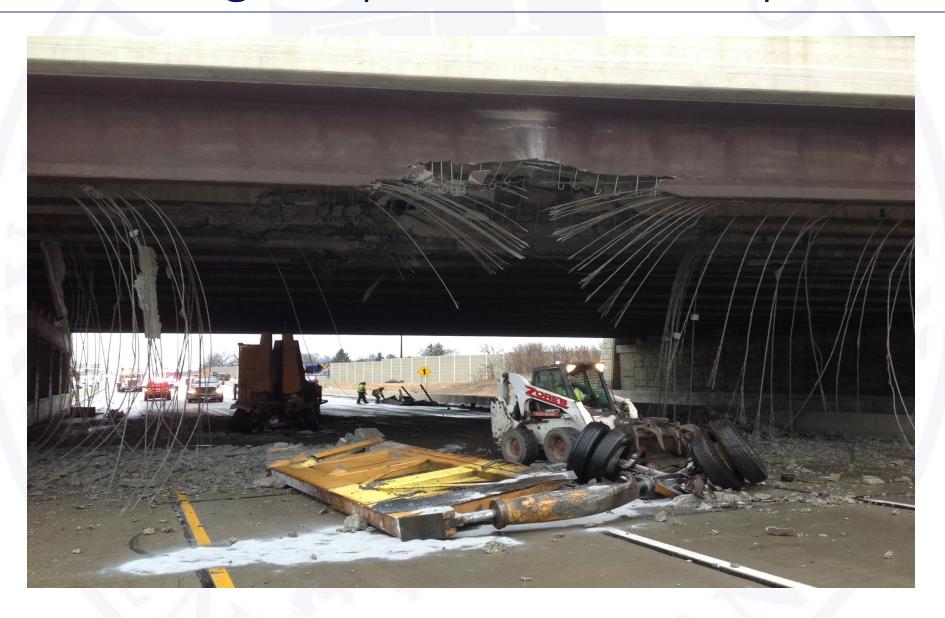
February 6, 2018 Indiana Bridge Inspection Workshop

Kate Francis, Mona Davis, & Bill Dittrich INDOT Central Office Bridge Inspection



Items to be Discussed:

- Critical Findings
- Cover Photos in BIAS
- Coding of NBI Items 92A, B, C and Item # 91 on new bridges
- NBI Items # 53 and # 54B
- NBI Error Check in BIAS

Items NOT checked -- NBI Items 44A & B - Approach Span Type

- Leading/trailing zeros needed on NBI Data
- Add a comment to BIAS Schedule for off-cycle inspections

Items to be Discussed:

- Use "State Code" as a criteria for most BIAS queries
- Always include required sections in BIAS Reports
- Compliance with NBI Inspection Dates
- Scour Screening & Assessment
- Submittal of NBI Data in March 2018
 - Friday February 9th, 2018 last day for new bridges until after March 15th.

Critical Findings

 Must call and/or e-mail the State Program Manager immediately, (as soon as safe to do so). This is still not being done in a consistent manner!

• Must complete a BIAS Critical Finding Maintenance Report and workflow it to the Program Manager within 24-hours. This must contain a proposed strategy for closing out the Critical Finding.

• The program Manager will either close out the Critical Finding or workflow the report back to the Inspector for additional information.

Critical Findings

• A critical finding is a <u>structural</u> or <u>safety</u> related deficiency that requires immediate follow-up inspection or action.

• A structure-related deficiency can interrupt the load path, not allowing the loads to be transferred as designed. This can cause surrounding elements to become overstressed or unstable, potentially leading to partial or total collapse of the structure.

• A critical finding may also be non-structural deficiencies which jeopardize the safety of motorists or pedestrians.

Critical Findings

• The follow-up action may be a structural review to determine the strength or serviceability of an element or bridge, restricting travel on a portion or the entire bridge, or corrections/repairs made to the noted deficiencies.

Critical Findings



Critical Findings

NBIS Metric #12 – Quality Inspections

A review to ensure that Critical Findings were identified, reported, documented, and closed out.

• NBIS Metric #21 – Inspection Procedures – Critical Findings

Bridge Inspection Manual is reviewed to ensure proper procedures are in place.

BIAS Critical Finding Files are reviewed to assure proper documentation and actions are taken, and in a timely manner.

