



SNBI Webinar - Idaho

YOUR *Safety* ●●●▶ YOUR *Mobility* ●●●▶ YOUR *Economic Opportunity*

Agenda

- **Introduction – Mike Johnson, ITD**
- SNBI Overview from a State's Perspective – Alan Buehrig, ITD
- SNBI Data Collection – Patty Fish, ITD
- Demonstration of the SNBI Collector – Rob Schultz, Mayvue



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Introduction Idaho Transportation Department 2/15/24

Mike Johnson, P.E.
State Bridge Engineer



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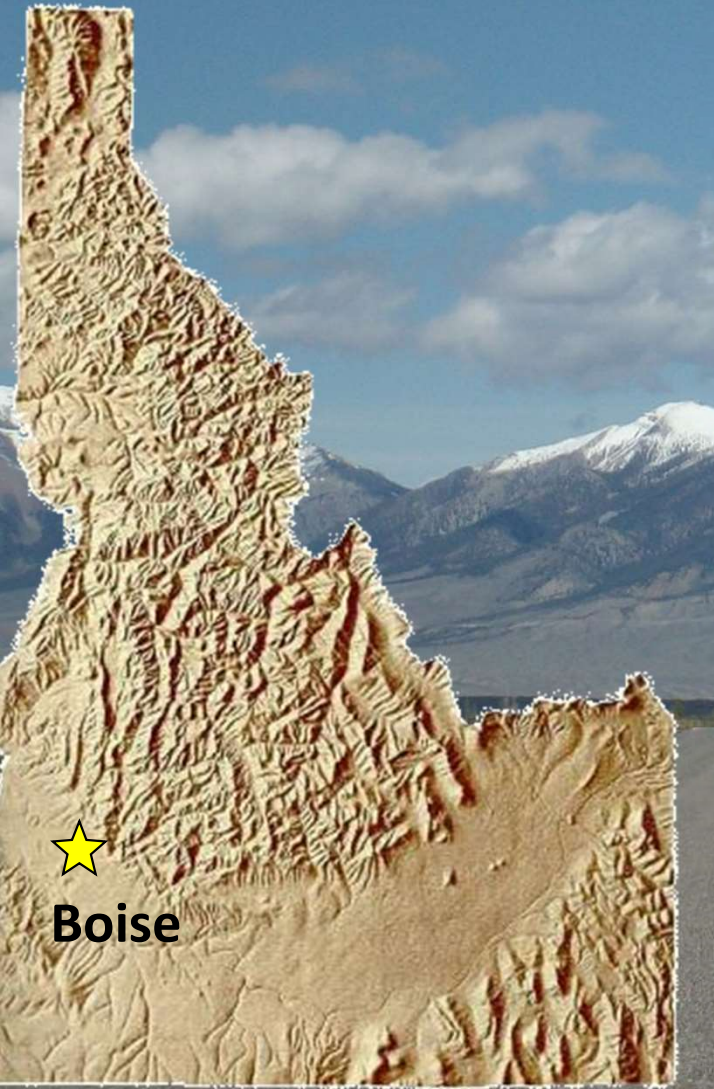
A Little About Idaho



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Population – 1.94-million

- 39th Largest
- 2nd Fastest Growing State

Area – 83,569 sq. mile

- 14th Largest

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Major Industries

- Technology
- Manufacturing
- Agriculture / Food Production
- Tourism
- Outdoor Recreation



