom Flange: _____ Beams Ends: _____
 Interior Beam: _____ Interior Bottom Flange: _____ Connections: _____
 Bracing: _____ Substructure: _____ Railings/Fence: _____
 Bearings: _____ Above Deck Superstructure _____

Remarks 1: _____
 Remarks 2: _____

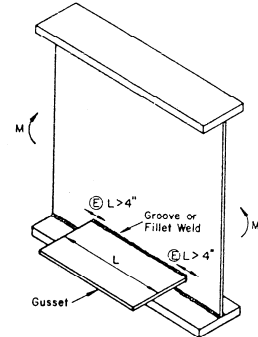
TYPICAL FATIGUE DETAILS (Highlight applicable detail(s), remove sheet if none are applicable)



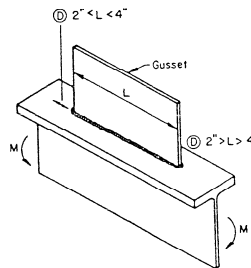
Short Wed Gusset Plate $L < 4$ in. Category D
Detail 1



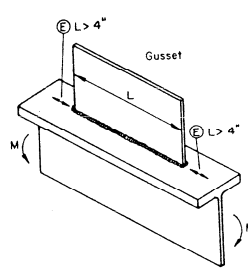
Termination of Longitudinal Stiffeners
Category E
Detail 2



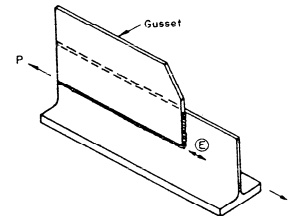
Web Gusset Plate Category E
Detail 3



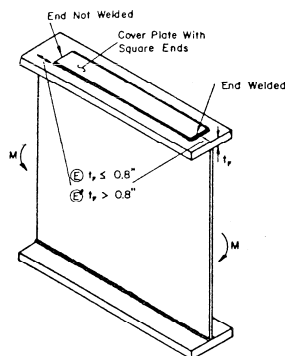
Short Flange Gusset Plate $L \leq 4$ in. Category D
Detail 4



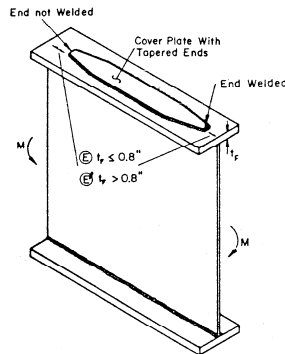
Flange Gusset Plate Category E
Detail 5



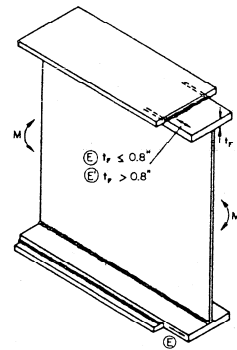
Gusset Welded to Bracing Member
Category E
Detail 6



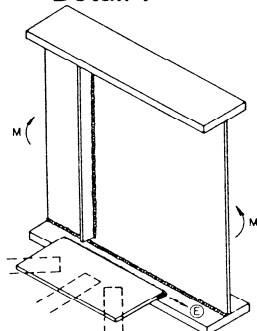
Square Ended Cover Plates Narrower than
the Girder Flange Category E or E'
Detail 7



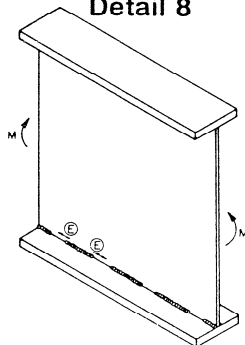
Cover Plates Narrower than the Girder Flange
with Tapered Ends Category E or E'
Detail 8



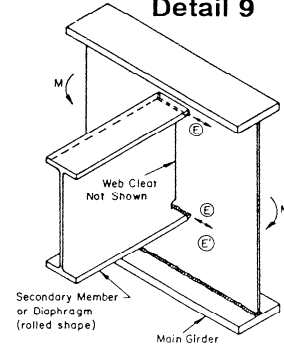
Cover Plates Wider than the Girder Flange
with End Welds Category E or E'
Detail 9