Critical Findings



Critical Findings

• BIAS has the listing of all <u>OPEN and CLOSED Critical Findings</u> reported since 11/14/2016.

InspectTech	Main Collector	Maintenand	ce Manager	Administration	Help
Saved Filters V Mai	Maintenan	ce Filter			
Odved Filters V	Maintenance Dashboard			<u> </u>	
Asset Code	Asset Name	Manage Maintenance by Asset		Parent	Asset Sta
0600022	06-00032	Work Orders			In-Service
8900193	89-00266		County - WAYNE	In-Service	
4800051	48-00058		County - MADISON		In-Service
4800087	48-00098		County - MADISON		In-Service
005900	024-37-05478 B		State - La Porte		In-Service

Critical Findings

• If you do not see what you think is a Critical Finding in this BIAS list, but the deficiency has existed for years before your inspection, you need to act as if a Critical Finding has never been reported, and report it.

Critical Findings

• The situation below has existed for years



Critical Findings

			CRITIC	AL FINDING	5	030540)	
Data Entry By:	Stephen Hurs	st		Entry Date:			12/20/2017	iii
Team Leader Rep	orting:	Hurst, Steph	en F.	Team Leade	er Number:	IN000422-20)18-ATL-F	
Structure #:	250-36-0585	4		NBI			030540	
Facility Carried:	SR 250			Feature Intersected: VERN			RNON FORK MUSCATATUCK RIV	
Location	01.86 W US	31		County:		Jackson	n	
Date of Finding:	12/20/2017		Notification of SPM Date:	12/20/2017		fication of ner Date:	12/20/2017	
Description of Issue:	been taken at inspected but	t this location and t the bottom of the	strands was found in th I that it punched through e beam had two severe was discovered through	both the top and botto d strands. A makeshift	m of the box bea	m. The top of	the beam could no	ot be
Team Leader Recommended Actions:	Perform a loa	d rating on the br	ridge.					.41
		Rec	commended Date	of Action: 01/03/20	18			
		Must submit to State Program Manager through WorkFlow.						
Actions Taken:	Load rating re	equest made to U	Inited on 12/21/2017.					
(By Whom/When)		Load Rating performed on 12/27/2017. Rating Factors all above 1.0 load posting not required. Load Rating Summary Report attached. Bill Dittrich 01/29/2018.						rt
	AJF- Close C	ritical Finding on (01-29-2018. Andrew F	itzgerald, PE				.4
			Date of	Action: 01/29/20	18			
Close Out	AJF- Close C	ritical Finding on	01-29-2018. Andrew F	itzgerald, PE				

Critical Findings

CRITICAL FINDING

sta Entry By: Stephen Hurst Entry Date 12/20/2017

Team Leader Reporting Hurst, Stephen F. Team Leader # IN000422-2018-ATL-F

Structure# 250-36-05854 NBI 030540

Facility Carried: SR 250 Feature Intersected: VERNON FORK MUSCATATUCK RIV

Location 01.86 W US 31 County Jackson

Date of Finding: 12/20/2017 Notification of SPM Date: 12/20/2017 Notification of Owner Date: 12/20/2017

Description of Issue A 10" hole with two severed strands was found in the bottom of box beam 3 in span B.

It was determined that a core sample had been taken at this location and that it punched through both the top and bottom of the box beam. The top of the beam could not be inspected but the bottom of the beam had two severed strands. A makeshift drain had been installed in the beam but no one was notified of the damage until it was

discovered through inspection.

Inspector Recommended Action Perform a load rating on the bridge.

Submit to State Program Manager through WorkFlow.