Boise

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Agricultural State

- Potatoes – 32% in USA
- Sugarbeets
- Dairy / Cattle
- Hay / Barley
- Onions



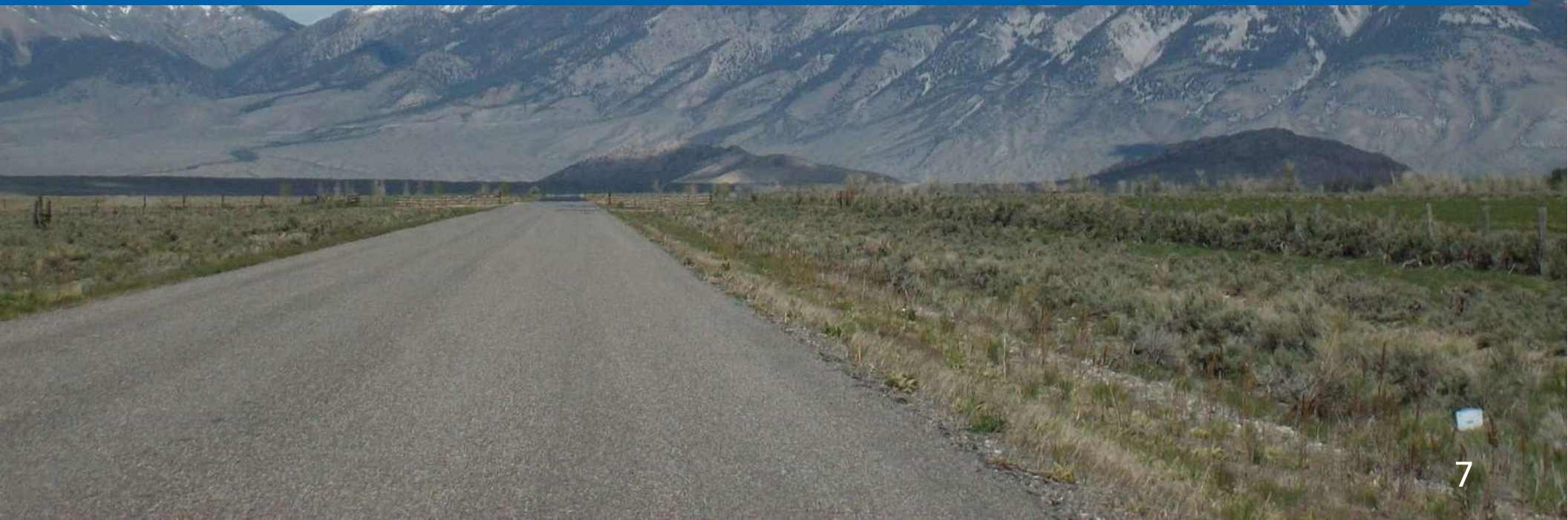
Boise



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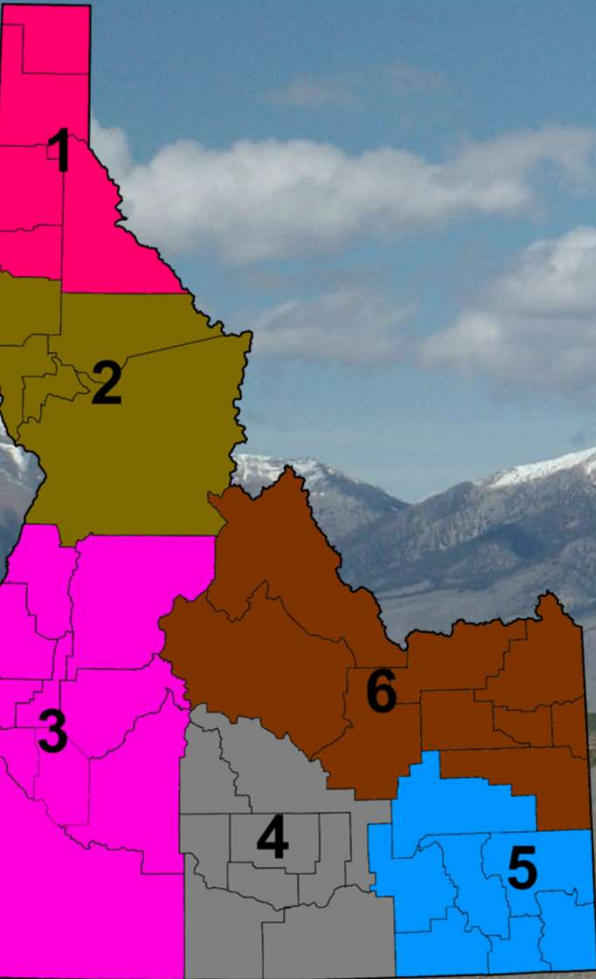
A Little About Idaho Transportation Department



