

INDOT UPDATES & CONTRACT PROCEDURES

2024 Bridge Inspection Workshop

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PRESENTATION AGENDA

- Bridge Inspection 23 Metrics Review
- Contract Procedures
- Metric 13: Load Ratings
- BIM 24-01: Critical Findings
- BIM 24-02: Timely Updating of Data
- Metric 18: Scour
- Upcoming Training/Announcements




BRIDGE INSPECTION 23 METRICS REVIEW


U.S. Department
of Transportation
**Federal Highway
Administration**

NBIS Oversight Program


HIBS-30
NBIPOT

Metrics for the Oversight of the National Bridge Inspection Program



May 2017


ToC


U.S. Department
of Transportation
**Federal Highway
Administration**

National Bridge Inspection Program

HIBS-40
BaTS Team

NBIP Compliance Review Manual



May 2023
(for internal FHWA use only)

PY24 INTERIM

BRIDGE INSPECTION 23 METRICS REVIEW

- NONE FOUND TO BE NON-COMPLIANT
- EIGHT METRICS ARE *CONDITIONALLY* COMPLIANT
- TWO METRICS ARE *SUBSTANTIALLY* COMPLIANT

GOOD NEWS

BAD NEWS

BRIDGE INSPECTION 23 METRICS REVIEW

EIGHT METRICS ARE **CONDITIONALLY** COMPLIANT

- METRICS 6, 7, 9, 10, AND 11: INSPECTION INTERVAL
- METRIC 13: INSPECTION PROCEDURES – LOAD RATINGS
- METRIC 18: INSPECTION PROCEDURES – SCOUR
- METRIC 23: TIMELY UPDATING OF DATA

ALL ARE UNDER APPROVED PLANS OF CORRECTIVE ACTION

BRIDGE INSPECTION 23 METRICS REVIEW

METRICS 6, 7, 9, 10, AND 11: INSPECTION INTERVAL

- CURRENT: Must meet frequency intervals; one month allowance for *DOCUMENTED UNUSUAL CIRCUMSTANCES*.
- INTERIM NBIP: Must meet frequency intervals plus acceptable tolerance up to 3 months.
 - Exceptions to inspection interval only for rare and unusual circumstances and must be approved by FHWA in advance.

INDOT POSITION: INSPECTIONS MUST MEET FREQUENCY INTERVALS AND INDOT IS NOT ADOPTING 3 MONTH TOLERANCE AT THIS TIME.

BRIDGE INSPECTION 23 METRICS REVIEW

TWO METRICS ARE ***SUBSTANTIALLY*** COMPLIANT

- METRIC 12: PROCEDURES – QUALITY OF INSPECTIONS
- METRIC 21: PROCEDURES – CRITICAL FINDINGS **

** *ISSUES ADDRESSED WITH BIM MEMORANDUM 24-01*

BRIDGE INSPECTION 23 METRICS REVIEW

METRIC 12: PROCEDURES – QUALITY OF INSPECTIONS

- Expectation is that as the condition ratings go down, the inspection report shall have greater level of details (photos, sketches, narratives).
- Reporting Defects: ***TYPE, SIZE, LOCATION, SEVERITY***
- INDOT Quality Assurance – more bridges will be reviewed.
- Last Year's Findings: INDOT QA Review (PY 2022)

<https://www.in.gov/indot/div/pubs/QA%20Review%20of%202022%20Inspections.mp4>

CONTRACT PROCEDURES

INDOT must have contract compliance that satisfies federal regulations.

Regarding processing NTP early: INDOT can only receive FMIS 8 weeks maximum before the compliance month. Consultants will not get reimbursed for doing inspections early without INDOT authorization.

Consultants are urged to work closely with your counties to ensure that all contract steps and requirements are completed timely so that NTPs can be issued without needing to mobilize On-Call Inspection Consultant.