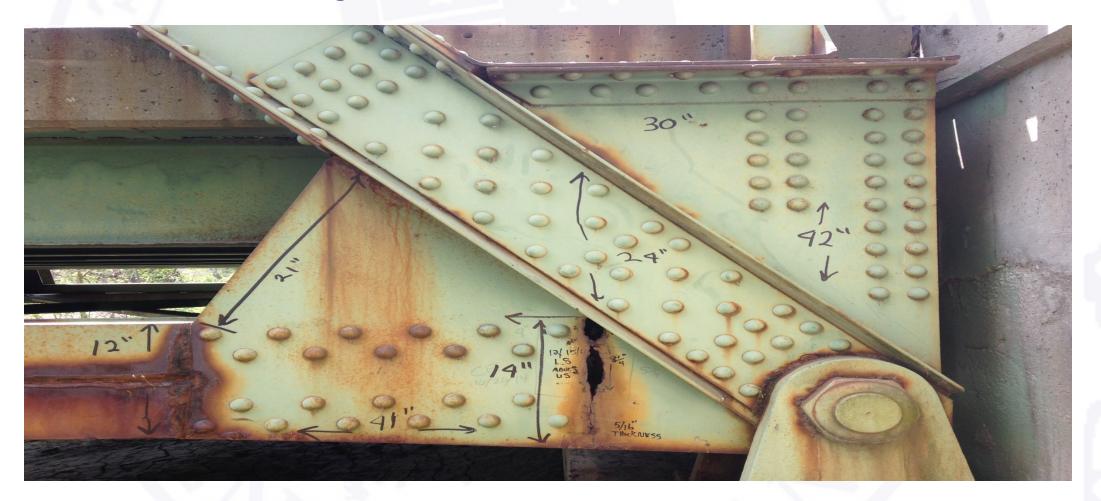
Actions Taken (By Whom/When) Load rating request made to United on 12/21/2017.

Load Rating performed on 12/27/2017. Rating Factors all above 1.0 -- load posting not required. Load Rating Summary Report attached. Bill Dittrich 01/29/2018.

AJF- Close Critical Finding on 01-29-2018. Andrew Fitzgerald, PE

Close Out Documentation AJF- Close Critical Finding on 01-29-2018. Andrew Fitzgerald, PE