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- ~1560 Employees
- 6 District / Headquarters
- 2023 - \$1.06-billion In Construction
- \$100-million Bridge Program

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Michael Johnson, P.E.
State Bridge Engineer

Bridge Design

Melissa Hennessy, P.E.
Group 1 Design Leader

Shanon Murgoitio, P.E.
Group 2 Design Leader

Herbert McDowell, P.E.
Hydraulic Engineer
Technical Engr.

Elsa Johnson, P.E.
Bridge Designer
Technical Engr.

William Johnson, P.E.
Bridge Designer
Technical Engr.

Jared Levings, P.E.
Bridge Designer
Technical Engr.

Scott Litchfield, P.E.
Bridge Designer
Technical Engr.

Tony Azari, P.E.
Bridge Designer

Kyle Blackham
Bridge Designer

Andrew Pack, P.E.
Bridge Designer

Erl Sandeen
CADD

Grant Hogg, E.I.
Bridge Designer

Mike Garoutte
CADD

VACANT
CADD

VACANT
CADD

David Samuelson
CADD

Bridge Asset Management

Alan Buehrig, P.E.
Bridge Asset Management
Engineer

VACANT
Load Rating Engineer

Patty Fish
Project Manager

Jake Legler, P.E.
Bridge Special Projects
Technical Engr.

Dave Cuvelier, P.E.
Bridge Inspector

Lauren Graham, E.I.
Load Rating Engineer

Jack Irwin
Bridge Inspector

VACANT
Load Rating Engineer

Amy Bower
Bridge Inspector

VACANT
Load Rating Engineer

Seth Crawford
Bridge Inspector Trainee

VACANT
Database Manager

Victor Babychuk
Equipment Specialist

Planning

Mike Ebright, P.E.
Planning Engineer

Darren LaMay, P.E.
Planning Engineer



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Idaho Bridge Inventory





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State Highway System

- 1835 Bridges
- 13.0-million SF Of Deck Area

Local System

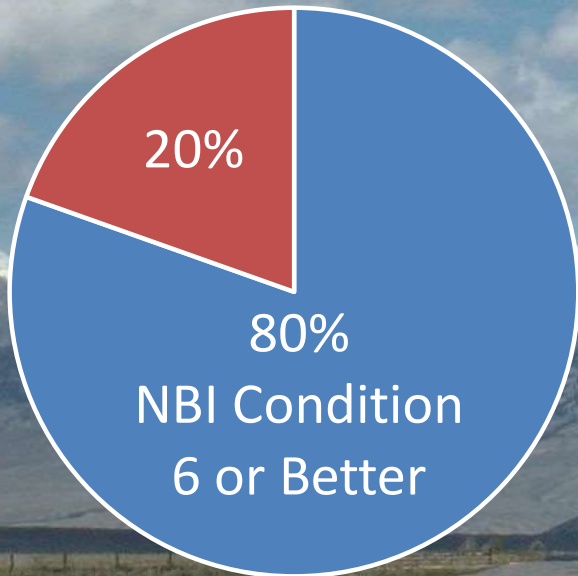
- 2515 Bridges
- 6.5-million SF Of Deck Area



