

SNBI Coding Mistakes & iTAMS Updates

2026 BRIDGE INSPECTION WORKSHOP

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SNBI Coding Mistakes

- Inspection Report Objects
- Many-to-One Identifier Fields (B.SP.01, B.SB.01, B.F.01 & B.RT.01)
- Section 4: Features
- Deck Material (B.SP.09) & Deck Related Fields
- Number of Beam Lines (B.SP.03)
- 'Nulls' vs '0' vs 'N'
- Bridge Geometry
- Bridge vs Bridge Culvert (B.SP.01 & B.C.04)

Inspection Report Objects











- Review 6.2 Fields in active report

- B.IE.01 Inspection Type
- B.IE.02 Inspection Begin Date
- B.IE.03 Inspection Completion Date
- B.IE.04 Nationally Certified.....
- B.IE.05 Inspection Interval

- Required for Metrics and other Audits

- NBIP 23-Metrics
- Inspection Intervals
- Timely Updating

Inspect-6.2: Inspection Events

	#1
 (B.IE.01) Inspection Type	2. Routine 
 (B.IE.02) Inspection Begin Date	01/28/2026
 (B.IE.03) Inspection Completion Date	01/28/2026
 (B.IE.04) Nationally Certified Bridge I...	IN000549 
(B.IE.05) Inspection Interval	24
 (B.IE.06) Inspection Due Date	01/28/2028
(B.IE.07) Risk-Based Inspection Interval ...	1. Method 1 
(B.IE.08) Inspection Quality Control Date	
(B.IE.09) Inspection Quality Assurance D...	
(B.IE.10) Inspection Data Update Date	
(B.IE.11) Inspection Note	
(B.IE.12) Inspection Equipment	

Many-to-One Identifier Fields

- Many-to-One Identifier Fields (B.SP.01, B.SB.01, B.F.01 & B.RT.01)

- B.SP.01 Span Configuration Designation
- B.SB.01 Substructure Configuration Designation
- B.F.01 Feature Type
- B.RT.01 Route Designation

- AN (3) Field format

- ITAMS has drop down for letter in the first position
- ITAMS has uncontrolled field (for now) for digits in last two positions
- Must use leading zero in last two positions where index is 9 or less

2.1: Span Material and Type

	#1	#2	#3
(B.SP.01) Span Configuration Design...	A. Approach	M. Main	M. Main
(B.SP.01) Span Configuration Design...	01	01	02
(B.SP.02) Number of Spans	1	4	4
(B.SP.03) Number of Beam Lines	22	19	19

2.2: Substructure Material and Type

	#1	#2
(B.SB.01) Substructure Configuration De...	A. Abutment	P. Pier or Bent
(B.SB.01) Substructure Configuratio...	01	01
(B.SB.02) Number of Substructure U...	7	44

Many-to-One Identifier Fields

- Subsection 4.1 Feature ID

- Include all features / feature types
- Double check last two positions for B.F.01
- Start with carried features first, all types

- Subsection 4.2 Routes

- Identify highway feature first using the two fields and must match a highway feature in Subsection 4.1
- Single field for B.RT.01 so must key this in the correct format 'R0#'
- Can repeat a given highway feature where adding multiple routes per highway

4.1: Feature Identification

	#1	#2	
(B.F.01) Feature Type - Type	H. Highway	H. Highway	
(B.F.01) Feature Type - Number	01	02	03
(B.F.02) Feature Location	C. Carried on bridge	C. Carried on bridge	
(B.F.03) Feature Name	I-65	I-65	ALABA

4.2: Routes

	#1	
(B.F.01) Feature Type - Type	H. Highway	
(B.F.01) Feature Type - Number	01	
(B.RT.01) Route designation	R01	
(B.RT.02) Route Number	65	

Section 4: Features

- Subsection 4.1 Feature ID
 - Include all features / feature types
- Subsection 4.2 Routes
 - Include only highway feature types ('H##') in the first two fields used for B.F.01
 - Include only route designations ('R##')
 - We do plan to control this more with drop downs that only include allowed types
- Subsection 4.3 Highway Features
 - Include only highway feature types ('H##') in the first two fields used for B.F.01
 - Each highway feature type will show up once and only once
- Subsection 4.4 Railroads & 4.5 Navigable Waterways
 - 4.4: Include only Railroad feature types ('R##') in the first two fields used for B.F.01
 - 4.5: Include only Waterway feature types ('W##') in the first two fields used for B.F.01
 - We do plan to control this more with drop downs

Feature Subsection 4.3 Highways

- **B.H.08 Lanes on Highway**
 - Not a clean cross walk
 - Review prior to 2028 and make sure count specific to feature and not an aggregate carried or below
- **B.H.10 Annual Average Daily Truck Traffic**
 - Not a clean cross walk
 - Old NBI was a percentage and new SNBI is actual count. Need to do the math and update
 - Our AADT's and AADTT's are old and need to be updated
- **B.H.11 & B.H.12 (vertical clearances)**
 - For carried features, should be '99.9' unless bridge over a bridge
 - Review highway features and make sure no accidental '99.9' values input for highway features below