METRIC 13: LOAD RATINGS

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METRIC 13: Conditionally Compliant Advance Plan of Corrective Action

INDOT to establish a procedure to ensure accuracy of NBI load rating data. This procedure will include:

- INDOT perform monthly audit of queried load rating data.
- INDOT communicate deficiencies with the appropriate owner (or responsible LPA) and Program Manager.
- Expected response time for the Appropriate Owner to address deficiencies.
- INDOT provide monthly status reports to FHWA

METRIC 13: LOAD RATINGS



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METRIC 13: Conditionally Compliant Advance Plan of Corrective Action Implementation Timeline

March 31, 2024: INDOT Standard operating procedure complete

Ongoing: Public Outreach

April 30, 2024:

- Initial audit
- Communicate deficiencies with respective owners
- Deficiencies reported to FHWA

METRIC 13: LOAD RATINGS



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Queried Data

- All Required Rating Factors – Design/Legal/Routine
- All Safe Posting Loads
- NBI Item 90 - Inspection Date
- NBI Items 59, 60, 62 - Condition
- NBI Item 41 - Structure Open, Posted, or Closed to Traffic
- Tons Posted

Scope of Audit

- Load rating documentation is complete. Review all required Rating Factors, taking into consideration the date of initial inspection.
- Load ratings were reviewed when a change in condition warranted re-rating.
- Bridges requiring load restriction. Compare Item 41, Tons Posted to Rating Factors and Safe Posting Loads.
- Monitor progress of supplemented LPA contracts regarding Items 63-66.

METRIC 14: POST or RESTRICT



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Queried Data

- All Required Rating Factors – Design/Legal/Routine
- All Safe Posting Loads
- NBI Item 41 - Structure Open, Posted, or Closed to Traffic
- NBI Item 90 - Inspection Date
- Tons Posted
- Load Rating Submission Date

Scope of Audit

- Bridges requiring posting. Compare Rating Factors and Safe Posting Loads, to Item 41 and Tons Posted.
- Posting deficiencies are resolved within 30 days. Compare the date of query to Load Rating Submission Date for bridges with NBI Item 41 coded B – Open, Posting Required.
- Bridges with a gross live load capacity less than three tons are closed. Review NBI Item 41.

PY24 INTERIM

Bridge Rating Application Database of Indiana (BRADIN)

- How to perform a query:

The screenshot shows the BRADIN web application interface. At the top, there is a navigation bar with the IN.gov logo, the text 'INDOT Bridge Rating Application Database of Indiana', and navigation links for HOME, HELP, CONTACT, and SIGN OUT. A user greeting 'Welcome Sean Hankins' is visible on the right. Below the navigation bar is a search filter bar with the following elements: a dropdown menu for 'Bridge # / NBI # / DES #', input fields for 'Rating ID:' and 'Parent Asset:', a list icon, and two checkboxes for 'Include Superseded Reports' and 'Include In-Progress Reports'. A 'Search' button and a 'Clear' button are also present. Below the search bar is a table with a grid icon on the left and a table header row with the following columns: NBI, Bridge #, DES, Rating ID, In-Serv..., Submitted Date, Revision Date, Rehab Designation, Deterioration Inclu..., and B.LR.03 – Load Rating Date. Below the table header is a pagination bar showing 'Page of 0' and '10 items per page'.

Common Search Methods:

- Bridge Number (e.g. 01-15-02474 A)
- NBI Number (e.g. 000010)
- DES Number (e.g. 1901483)
- Parent Asset (district or county)
- The query will always return the In-Service Report if one exists
- Optional, include superseded reports
- Optional, include In-Progress reports (saved, not submitted)

Include Superseded Reports Include In-Progress Reports

Bridge Rating Application Database of Indiana (BRADIN)

More about the **Parent Asset**:



Bridge # / NBI # / DES #:

Rating ID:

Parent Asset:

Include Superseded Reports

Include In-Progress Reports

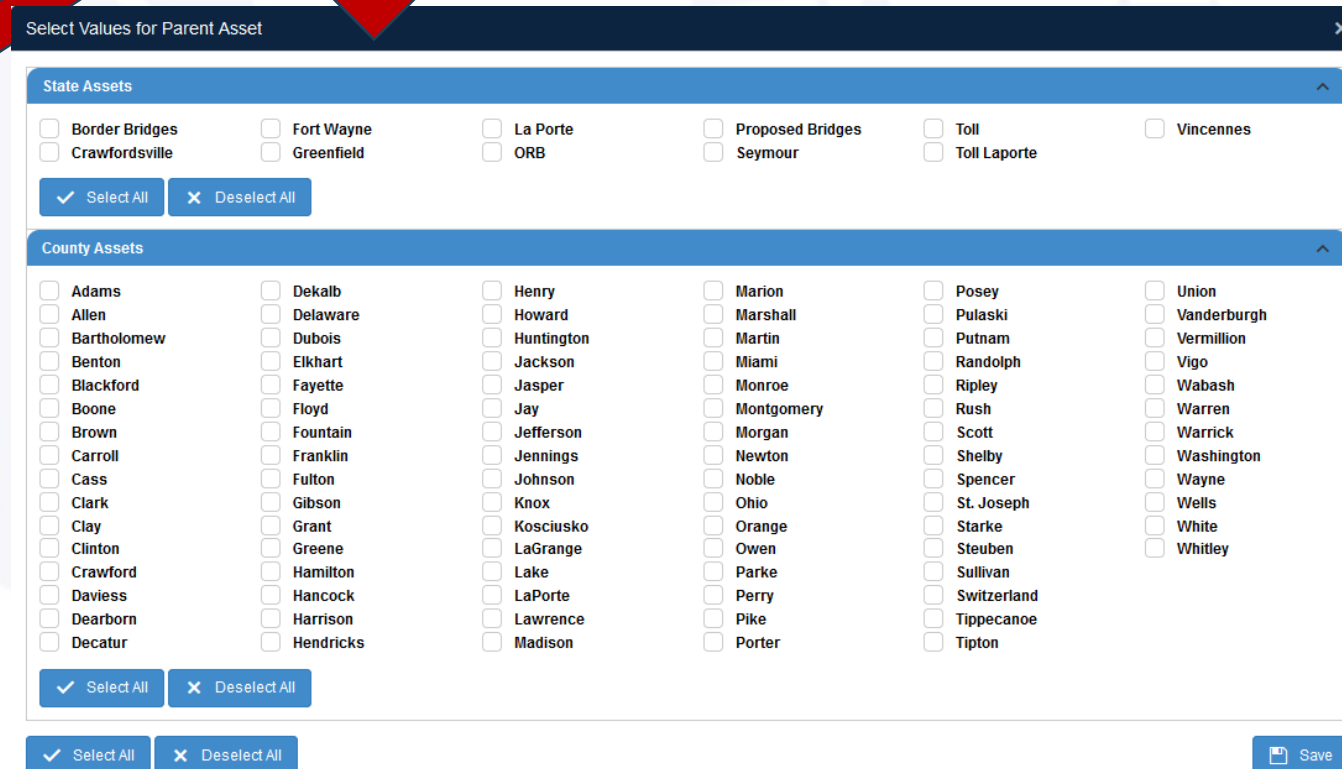
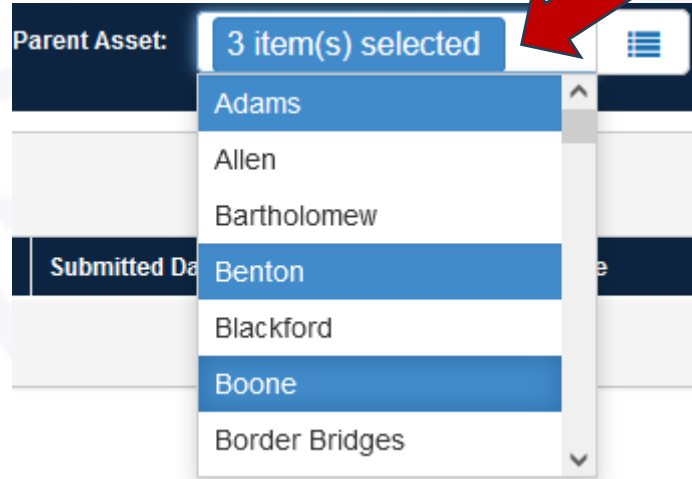
Search

Clear

Welcome Sean Hankins

To reveal the list of parent assets available:










- Press the down arrow key, or
- Press the chart icon, then click "Save"



Bridge Rating Application Database of Indiana (BRADIN)

- To export a query:

Bridge # / NBI # / DES #: Rating ID: Parent Asset: 3 item(s) selected

	NBI	Bridge #	DES	Rating ID	In-Service Report	Submitted Date	Revision Date
	0100001	01-00001		15602	✓	03/04/2019 12:46:58 PM	06/30/2023 08:
 	0100003	01-00004					
 	0100004	01-00005					
 	0100005	01-00006					
 	0100006	01-00007					

Select Columns for Dashboard Export

Rating Status

Rating Header

- NBI
- Deterioration Included
- Shop Drawings Available
- Rater Name
- B.LR.04 – Load Rating Method
- B.LR.08 – Routine Permit Loads
- B.PS.02 – Posting Status Change Date
- (64) Operating Rating
- Tons Posted
- Posted Tonnage (Gross) CV
- Posted Tonnage (5-Axle) CV
- Posted Tonnage (Tandem) EV

- Bridge #
- DES
- Rating Program
- B.LR.01 – Design Load
- B.LR.05 – Inv. Load Rating Factor
- Toll Road
- (65) Inventory Rating Method
- (31) Design Load
- Date Posted/Closed
- Posted Tonnage (2-Axle) CV
- Posted Tonnage (6-Axle) CV
- Posted Tonnage (Gross) EV

- Parent Asset
- SPMS Contract #
- Program Version
- B.LR.02 – Design Method
- B.LR.06 – Oper. Load Rating Factor
- Extra Heavy Duty Highway
- (66) Inventory Rating
- (70) Bridge Posting
- Commercial Vehicle Sign
- Posted Tonnage (3-Axle) CV
- Emergency Vehicle Sign
- Notes

- Rehab Designation
- Plans Available
- Rating Firm
- B.LR.03 – Load Rating Date
- B.LR.07 – Controlling Legal Load Rating Factor
- B.PS.01 – Load Posting Status
- (63) Operating Rating Method
- (41) Structure Open / Posted / Closed
- Posted Tonnage (Single Axle) CV
- Posted Tonnage (4-Axle) CV
- Posted Tonnage (Single Axle) EV

✓ Select All ✗ Deselect All

Design Inventory Loads

Design Operating Loads

Legal and Routine Permit Loads

Special Permit Loads

✓ Select All ✗ Deselect All

Export

- Select the Excel icon,
- Expand the desired sections,
- Select the desired fields, then click “Export”

BIM 24-01: CRITICAL FINDINGS



BIM 24-01: CRITICAL FINDINGS

ISSUED ON JANUARY 30, 2024, AND EFFECTIVE IMMEDIATELY.

- ADDRESSES METRIC 21 “SUBSTANTIALLY COMPLIANT” FINDINGS

CONSISTENCY WITH SECTION 650.313(q)

- DEFINES REQUIREMENTS CONCERNING WEIGHT LIMIT SIGNAGE.
- CLARIFIES REPORTING REQUIREMENTS.

- REMOVES REFERENCES TO *BIAS*.
- DETAILS *iTAMS* WORKFLOW PROCESS.

BIM 24-01: CRITICAL FINDINGS

23 CFR PART 650, SECTION 650.313 (q)

- DISCOVERY OF NBI ITEMS 58, 59, 60, 61, AND 62 ≤ 2 (CRITICAL).
- ASSESSMENT OF NBI ITEM 113 ≤ 2 (SCOUR VULNERABILITY).
- DISCOVERY OF ANY NSTM ≤ 3 (CRITICAL).
- WEIGHT LIMIT RESTRICTION ISSUES.

DISCOVERY OF MISSING OR INCORRECT LOAD RESTRICTION SIGNS AT BRIDGE ENDS AND ADVANCED WARNINGS SHALL BE REPORTED AS A CRITICAL FINDING – INCLUDING ANY DUE TO NEW LOAD RATING.