Flange Gusset Plate Category E
Detail 10



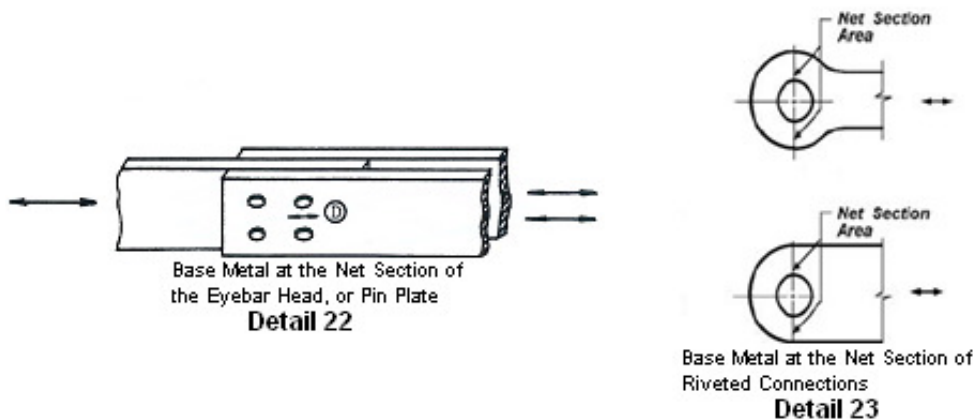
Intermittent Fillet Welds Category E
Detail 11



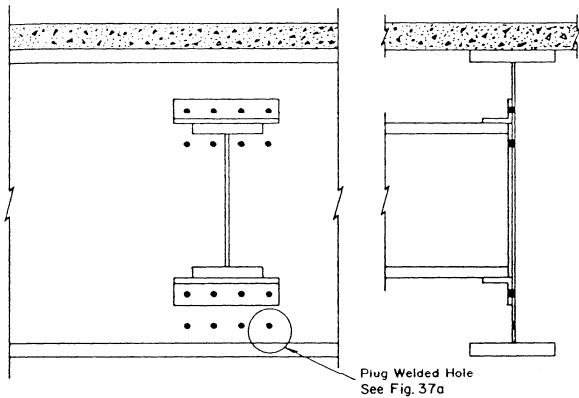
Stringer Framing into Girder Web
Category E or E'
Detail 12

TYPICAL FATIGUE DETAILS (Highlight applicable detail(s), remove sheet if none are applicable)

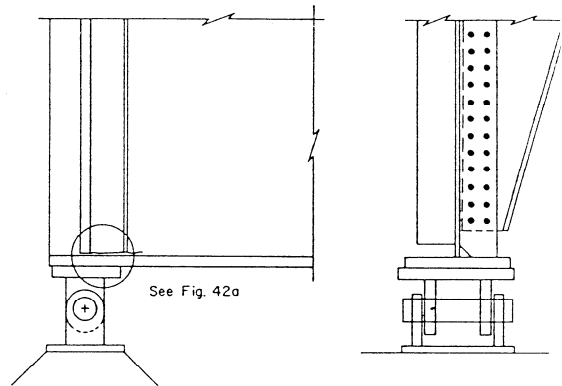
13. Field Weld Repairs - Proper welding procedures may not have been used; testing of weld by non-destructive methods was usually not done, therefore, the possibility of large flaws exists. Check carefully on the main structural members (stringers, floorbeams, girders).
14. Tack Welds - Check carefully on riveted members constructed in 1940's and 1950's as these welds were sometimes used to hold the plates together during riveting.
15. Plug Welds - Check at bolted connections on welded structures. These welds may have been used to fill-in incorrectly drilled holes (see sketch).
16. Backing Bars - These welds are possibly not full penetration. Check carefully on box girders if accessible and at butt (groove) welds made in the field.
17. Details with 2 or 3 Intersecting Welds (Slot Welds) - Incomplete penetration of the second and third welds is possible.
18. Butt (Groove) Welds on Horizontal Web Stiffeners - NDT of the weld was not always required on the stiffener in the tension zone. If the weld is not good, this will be an "E" detail or worse which can exist in a high stress area (This would be the same as or worse than typical detail 3).
19. Detail Without Proper Welding Clearance - Poor welding can result if proper clearance for the welding rod is not maintained by the designer (such as a horizontal web stiffener placed too near the bottom flange of a girder; fillet weld at bottom of stiffener is difficult due to a lack of clearance for the welding rod).
20. Coped or Blocked Flanges - Check carefully when these details exist on main structural members (stringers and floorbeams). Coped flanges are a typical detail on movable spans.
21. Distortion (Bending) at Small Gaps - For typical details which exhibit damage due to this, see "Inspecting Steel Bridges for Fatigue Damage" (see sketches).