Feature Subsection 4.3 Highways

- Subsection 4.3 Fields not required for first Hybrid
 - B.H.07 LRS Mile Point
 - Not required and ultimate goal is for INDOT to live link to B.H.06 LRS Route ID and this one to our GIS platform
 - B.H.10 Annual Average Daily Truck Traffic (AADTT)
 - Lucky not due this year – Did not cross walk very well as noted previously
 - B.H.12 Highway Maximum Usable Vertical Clearance
 - B.H.13 Highway Minimum Vertical Clear >> Is required
 - B.H.14 & B.H.15 Highway Minimum Horizontal Clearance, Left & Right
 - This will need a lot of work just looking at old under records
 - Only apply to highway features beneath so carried feature value shall be NULL
 - B.H.18 Crossing Bridge Number
 - These will be exact values from B.ID.01 for bridges above or below bridge being coded
 - Bill Dittrich is maintaining this field

Deck Material (B.SP.09) & Deck Related Fields

- When B.SP.09 Deck Material = ‘0’ – ‘None’, do not report the following”
 - B.SP.08 Deck Interaction
 - B.SP.10 Wearing Surface
 - B.SP.11 Deck Protective System
 - **B.SP.12 Deck Reinforcing Protection System**
 - B.SP.13 Deck Stay-in-Place Forms
- Direction for the above is typically noted at the end of the Specification section
- B.SP.12 only reported for concrete Decks

2.1 – SPAN MATERIAL AND TYPE

Deck Interaction											
<u>Format</u> AN (2)	<u>Frequency</u> I										
<u>Item ID</u> B.SP.08											
Specification	Commentary										
<p>Report the type of interaction between the superstructure and deck for the span configuration using one of the following codes.</p> <table border="1"> <thead> <tr> <th><u>Code</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>CS</td> <td>Composite – shored construction</td> </tr> <tr> <td>CU</td> <td>Composite – unshored construction</td> </tr> <tr> <td>IM</td> <td>Integral or monolithic</td> </tr> <tr> <td>NC</td> <td>Non-composite</td> </tr> </tbody> </table> <p>Do not report this item when Item B.SP.09 (<i>Deck Material and Type</i>) is 0.</p>	<u>Code</u>	<u>Description</u>	CS	Composite – shored construction	CU	Composite – unshored construction	IM	Integral or monolithic	NC	Non-composite	<p>This item captures the type of structural interaction that occurs between the bridge deck and superstructure, which may indicate the importance of the deck to the overall stability and capacity of the bridge.</p> <p>Use code NC to indicate that the deck and the superstructure act independently.</p> <p>Use code CU to indicate that the deck acts composite with the superstructure, and that the superstructure can carry its own self-weight, plus that of the deck concrete prior to curing.</p>
<u>Code</u>	<u>Description</u>										
CS	Composite – shored construction										
CU	Composite – unshored construction										
IM	Integral or monolithic										
NC	Non-composite										
Commentary Continued											

Number of Beam Lines (B.SP.03)

2.1 – SPAN MATERIAL AND TYPE

<i>Number of Beam Lines</i>		
<u>Format</u> N (3,0)	<u>Frequency</u> I	<u>Item ID</u> B.SP.03
Specification	Commentary	
Report the number of principal beam lines. Report 1 for bridges where Item B.SP.06 (<i>Span Type</i>) is F01, F02, S01, or S02. Report 0 for bridges where Item B.SP.06 (<i>Span Type</i>) is P01 or P02.	Principal beam lines include the main longitudinal load-carrying members of the superstructure such as beams, girders, trusses, and arches or arch ribs, but do not include stringers of a floor beam system or spandrel walls of an arch. Use the average number of beam lines for bridges with variable number of beam lines within a span configuration, rounded down.	

'Nulls' vs '0' vs 'N'

- Before Using '0' – 'None' or 'N' – 'Not Applicable', check the specification, likely near the bottom, for:
 - “Do not report this items when Item...”
 - “Report this items only if...”
- When you see the above phrases, there will be circumstances where you leave the field value NULL or update to NULL.
- Just because a drop down field includes '0' – 'None' or 'N' – 'Not Applicable', make sure that a value is actually required or allowed. Examples:
 - B.C.14 NSTM Condition >> Only code 'Y' or 'N' when B.IR.01 NSTM Inspection Required is coded 'Y'
 - B.C.15 Underwater Inspection Condition >> Only code 'Y' or 'N' when B.IR.03 is coded 'Y'

Bridge Geometry – Section 3

- Section 3 Field Not Required for First Hybridge
 - B.G.01 NBIS Bridge Length
 - FHWA explained in meeting why NBIS length not being used for this first submittal when determining bridges to include or exclude
 - Go ahead and get these populated as much as possible and remember, cannot be longer than total
 - B.G.04 Minimum Span Length
 - Should be populated for single span but not required this first submittal
 - B.G.12 Curved Bridge
 - B.G.13 Maximum Bridge Height
 - Not required but should already be done for INDOT
 - Not hard to do these now. Can get from plans or estimate from photos
 - B.G.14 Sidehill Bridges
 - Already done.