Critical Findings



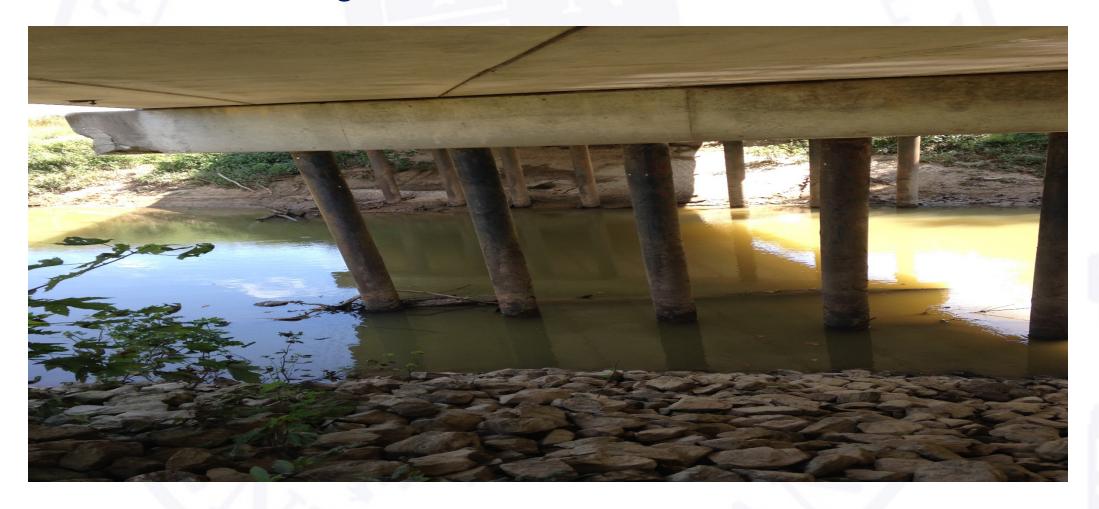
Critical Findings



Critical Findings



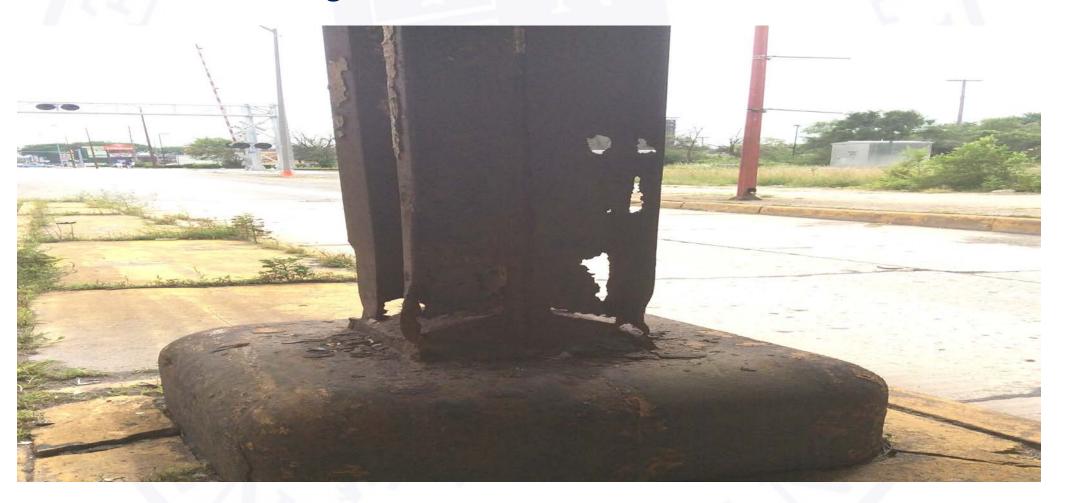
Critical Findings



Critical Findings



Critical Findings



Critical Findings



Critical Findings

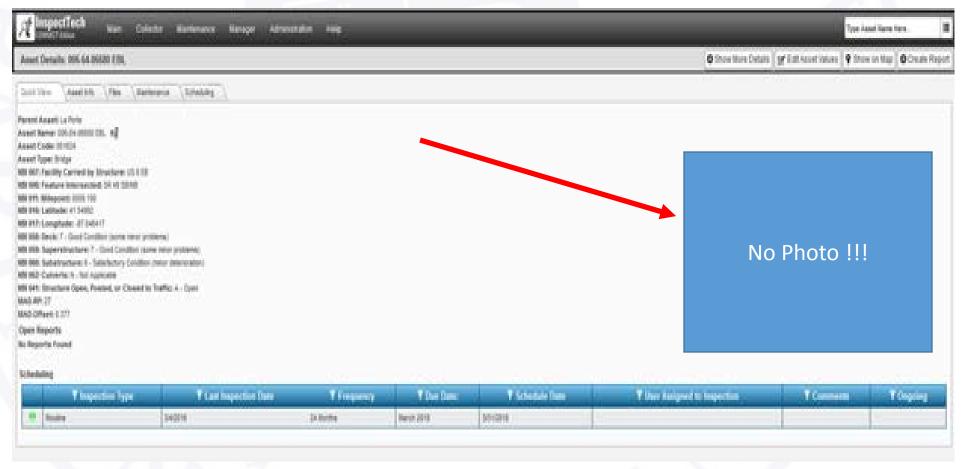


Critical Findings



Cover Photos in BIAS

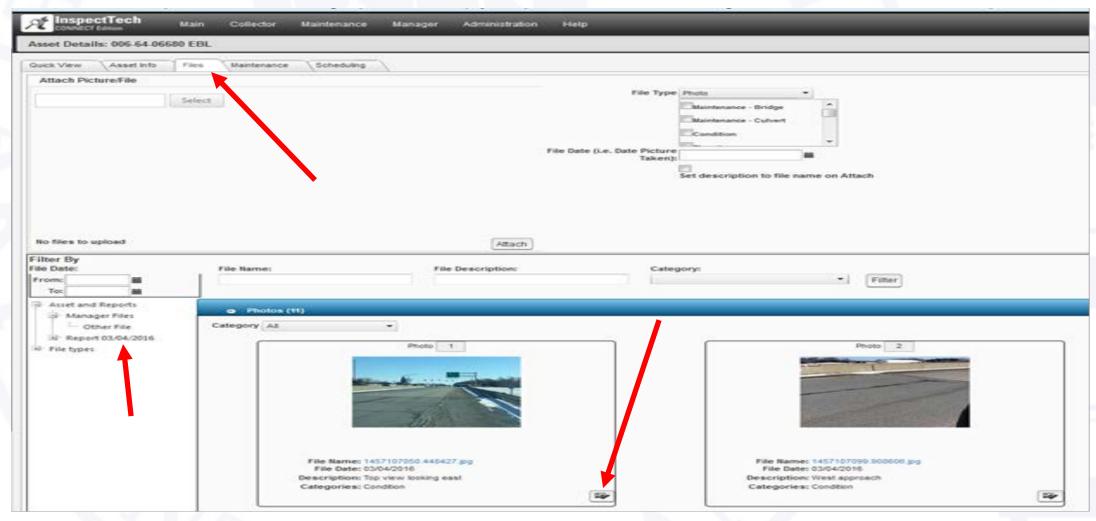
• You must create a Cover Photo in BIAS. This is different than a Cover Page photo for a BIAS Report.