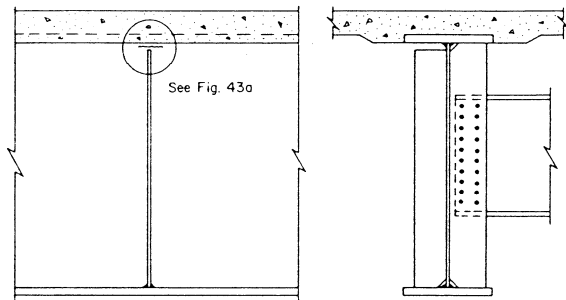
TYPICAL FATIGUE DETAILS (Highlight applicable detail(s), remove sheet if none are applicable)



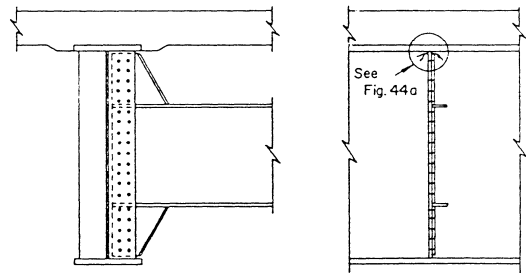
Schematic Showing Misplaced Holes Filled with Weld
Detail 15



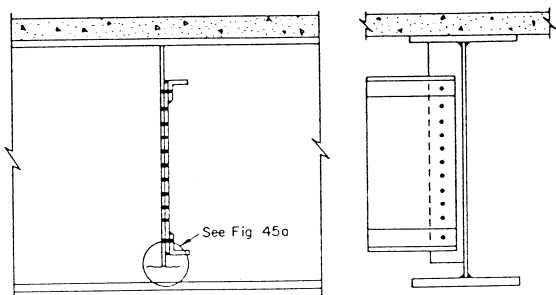
Schematic Showing Crack in Girder Web at
 Floor Beam Connection Plates at Supports
Detail 21A



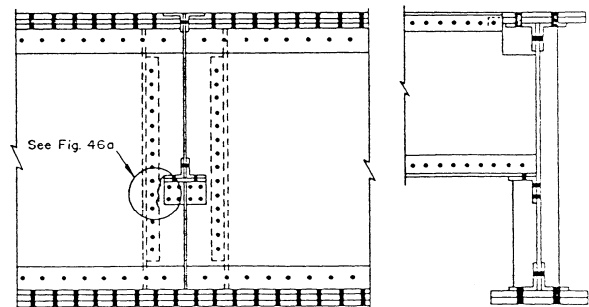
Schematic of Crack in Girder Web at Floor Beam
 Connection Plates in Negative Moment Region
Detail 21B



Schematic of Crack in Girder Web and Transverse Connection Plate
 Welds at Floor Beam in Negative Moment Region of Skewed Bridge
Detail 21C



Schematic of Transverse Diaphragm Attached to Cut Short
 Welded Connection Plate Showing Web Cracking in Gap
Detail 21D



Schematic Showing Stringer Framing into Riveted Floor Beam With
 Crack Between Seat Angle Connection and Adjacent Web Stiffeners
Detail 21E

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUBSTRUCTURE

SI&A Item 60 Condition Rating: _____

ABUTMENT (South or West)

RATING	COMPONENT	REMARKS
	Breastwall	<p>Keep the two Abutment sheets together - by this we mean one directly follows the other in the report, and on the computer screens (or are on the same screen). Any Pier sheets would then follow. It would be preferable if the Abutments are together on one TAB, and the Piers are all together on one TAB if at all possible.</p> <p>Piers are numbered 1,2,3... So, if numbering is needed for the abutment, PERHAPS the leading Abutment could be 0 (we may need to research this more).</p>
	Backwall	
	Bridge Seat	
	Wingwalls / Retaining Walls	
	Embankment / Slope Protection	
	Others / Footings	

Additional Remarks:

ABUTMENT (North or East)

RATING	COMPONENT	REMARKS
	Breastwall	
	Backwall	
	Bridge Seat	
	Wingwalls / Retaining Walls	
	Embankment / Slope Protection	
	Others / Footings	

Additional Remarks:

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUBSTRUCTURE
(Arch/Frame)

SI&A Item 60 Condition Rating: _____

ABUTMENT _____

RATING	COMPONENT	REMARKS
	Footings/ Skewbacks	
	Wingwalls/ Retaining Walls	
	Others	