Bridge Geometry – Section 3

- Reminders for Required fields
 - B.G.05 Bridge Width Out-to-Out
 - Different now for underfills
 - Use out-to-out headwall measured perpendicular to roadway
 - B.G.06 Bridge Width Curb-to-Curb
 - For underfills, typically same as B.G.09 Approach Roadway Width
 - General Comment
 - The above two widths are aggregated when we have multiple highway features carried by the bridge
 - This is similar to what we did with the older NBI
 - I mention this in comparison to what we do when coding Subsection 4.3 for highway features
 - Subsection 4.3 measurements are specific to the feature

Bridge vs Bridge Culvert (B.SP.01 & B.C.04)

- When to use Culvert Designation

- B.SP.01 Span Configuration Designation >> Commentary Continue

- Use code 'C##' for spans that convey water through or under a roadway embankment.
 - Designed hydraulically to take advantage of submergence to increase water carrying capacity

- If a waterway feature does not exist and is not documented in Subsection 4.1 and 4.5, cannot use the culvert ('C##') designation in B.SP.01.

- This also means one cannot use the Culvert Condition Rating field (B.C.04)
 - Must use B.C.02 Superstructure Condition Rating and B.C.03 Substructure Condition Rating at a minimum in this circumstance

- Example Next Slide

Bridge vs Bridge Culvert (B.SP.01 & B.C.04)



Not a Culvert: B.SP.01 = 'M01'
and code B.C.02 & B.C.03 Conditions

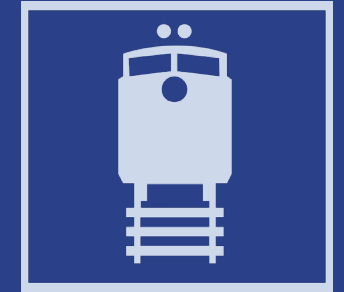


Could code as culvert: B.SP.01 = 'C01'
And code B.C.04 Culvert Condition Rating
(would recommend not)



iTAMS

Indiana Total Assets Mgt System
Maricar Gonzales



ITAMS Developments in 2023

2023

Go-live

- Soft launch (April 1st)
- Go-Live to all users (May 1st)

Configuration

- Continue to modify bridge inspection module according to operational needs of INDOT to include adding fields, delinquent/timely inspections, definition of error messages
- Linked assets were created
- NBI reconfiguration (December)
- Creation of PDF reports

3rd party Integrations

- Work History types and the History Rehab Letter
- Bradin Chapter and HRA mins data refresh
- Live Datawarehouse connection

ITAMS Developments in 2024

2024

Configuration

- Channel Profile (May)
- Inspection summary (July)
 - customized per inspection types

Configuration

- Monitoring Logs and Scour POA Audit (June)
- Retaining Wall Asset configuration (November)
- New asset class for Walls and Tunnels (June)
- SNBI configuration (August-December)

3rd party Integrations

- Datawarehouse/DMO integration
 - Creation of maintenance work request items

Recent Developments

2025

SNBI

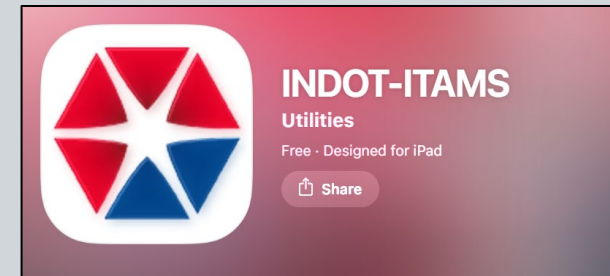
- Implementation of SNBI
 - New FHWA standard for how bridge data should be collected, structured, and reported

Configuration

- User Profile Desktop Reconfiguration (July)
 - Added user attributes to more accurately track and verify user certifications
- Warning for Inventory data change (December)
 - BRADIN fields will automatically be updated when routing to Submitted for Review and Approved. If there are discrepancies the system will alert users.
 - "The BRADIN data was outdated, and has been refreshed in the inspection. Please review the data and regenerate the report if appropriate."
- Asset Level Data Export

Mobile

- App published on Apple and Google store (November)



Recent Developments

2025

Walls Reconfig & Consolidation (December)

Filter Updates (December)

RW 062-082-025.34 | RW-10008

Asset Name: RW-10008

Asset Number: RW 062-082-025.34

Asset Category: Walls

Contact: Vincennes

Comments: Old Wall: RWALL-1519

RW 062-082-025.34 | RW-10008

080016 - 062-82-08915

Bridge >> Walls (Bridge-Wall)

RWALL-1519

Walls >> Walls (Wall-Wall)