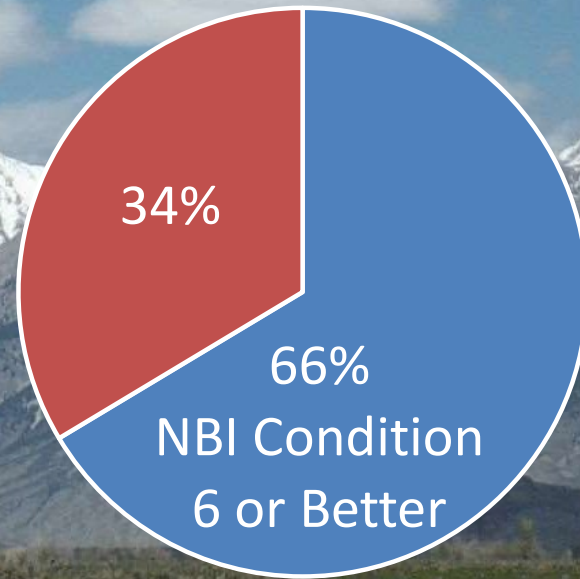
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2023 State Bridge Condition



2023 Local Bridge Condition



State Bridge Condition Based
On 13.0-million SF Of Bridge Area

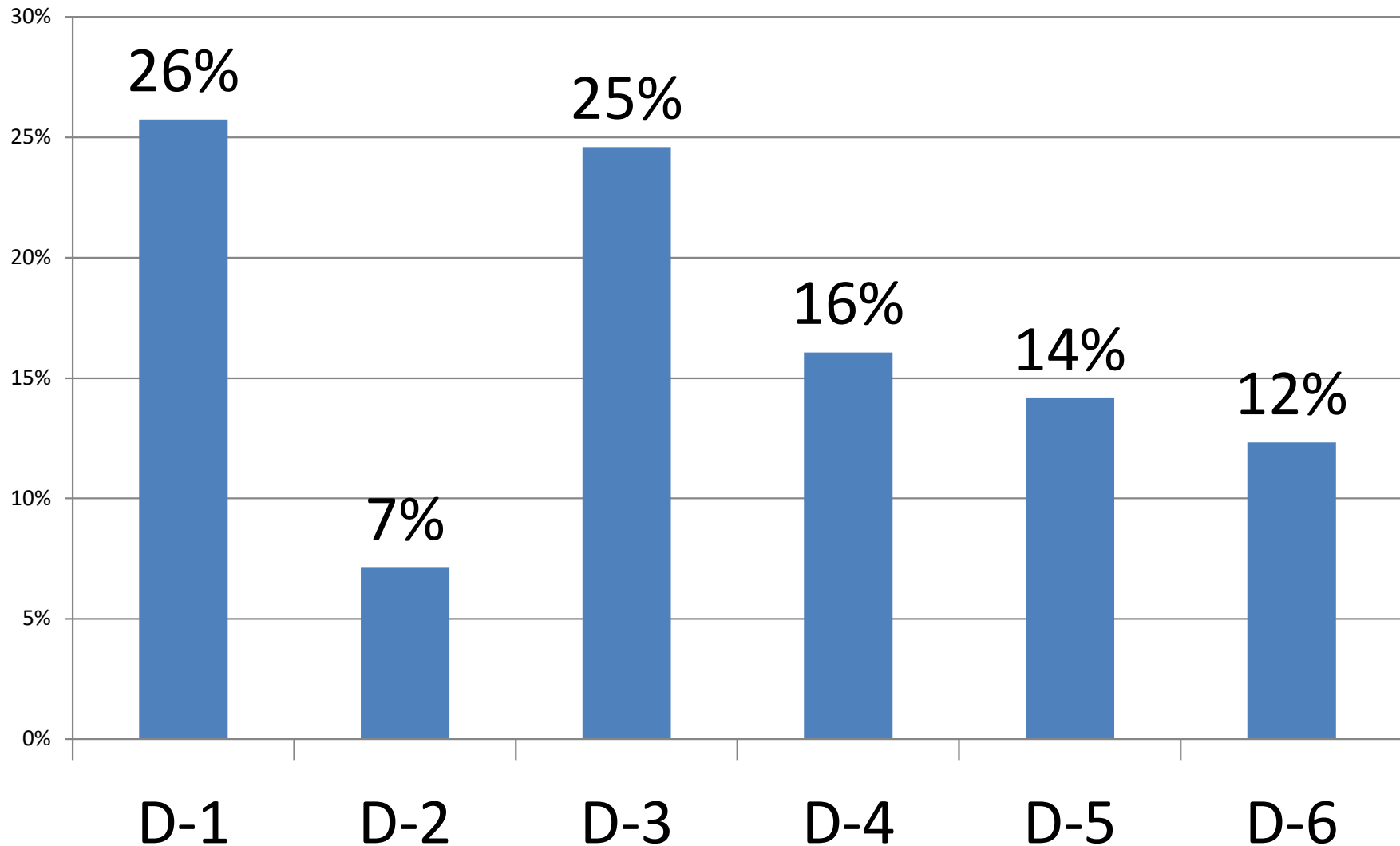
Local Bridge Condition Based
On 6.50-million SF Of Bridge Area