BIM 24-01: CRITICAL FINDINGS

WEIGHT LIMIT SIGNAGE AND CRITICAL FINDINGS

- MISSING/INCORRECT DISCOVERED BY BRIDGE INSPECTORS: CRITICAL FINDING IS **REQUIRED**
- NEED FOR SIGNAGE (NEW OR MORE RESTRICTIVE) DISCOVERED DURING ANY LOAD RATING ANALYSIS: CRITICAL FINDING IS **REQUIRED**
- MISSING/INCORRECT DISCOVERED BY LOCAL FORCES:
 - CORRECT AS A HIGH-PRIORITY MAINTENANCE FIX WITHIN 30-DAYS OF DISCOVERY.
 - FORMAL CRITICAL FINDING INCIDENT REPORT IS **NOT REQUIRED**

ONLY CERTIFIED INSPECTION TEAM LEADERS CAN REPORT CRITICAL FINDINGS

BIM 24-01: CRITICAL FINDINGS

MEMORANDUM INCLUDED REQUIREMENT FOR FOLLOW UP ACTIONS

- AGENCY/LPAs/CONSULTANTS: REVIEW BRIDGE FILES
- CHECK: NBI 58, 59, 60, 61, 62, AND 113 ≤ 2
- CHECK: BRIDGE WITH NSTMs ≤ 3
- IF NO PAST CRITICAL FINDINGS: SUBMIT NEW CRITICAL FINDING

IF NSTM(s) DROPPED TO ≤ 3 AND LOAD RATING WAS DONE FOLLOWING DISCOVERY OF REDUCTION AND RESULTS ACTED UPON:

**** NO NEW CRITICAL FINDING SUBMITTAL NEEDED.***

**** ADD MEMO TO BRIDGE FILE.***

BIM 24-02: TIMELY UPDATING OF DATA



Depositphotos_195613490

BIM 24-02: TIMELY UPDATING OF DATA

ISSUED ON JANUARY 30, 2024, AND EFFECTIVE IMMEDIATELY.

- DEFINES EXPECTATIONS FOR UPDATING INSPECTION DATES IN iTAMS.
- DEFINES REQUIREMENTS FOR SUBMITTING REPORTS FOR REVIEW AND INSPECTION REPORT APPROVAL
- CLARIFIES DELINQUENT INSPECTION SITUATIONS
 - *Revises procedures away from previous BIAS Form to an email notification until similar iTAMS form can be implemented.*

BIM 24-02: TIMELY UPDATING OF DATA

EXPECTATIONS FOR UPDATING INSPECTION DATES IN iTAMS

***UPDATE NBI 90 (ROUTINE) AND NBI 93 (CRITICAL FEATURES)
INSPECTION DATES “NO LATER THAN 48 HOURS FOLLOWING THE
ACTUAL BRIDGE INSPECTION START DATE...”***

The intention is not to be punitive. INDOT is looking to address instances where corrective actions may be warranted.

BIM 24-02: TIMELY UPDATING OF DATA

DEFINES REQUIREMENTS FOR SUBMITTING REPORTS FOR REVIEW AND INSPECTION REPORT APPROVAL

REPORTS MUST BE APPROVED “NO LATER THAN THE LAST CALENDAR DAY OF THE SECOND MONTH FOLLOWING THE LAST CALENDAR DAY OF THE BRIDGE ASSET’S SPECIFIED INSPECTION COMPLIANCE MONTH.”

For example: Inspection done on March 20, 2024 (Compliance Month) must have the inspection report APPROVED by May 31, 2024.

METRIC 18: SCOUR



METRIC 18: SCOUR

APRIL 27, 2001: FHWA MEMORANDUM REVISED NBI ITEM 113

<https://www.fhwa.dot.gov/engineering/hydraulics/policymemo/revguide.cfm>

8: Bridge foundations determined to be stable for assessed or calculated scour conditions; ~~calculated~~. Scour is determined to be above top of footing. (Example A) by assessment (i.e., bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculation or by installation of properly designed countermeasures (see HEC 23).

METRIC 18: SCOUR

APRIL 27, 2001: FHWA MEMORANDUM REVISED NBI ITEM 113

<https://www.fhwa.dot.gov/engineering/hydraulics/policymemo/revguide.cfm>

7: Countermeasures have been installed to ~~correct~~ mitigate ~~a previously~~ an existing problem with scour and to reduce the risk of bridge failure during a flood event. Instructions contained in a plan of action have been implemented to reduce the risk to users from a bridge failure during or immediately after a flood event. ~~Bridge is no longer scour critical.~~

METRIC 18: SCOUR

INDOT REVISING PART 6 (SCOUR) OF BRIDGE INSPECTION MANUAL

CURRENTLY

NBI ITEM 113 ≤ 3 OR “U” **REQUIRES** SCOUR PLAN OF ACTION.