Cover Photos in BIAS

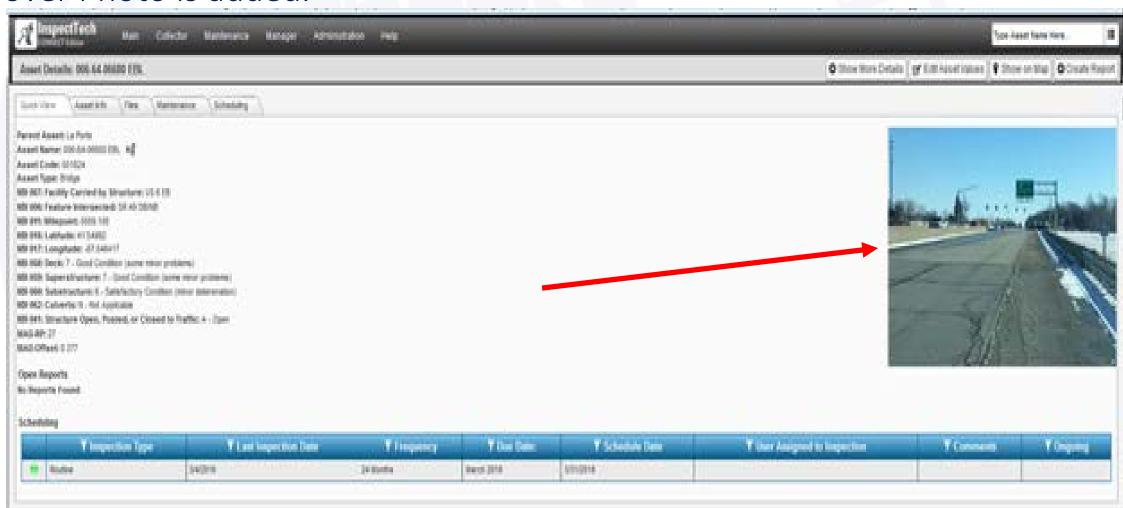
Cover Photo can be added from photos by checking box in lower right of photo

box.



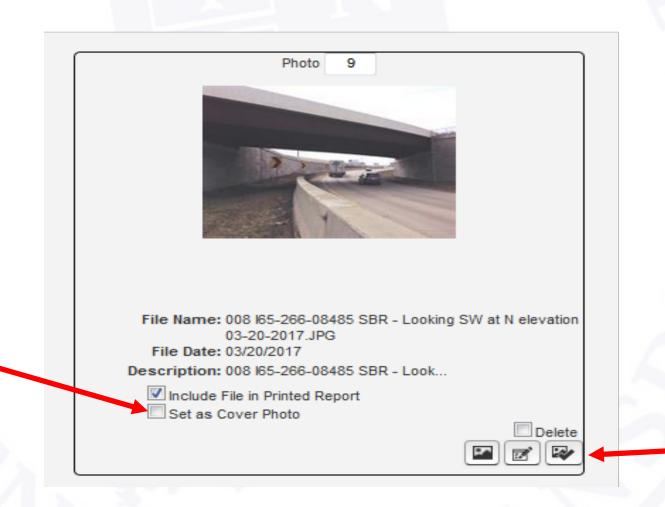
Cover Photos in BIAS

Cover Photo is added.



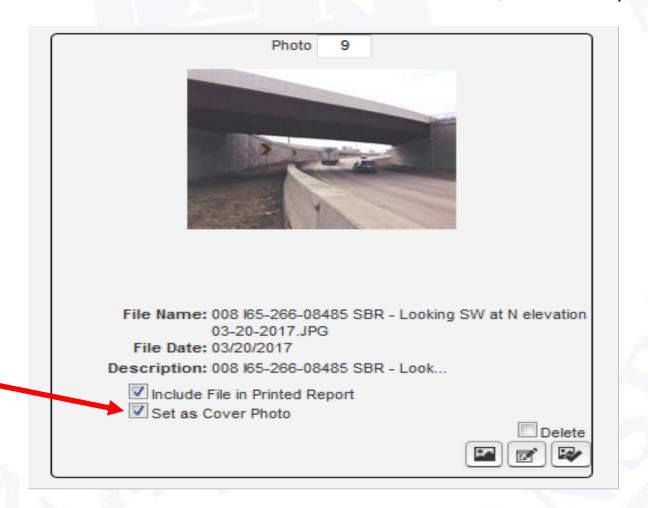
Cover Photos in BIAS

Adding Report Cover Photo and File Cover Photo, in a Report.