Asset: RWALL-15

Link Type: Walls

comments

Asset Name	Asset Number	Type	Begin Date	Status	Inspector	Team	Completion Date
050-69-06912	018750	Routine	08/02/2031	Inactive/Cancel	Stephen F. Hurst	Seymour District	08/02/2031
Test - Sixense	Test - Sixense	Routine-NBI	04/02/2029	Approved	Stephanie Hartman	Sixense	04/02/2029
Test - Sixense	Test - Sixense	Routine	12/21/2026	Scheduled	Stephanie Hartman	Sixense	12/21/2026
Test - Sixense	Test - Sixense	Routine	12/19/2026	Open for Correction	Stephanie Hartman	Sixense	12/19/2026
Test - Sixense	Test - Sixense	Routine	12/19/2026	In Progress	Aaron Spalotto	Sixense	12/19/2026
Test - Sixense	Test - Sixense	Routine	12/19/2026	Approved	Stephanie Hartman	Sixense	12/19/2026
042-67-02172 B	075890	Fracture Critical (NSTM)-NBI	05/21/2026	Inactive/Cancel	Matthew Ference	Crawfordsville District	05/21/2026
32-0011	3200082	Routine-NBI	05/08/2026	Inactive/Cancel	Michael D. Lankford	United Consulting Engineers, Inc.	05/08/2026
22-00023 B	2200108	Routine-NBI	04/27/2026	Inactive/Cancel			04/27/2026
19-0010	1900078	Routine	03/29/2026	Scheduled			03/29/2026
19-0010	1900078	NSTM	03/29/2026	Scheduled			03/29/2026
19-00144	1900107	Routine	03/29/2026	Scheduled			03/29/2026
19-00149	1900113	NSTM	03/29/2026	Scheduled			03/29/2026
19-00283	1900217	NSTM	03/29/2026	Scheduled			03/29/2026
19-00146	1900109	NSTM	03/29/2026	Scheduled			03/29/2026

Choose attributes

Templates

Default Template

Template name

Default Template

Attribute Fields

- (B.C.01) Deck Condition Rating X
- (B.L.06) Longitude X
- (B.C.06) Bridge Railing
- Transitions Condition Rating >
- Comments
- (B.AP03b) Date of Countermeasures Placed or Field Verified >



Recent Developments

2025

Reconfiguration of SNBI
Table 6.2 in Asset &
Inspection (January)

SNBI JSON file submission draft

- First JSON submittal for the new SNBI FHWA standard

6.2: Inspection Events

Inspect-6.2: Inspection Events

	#1
(B.IE.01) Inspection Type	2. Routine
(B.IE.02) Inspection Begin Date	03/24/2026
(B.IE.03) Inspection Completion Date	03/24/2026
(B.IE.04) Nationally Certified Bridge I...	IN000919
(B.IE.05) Inspection Interval	
(B.IE.06) Inspection Due Date	
(B.IE.07) Risk-Based Inspection Inter...	
(B.IE.08) Inspection Quality Control Date	
(B.IE.09) Inspection Quality Assurance D...	
(B.IE.10) Inspection Data Update Date	
(B.IE.11) Inspection Note	
(B.IE.12) Inspection Equipment	

6.2: Inspection Events

6.2 Inspection Events

	#1
(B.IE.01) Inspection Type	2. Routine
(B.IE.02) Inspection Begin Date	01/13/2026
(B.IE.03) Inspection Completion Date	01/13/2026
(B.IE.04) Nationally Certified Bridge I...	IN000816
(B.IE.05) Inspection Interval	24
(B.IE.06) Inspection Due Date	01/13/2028
(B.IE.07) Risk-Based Inspection Inter...	1. Method 1
(B.IE.08) Inspection Quality Control ...	01/20/2026
(B.IE.09) Inspection Quality Assuran...	
(B.IE.10) Inspection Data Update Date	
(B.IE.11) Inspection Note	
(B.IE.12) Inspection Equipment	



In Development

2025

SNBI

- SNBI Audit
 - Removal of Open for Correction
 - Auto generation of pdf reports
- Copy NBI comments to SNBI