**Additional
Remarks:**

ABUTMENT _____

RATING	COMPONENT	REMARKS
	Footings/ Skewbacks	
	Wingwalls/ Retaining Walls	
	Others	

**Additional
Remarks:**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUBSTRUCTURE

SI&A Item 60 Condition Rating: _____

ABUTMENT _____

RATING	COMPONENT	REMARKS
	Sheeting	
	Piles	
	Pile Cap	
	Wales	
	Header	
	XX Wingwall Sheeting	
	Piles	
	Wales	
	YY Wingwall Sheeting	
	Piles	
	Wales	

**Additional
Remarks:**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUBSTRUCTURE

SI&A Item 60 Condition Rating: _____

BENT _____

RATING	COMPONENT	REMARKS
	Bent	
	Cap	
	Posts/Piles	
	Foundation	
	Cross Bracing	
	Horizontal Bracing	
	Longitudinal Bracing	
	Girts	
	Others	

**Additional
Remarks:**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUBSTRUCTURE

SI&A Item 60 Condition Rating: _____

PIER _____

See previous sheet for discussion about layouts.

RATING	COMPONENT	REMARKS
	Columns/ Stem Crashwall	
	Pier Cap	
	Bridge Seat	
	Others/Fender	

**Additional
Remarks:**

Multiple sheets may be necessary for additional spans.

PIER _____

RATING	COMPONENT	REMARKS
	Columns/ Stem Crashwall	
	Pier Cap	
	Bridge Seat	
	Others/Fender	

**Additional
Remarks:**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

SUBSTRUCTURE/SCOUR

SI&A Item 60 Condition Rating: _____

PIER/ABUTMENT _____

Multiple sheets may be necessary for additional spans.

RATING	COMPONENT	REMARKS
--------	-----------	---------

COUNTERMEASURES

	Description	
	Condition	

PROBING/SCOUR

	Findings	
	Changes Since Prior Inspection	Not applicable (first cycle).
	Debris	

Repair Quantities: _____

PIER/ABUTMENT _____

RATING	COMPONENT	REMARKS
--------	-----------	---------

COUNTERMEASURES

	Description	
	Condition	

PROBING/SCOUR

	Findings	
	Changes Since Prior Inspection	Not applicable (first cycle).
	Debris	

Repair Quantities: _____

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

WATERWAY/CHANNEL

One sheet per WATERWAY. If 2 separate streams flow under one bridge, then there would be 2 sheets.

SI&A Item No. 61: _____
 SI&A Item No. 71: _____
 Prioritization Category: _____
 Scour Sufficiency Rating: _____

RATING	COMPONENT	REMARKS
FLOW CONDITIONS		
	Direction	
	Magnitude	
	Velocity	
EMBANKMENTS		
	Upstream	
	Downstream	
	Channel Countermeasures	
CHANNEL MOVEMENT AND CHANGES		
	Horizontal Location	
	Cross Section	
	Alignment	
	Changes Since Previous Inspection	Not applicable (first cycle).
	Navigation Clearances	
	Waterway Opening	
	Other/Debris in Channel	

Repair Quantities: _____

Note: Provide multiple sheets if multiple waterways are present beneath structure.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

HIGHWAY SAFETY

Coding of SI&A Item 36: _____
 1: Good
 0: Not Good
 N: Not Applicable

RATING		COMPONENT	REMARKS
		Bridge Railing	
		Transition to Bridge Railing	
		Curb / Sidewalk Terminations	
		Approach Guide Rails	
		Approach Guide Rail End Terminals	

new sheet

DECK GEOMETRY

SI&A Item 68 Rating: _____

COMPONENT	REMARKS
Bridge Cross Section	
Adequacy of Lane / Shoulder Widths	
Vertical Clearance over Deck	

*Posting for Load / Speed / Clearance Restrictions	
--	--

Structure No.: ####-### Route: ## Cycle No.: 1
Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

DECK CROSS SECTION

Typical cross section drawing(s). We will specify that these be either TIF, BMP, or PDF files.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

CLEARANCES

FEATURE ON STRUCTURE: _____ SI&A SHEET 1

Minimum Vertical Clearance (SI&A item 10)	
Total Horizontal Clearances (SI&A item 47)	
Minimum Vertical Underclearance (SI&A item 54)	
Minimum Vertical Underclearance (incl. shoulders) (SI&A item DJ)	
Lateral Right (SI&A item 55)	
Lateral Left (SI&A Item 56)	