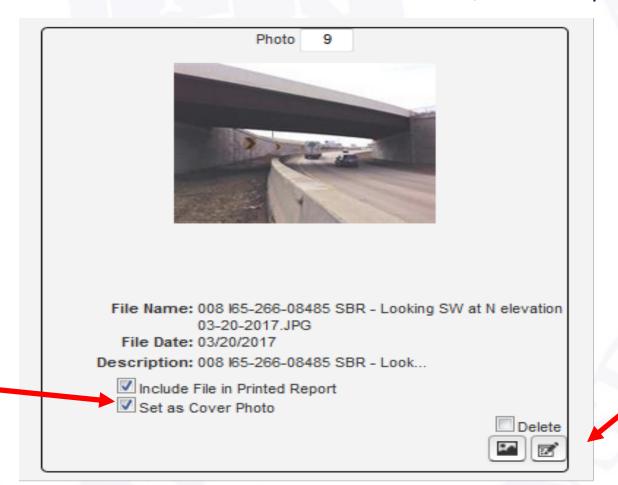
Cover Photos in BIAS

Adding Report Cover Photo and File Cover Photo, in a Report.



Cover Photos in BIAS

Adding Report Cover Photo and File Cover Photo, in a Report.



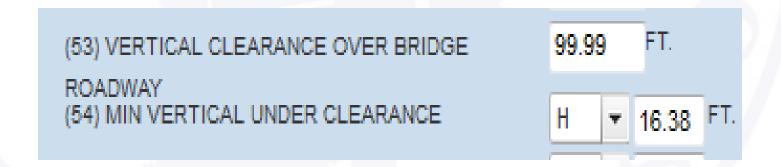
Additional data added on new bridges in BIAS

• New Bridges – Pre-coding of NBI Items <u>92A,B,C</u>, and <u>91</u> and their BIAS <u>Inspection Schedules</u>.

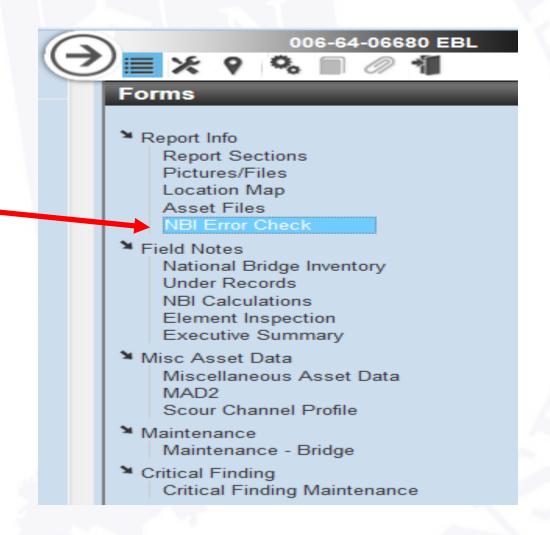
- INDOT is now populating data into these fields when a new bridge is created.
- It is the responsibility of the Inspection Team Leader to ensure that the coded data is correct on the initial inspection.
- Having data in these fields helps determine inspection status, and the starting point to ensure timely updating of data.
- The person requesting a new bridge will have the inspection(s) assigned to them to start with.

Vertical Clearance Data -- NBI Items 53 & 54B

- Contact INDOT if you need changes made to NBI Items <u>53 & 54B</u>. These fields are "read only" for Inspectors. Data resides in INDOT's Roads & Highways data base. Updates to BIAS are run daily.
- INDOT will try to pre-populating these fields when a new bridge is created.
- It is the responsibility of the Inspection Team Leader to ensure that the coded data is correct on the initial inspection.