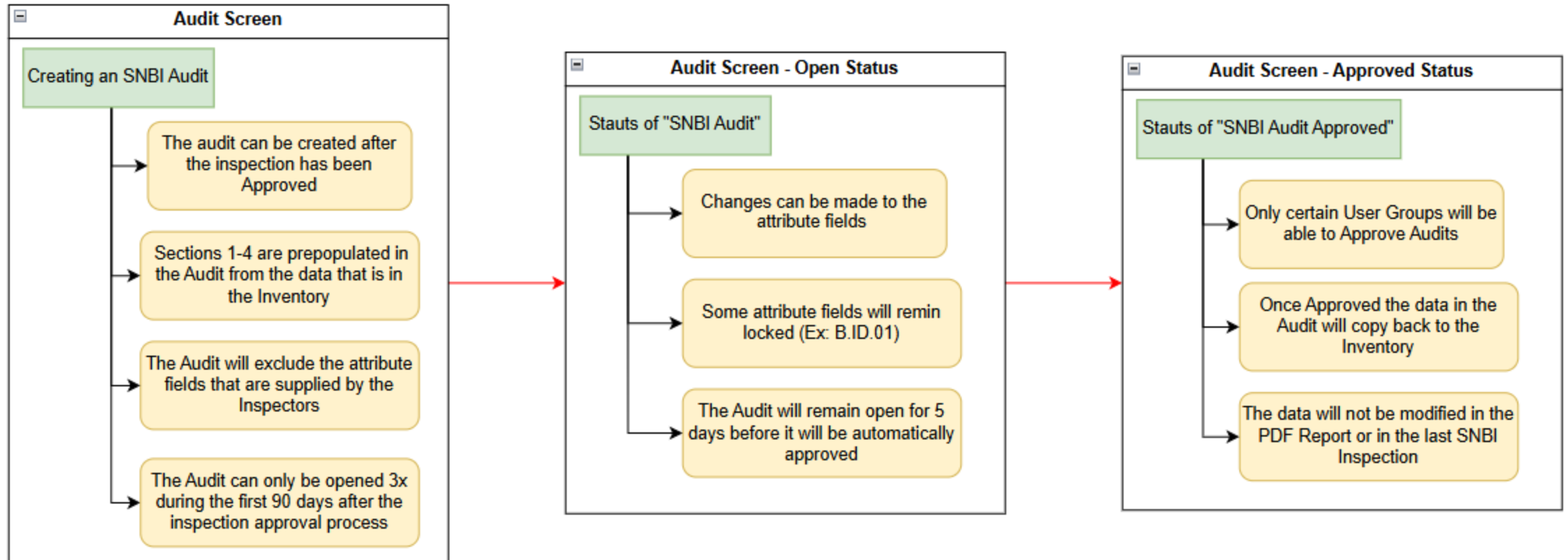
Administration

- Track user certifications
- New ERMS screen

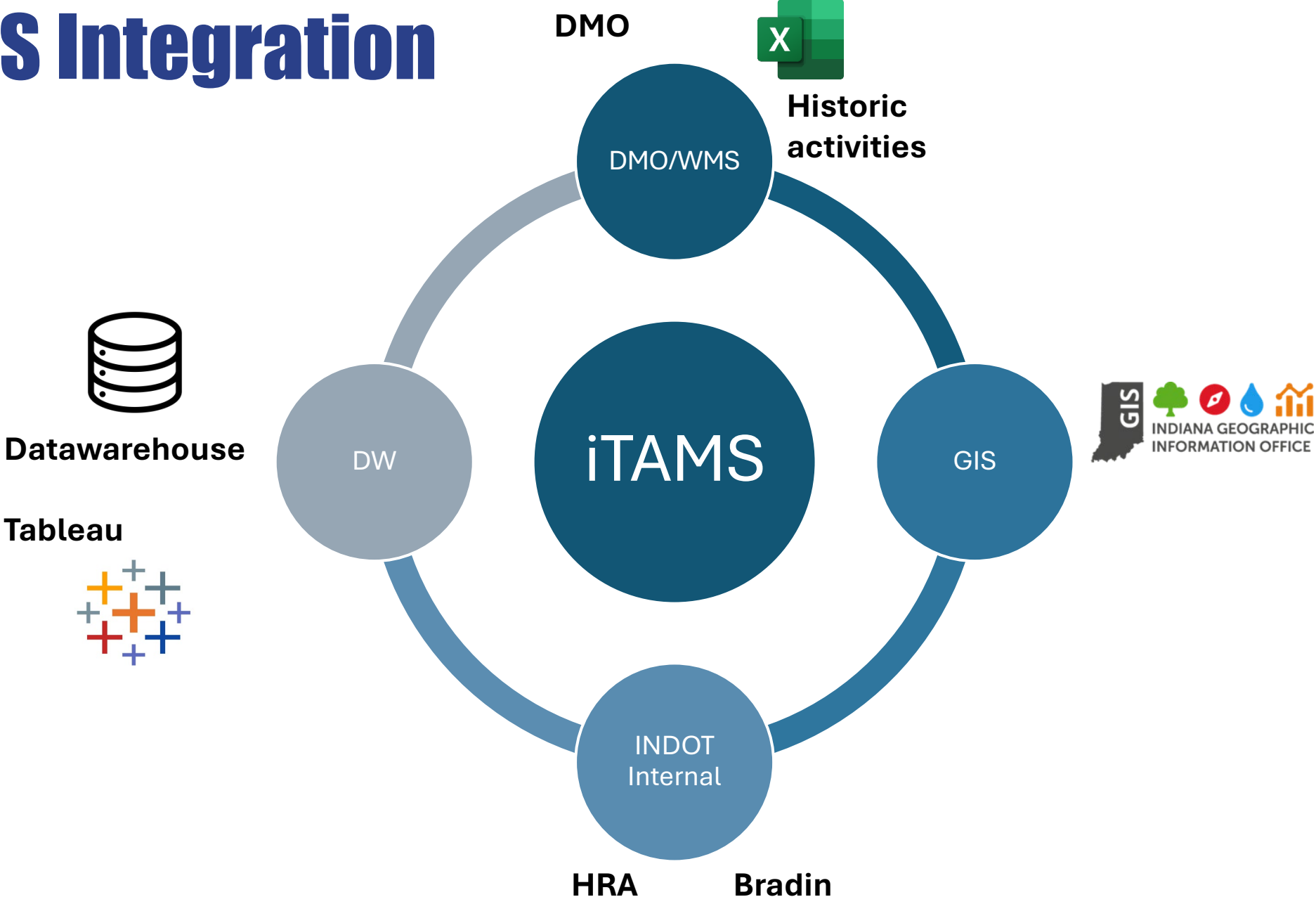
Inspection

- Channel Profile for mobile
- functionalities
- Culvert walls and special workflow
- Changes to Sub-Chapter 7.6