FEATURE UNDER STRUCTURE: _____ SI&A SHEET 2 or A

*Minimum Vertical Clearance (SI&A Item 10)	
Total Horizontal Clearance (SI&A Item 47)	
Minimum Vertical Underclearance (incl. shoulders) (SI&A item DJ)	

FEATURE UNDER STRUCTURE: _____ SI&A SHEET B

*Minimum Vertical Clearance (SI&A Item 10)	
Total Horizontal Clearance (SI&A Item 47)	
Minimum Vertical Underclearance (incl. shoulders) (SI&A item DJ)	

FEATURE UNDER STRUCTURE: _____ SI&A SHEET C

Minimum Vertical Clearance (SI&A Item 10)	
Total Horizontal Clearance (SI&A Item 47)	
Minimum Vertical Underclearance (incl. shoulders) (SI&A item DJ)	

*** Minimum clearance for a 10 foot width of the pavement or traveled part of the roadway where the clearance is greatest shall be coded in feet and inches.**

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

RAILROAD SAFETY

Coding of SI&A Item 36: _____

1: Good

2: Not Good

RATING	COMPONENT	REMARKS
	Track Alignment	
	Inner Guard Rail	1. Location (are guard rails on the bridge and 10" from the running rail?) 2. Attachment (are the guard rails attached to the structure?) 3. Extension (must extend 50' beyond the bridge) 4. End Treatments (are ends of the guard rail beveled down toward the center of the track?)

Note: RAILROAD SAFETY sheet should be used for Railroad carrying bridges only.

Structure No.: ####-### Route: ## Cycle No.: 1
 Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

FENCING

Coding of SI&A Item FN: _____

Coding of SI&A Item FO: _____

Coding of SI&A Item FP (in thousands): _____

Warranted (Per Design Manual Section 23):	Yes/No	
If Yes: (#) Description:		
<u>Current Status of Fence & Sidewalk:</u>	<u>Left Side</u>	<u>Right Side</u>
a. Fence:	Yes/No	Yes/No
b. Sidewalk Width:	## FT	## FT
c. Total Height of fence above curb/sidewalk:	## FT	## FT
d. Type of Fence (per Design Manual Section 23):		
Action Recommended:		
Estimated Cost: \$		

Notes: _____

Other Field Notes Structured Sheets as needed for unique situations

Structure No.: ####-### Route: ## Cycle No.: 1
Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

WORK DONE HISTORICAL DATA

CYCLE NO.	YEAR	WORK DONE SUMMARY
1	####	Not applicable (first cycle).

This page is intended to function as a historical log for Work Done on the structure. This template shows one entry, but if this was a 4th cycle Format C Routine Report, there would ideally be four rows (oldest cycle at bottom).

Structure No.: ####-### Route: ## Cycle No.: 1
Name: I-## over XX Road and XX River or Railroad Insp. Date: MM/DD/YYYY

The following reports, files and memos are associated with this document:

UNDERWATER BRIDGE EVALUATION SURVEY REPORT:

STR. NO: **####-###**
NAME: **I-## over XX Road and XX River or Railroad**
DATED: **MONTH DD, YYYY**
Prepared By: **XYZ Diving Consultant**
Address 1
Address 2
City, State, Zip
Prepared For: **ABC Consultant**

This report is in the file named: #####_YYYYMMDDcy##_uw.pdf

This report was prepared as part of this inspection and is associated with this report by reference.

OR

This report was prepared as part of a previous cycle of inspection and included for informational purposes only.

(Note: Replace ##### with Bridge Number, YYYYMMDD with Date, and ## with 2-digit Cycle Number)

LOAD RATING REPORT:

The following Load Rating Report has been included for this structure:

PDF Filename(s):
#####_YYYYMMDDcy##_LR.pdf

(Note: Replace ##### with Bridge Number, YYYYMMDD with Date, and ## with 2-digit Cycle Number)

PRIORITY REPAIRS:

The following Priority Letter(s) have been included for this structure:

Each Priority Letter listed here has been submitted as a separate PDF file.

PDF Filename(s):
#####_YYYYMMDDcy##_PR#_01.pdf
#####_YYYYMMDDcy##_PR#_02.pdf

(Note: Replace ##### with Bridge Number, YYYYMMDD with Date, and ## with 2-digit Cycle Number)
(Replace # with E or 1 or 2)

Add additional statement(s) as necessary for other associated documents, such as Deck Survey Report, etc... (match format as above). Do not include any documents contained in the main report PDF file as appendices.