NBI Data Check -- in BIAS



NBI Data Check -- in BIAS

- Always run the Error Check
 - 1. When finished with a Report but before submitting for Approval
 - 2. When Performing QA

NBI Error Check

Test Bridge 2 (Test Assets), Report Date: 2/1/2018 - 52 errors found

▼ Error Message	▼ Forms
Error CE003: ITEM 26 - Item 12 = 1 So Item 26 must be 01, 02, 06, 11, 12, or 14.	Form: National Bridge Inventory Edit Values
Error IE005B: ΠΕΜ 5B - Route Signing Prefix code is not a valid value.	Form: National Bridge Inventory Edit Values
Error IE005C: ITEM 5C - Level of Service code is not a valid value.	Form: National Bridge Inventory Edit Values
Error IE005D: ITEM 5D - Route Number is not entered.	Form: National Bridge Inventory Edit Values
Error IE019: ΠΕΜ 19 - Detour is not a valid number.	Form: National Bridge Inventory Edit Values
Error IE020: ΓΤΕΜ 20 - Toll code is not a valid value.	Form: National Bridge Inventory Edit Values
Error IE021: ITEM 21 - Maintenance Responsibility code is not a valid value.	Form: National Bridge Inventory Edit Values
Error IE022: ITEM 22 - Owner code is not a valid value.	Form: National Bridge Inventory Edit Values
Error IE026: ΠΕΜ 26 - Functional Classification code is not a valid value.	Form: National Bridge Inventory Edit Values

NBI Data Check -- in BIAS

- Items NOT checked
- There are a number of NBI Items that the BIAS NBI Check does not check
- One Example is: NBI Items 44A & B Approach Span Type
 This Item should always have data, even if it is "000", for NO Approach Spans

Under Records can also have NBI Data Errors

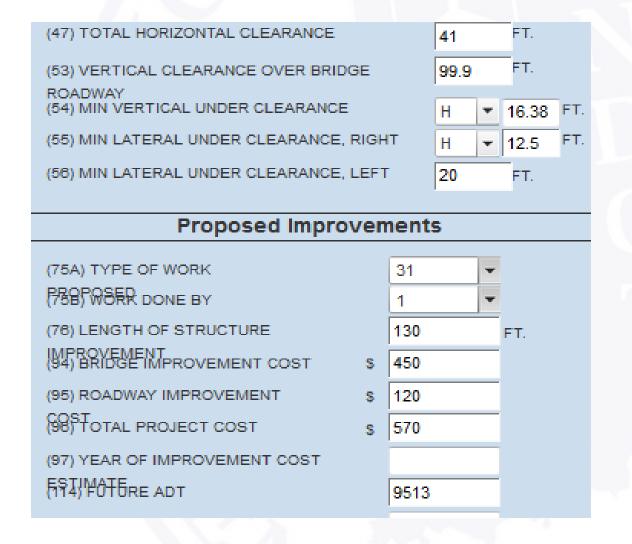
NBI Data should have all digits filled in - leading and trailing zeros

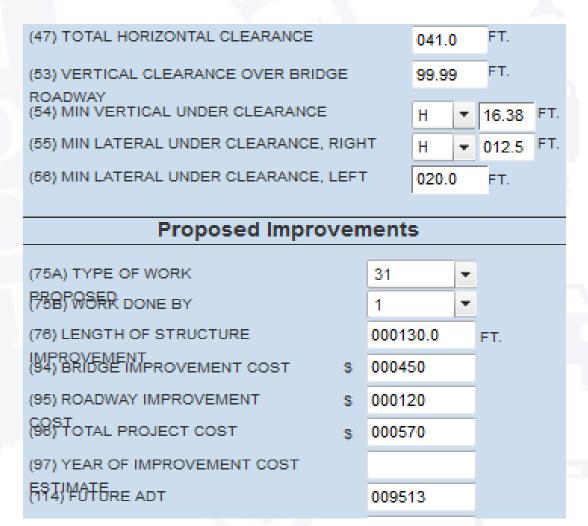
• Generally BIAS will limit you to the exact field size for a data item, on either side of a decimal point.

- Examples of data that often requires leading zeros

 ADT, Span Length, Lateral Clearance, Bridge Cost, Mile Point, Detour Length
- Examples of data that requires trailing zeros.
 Mile Point, Vertical Clearances, Latitude, Longitude

NBI Data should have all digits filled in – leading and trailing zeros





Add Comments to BIAS Schedule if contract requires "Off-Cycle" Inspections

Example: Routine and Fracture Critical inspection are conducted in one year, but contract requirements result in a Special Detail Inspection being conducted the following year on deteriorated fracture critical members.