SNBI Audit Process



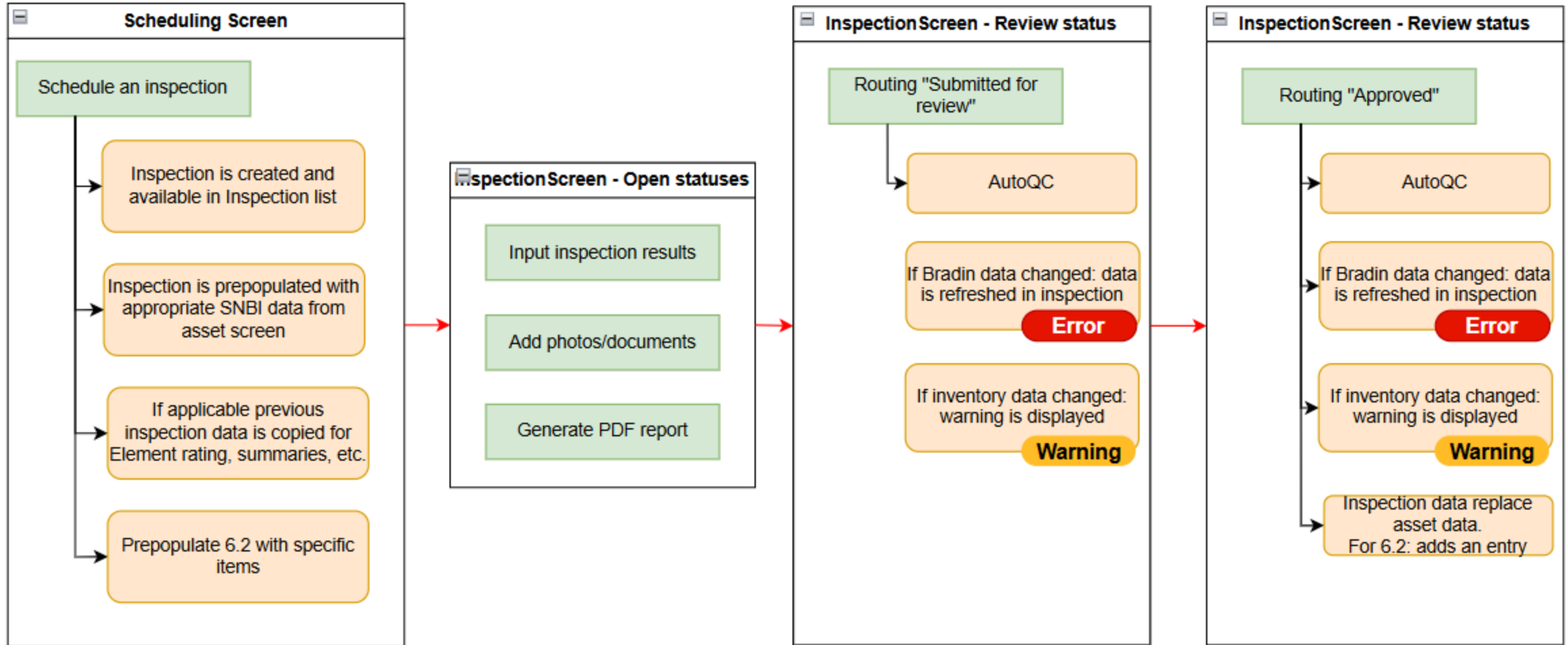
ITAMS Integration



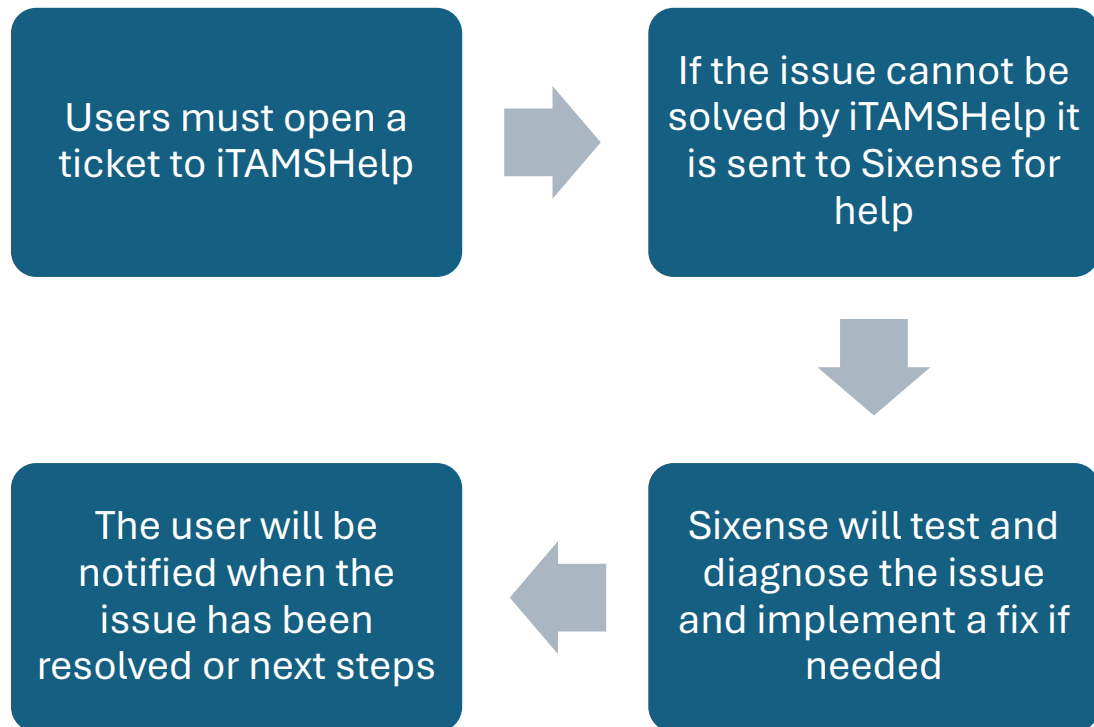
Upcoming Development

- iTAMS and DMO WR, WO details data integration
- User Defined Fields – adding more fields for INDOT Operational use
- Inspection Level Data Export
- Reconfiguration of Vertical and GIS Data
- NSTM table new
- Fixing Issues in new iTAMS Version