NEW

NBI ITEM 113 = 7 **NOW REQUIRES** SCOUR PLAN OF ACTION.

NBI ITEM 113 = 8 WHEN PROPERLY DESIGNED COUNTERMEASURES ARE IN PLACE; SCOUR PLAN OF ACTION **NOT REQUIRED**.

METRIC 18: SCOUR

INDOT REVISING PART 6 (SCOUR) OF BRIDGE INSPECTION MANUAL

- STATE REQUIREMENT FOR ***DOCUMENTATION SUPPORTING*** HOW NBI ITEM 113 IS CODED FOR ALL BRIDGE ASSETS.
- DEFINE ***“PROPERLY DESIGNED COUNTERMEASURES”*** REQUIREMENTS.
- ALL BRIDGE ASSETS ***BUILT AFTER 1998***: REQUIRE DESIGN PLANS, SCOUR ANALYSIS CALCULATIONS, SCOUR APPRAISAL LETTER, OR SIMILAR APPROVED DOCUMENTATION IN ALL BRIDGE FILES.
- DETAIL EXPECTATIONS AS TO WHAT INSPECTORS SHOULD REVIEW FOR SCOUR WHEN CARRYING OUT INSPECTIONS.
- REQUIRE ALL SCOUR PLANS OF ACTION TO BE REVIEWED, UPDATED, AND APPROVED AT REGULAR INTERVALS.

METRIC 18: SCOUR

IMPLEMENTATION ACTIONS

- JULY 2024: EXPECT REVISED PART 6 OF BRIDGE INSPECTION MANUAL.
- PROVIDING LIST OF AFFECTED BRIDGES (NBI 113 = 7, U, 3 or Less) TO ALL BRIDGE OWNERS AND INSPECTORS.
- NEW SCOUR PLANS OF ACTION SHALL BE PREPARED.
- EXISTING SCOUR PLANS OF ACTION SHALL BE UPDATED REGULARLY.
- SCOUR APPRAISAL ITAMS DATA FIELDS FOR AGENCY-DEFINED CODING.
- ADDITIONAL INFORMATIONAL OUTREACH.
- TRACKING IMPLEMENTATION THROUGH DATA AUDITS.
- REQUIRED FULL COMPLIANCE BY ***NOVEMBER 30, 2025.***

UPCOMING TRAINING/ANNOUNCEMENTS



UPCOMING TRAINING/ANNOUNCEMENTS

- NHI COURSE 130053: Bridge Inspection Refresher Training (3-day)
July 23 through July 25, 2024 (All seats full – waiting list)

INDOT trying to schedule another for later this year.

- NHI COURSE 130055: Safety Inspection of In-Service Bridges (10-day)
August 5 through August 16, 2024

- PURDUE/SBRITE 2-DAY NSTM COURSE

Still working with FHWA on getting certified as an approved equivalent for NSTM.
INDOT likely will make a required refresher training for current NSTM inspectors.

UPCOMING TRAINING/ANNOUNCEMENTS

- BRIDGE INSPECTION MANUAL: Revisions are underway and INDOT expects to issue new Parts later this spring.
 - Revisions all driven to meet new regulations and SNBI.
 - Part 1 – Administration: titles, qualifications, responsibilities.
 - Part 2 – Types of Inspections: including risk-based inspection frequencies.
 - Part 4 – QC/QA: incorporating recent FHWA Peer Exchange.
 - Part 6 – Scour: driven to meet current Plan of Corrective Action.

UPCOMING TRAINING/ANNOUNCEMENTS

- iTAMS ENHANCEMENTS: Ongoing; updates posted to bridge inspection website.

<https://www.in.gov/indot/doing-business-with-indot/consultants/bridges/bridge-inspection/indiana-total-asset-management-systems/>

- iTAMS PLATFORM RE-ORGANIZATION: Second week of March; look for upcoming announcement.
- BIAS GOING OFF-LINE ***PERMANENTLY*** ON ***MARCH 30, 2024***

THANK YOU!

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