Scheduled Inspections

Inspection Type	Last Inspection Date	Frequency	Due Date	Schedule Date	User Assigned to Inspection	Comments
Special		24 Months	January 2018	01/17/2018		◆ This is an "Off-Cycle" Inspection; to Start in 2018 - Inspect deterior
Fracture Critical		24 Months	January 2019	01/16/2019		Full Fracture Critical Inspection.
Routine	01/23/2017	24 Months	January 2019	01/16/2019		

Comments:

This is an "Off-Cycle" Inspection; to Start in 2018 - Inspect deteriorated members only

Couple of Query Tips in BIAS

- Use the State Code, NBI Item #1, (Indiana = 185), as a primary query criteria. This will ensure that you do not get any Large Culverts in you answer.
- Be careful on which "Values Returned" you select. This may greatly affect the answers you get.



Minimum required BIAS Report Sections in a Report

- A BIAS Report should always contain a minimum number of sections in a report. This is to provide a person using the report enough information to know where the bridge is located, as well as its basic condition.
 - 1. Cover Page with Photo
 - 2. Location Map
 - 3. Executive Summary
 - 4. National Bridge Inventory
 - 5. Pictures

Remove Section	Order	Section Name		Print	Include in Table of Contents	Insert Cover Page Before Section	Show Page Number
	1	Report Cover	<u>View</u>	V			
î	2	Table of Contents	View				
î	3	Location Map	View	7	V		V
î	4	Executive Summary	<u>View</u>	V	V		V
	5	National Bridge Inventory	View	V	V		V
î	6	Elements	<u>View</u>				
î	7	Pictures	<u>View</u>	V	V		V

Compliance with NBI Inspection Dates

- INDOT is again running a monthly Status Report. It is run during the first couple of days of each month.
- INDOT is reviewing the status of each inspection type, using the actual data base (Asset Data) values. In-progress report information (Work Flows) is included to help determine if late inspections are in-progress, not conducted, or indicated improperly entered data.
- In-progress reports are reviewed to ensure that they fall within the allowed time frame (one month for INDOT Bridges and two months for County Bridges).
- Team Leaders and/or Consultant BIAS Administrators are contacted about any deficiencies.
- Late inspections and/or improperly approved reports are to be corrected immediately.

Scour Screening & Assessment

The number of Scour Screenings and Scour Assessments completed in BIAS as of 09/18/2017 are:

- 659 Bridges Screened
- 451 Bridges Assessed

These numbers may be inflated since it seems that many of these reports were <u>opened and started months ago, but have not been completed.</u>

Generally, these reports should be <u>opened and completed</u> <u>in one sitting</u>.

<u>Is this a Critical Finding?</u> <u>How many Footings does this bridge have??</u>



How many Footings does this bridge have??

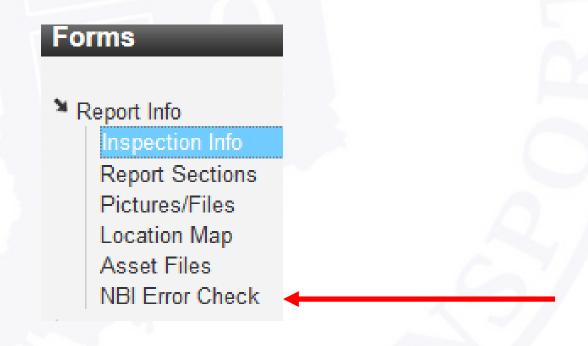


Submittal of NBI Data in March 2018

- Data is required to be submitted to the FHWA by: March 15, 2018.
- New bridges will not be created in BIAS from February 10th through March 15th, so all new bridges can be inspected and all data entered before compiling the data to be submitted.
- INDOT last sent NBI and Element Data to the FHWA test site in mid January, and will continue to do this periodically until early March, when the final set of data will be compiled to submit to the FHWA.
- Team Leaders (Owners of a Report) will be notified of any errors found on their bridges, and corrections are expected to be made immediately.

Submittal of NBI Data in March 2018

• Team Leaders should always run the NBI Error Check in BIAS before submitting a report for approval. People performing QA on inspection reports should also run the Error Check. This should clear up a lot of errors before the NBI data is submitted to the FHWA site.



THANK YOU!!

QUESTIONS???

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