Global Process



Opening an iTAMS Ticket



Tickets must have these details

Production: <https://itams.sixense.co/login>

Link/URL:

User Login:

General Description:

Screenshot/Video:

Replication Steps:

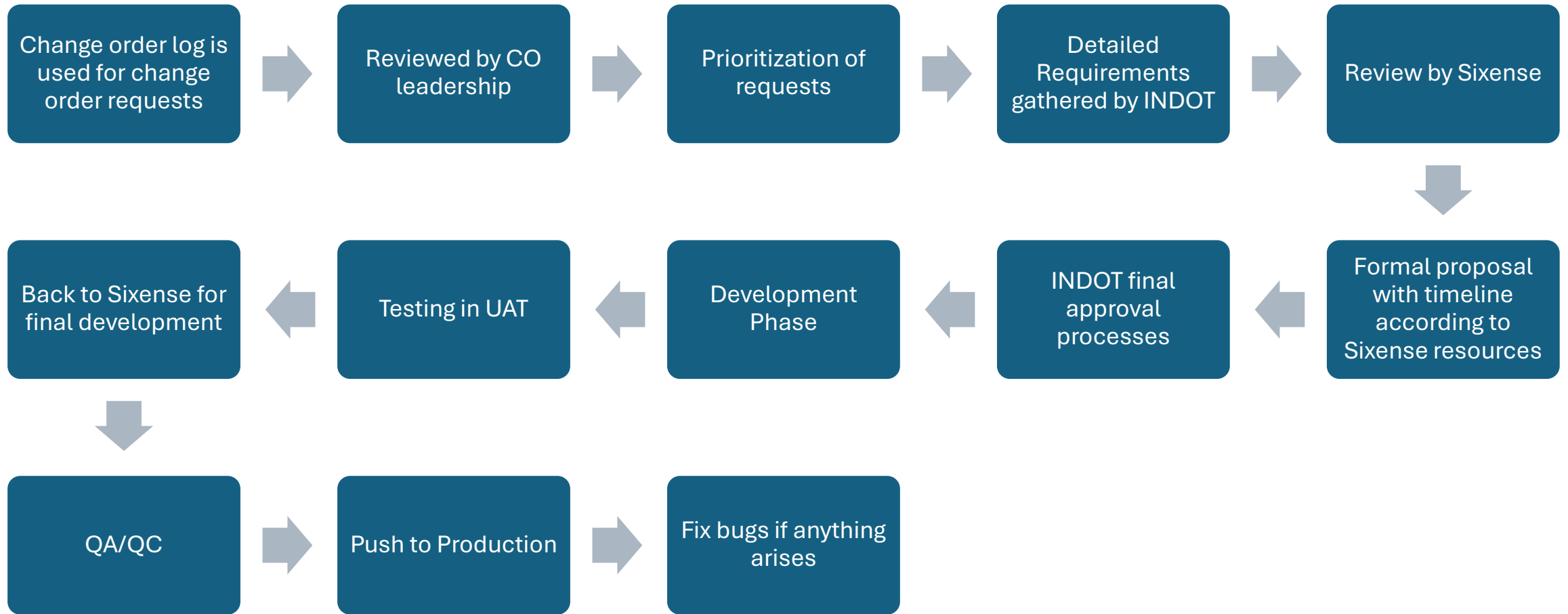
- 1.
- 2.

Current Result:

Expected Result:

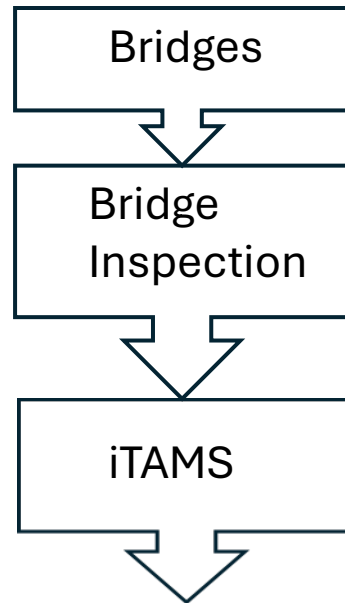
Additional Information:

New Feature Development Processes



iTAMS WebPage

- <https://www.in.gov/indot/>



Indiana Total Asset Management System (iTAMS)

- [Indiana Total Asset Management System \(iTAMS\)](#)
- [INDOT Inspectors Qualification Form](#)
- [INDOT iTams Read Only Access Form](#)
- [iTAMS Help Desk Ticket](#)

Need iTAMS Training? [Click here to request.](#)

A screenshot of the "Indiana Total Assets Management Systems" webpage. The page has a dark header with the title "Indiana Total Assets Management Systems" in white. Below the header is a breadcrumb trail: "Doing Business with INDOT > Consultants > Bridges > Bridge Inspection > Indiana Total Asset Management Systems". The main content area is light gray and contains four white rounded rectangular buttons. The first button is labeled "iTAMS Portal" with "Click Here" below it. The second button is labeled "iTAMS Training" with "Click Here" below it. The third button is labeled "iTAMS Updates" with "Click Here" below it. The fourth button is labeled "Frequently Asked Questions" with "Check back soon to access iTAMS FAQ's." below it.

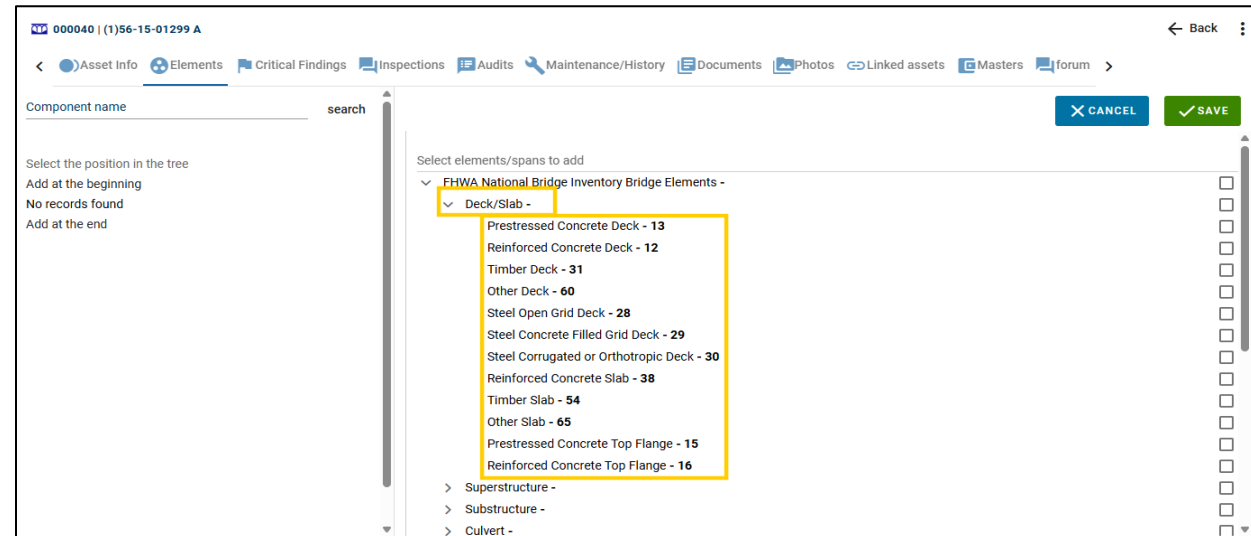


Initial Inspection

- Initial Inspections
 - Contact Bill Dittrich/Nathaniel Foy to create a Master for Initial Inspection
 - Sections 2,3,4,6, & 7 will have a pre-filled information, together with the Design Plan, as well as any NBI Miscellaneous tab that may be applicable
 - Load Rating is requested and initiated
 - Old bridge is archived in iTAMS and RCE
 - A bridge will be in active status
 - Inspection can start

Adding Elements

- *Element data needs to be done before Inspection data is entered*
- Select the Asset and click on Elements in the top menu
- To add elements/spans click on the green button in the upper right corner
- The element list for the selected asset is called the Element Tree
 - The list is expandable, to see the sub elements click on the arrows
- Click the element/span type to add to the Asset
- Click Save
- The created elements will be displayed
 - Click on the element to update its information
 - Click on the Edit button to update element information



Adding Elements – quick tips

- Parent elements: per FHWA, elements 510, 515, 521 need to have a parent
- Move elements in the tree:
 - click Edit and use the = icon next to the element name
 - Use “add at the begin” or “add at the end” to move as the first or last element of the tree
- Archive elements: make sure you update the archive date if needed
- Element TQ is based on the edit date

INDOT iTAMS Team

- Anne Rearick, Bridge Mgt Director
- Tony Marino, Bridge Inspection State Program Mgr
- Maricar Gonzales, Bridge System & Data Mgr
- Bill Dittrich, Bridge Inspection Asst. State Program Mgr
- Jake Gould, Area Engineer
- Cristy Burlage, Area Engineer
- Nathaniel Foy, iTAMS System Admin
- Erich Hart, Hwy Eng. 1, Bridge Mgt

Slido Q&A not in recorded presentation.

<u>Question</u>	<u>Answer</u>
Is there a way to export data to excel from a many to one table. Currently doesn't export.	Yes you can in the asset & inspection filters.
Would INDOT consider allowing consultants to bulk-upload data into iTAMS?	No.
Will itams ever add a data check for these type of inventory data errors, similar to what bias had?	Currently we have a warning for when the asset view data is different from the inspection view data.
Is the mobile app going to be updated to work correctly? Structure map does not. Still using work around to use the back button	Please submit any issues to iTAMSHelp so it can be logged and addressed.
Will iTAMS ever produce tables and reports for County Summary Reports like BIAS did?	This is still in our list of "new requests" for Sixense to develop. ACEC has a task group that created a template but needs reviewed again with SNBI changes. No timeline on this getting done.