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BRIDGE AREA BY DISTRICT

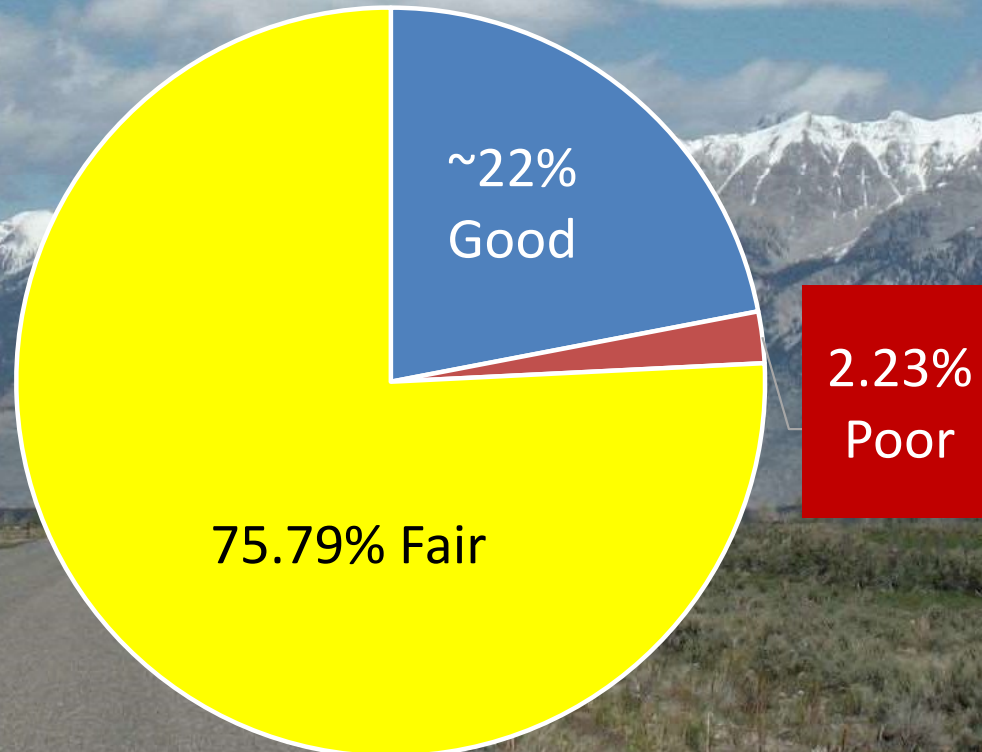




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2023 NHS
Bridge Condition



Idaho NHS Bridges



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SNBI Overview from a State's Perspective

Idaho Transportation Department

Alan Buehrig, P.E.

Bridge Asset Management Engineer



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Idaho Asset Management Program

Total Budget for State and Local System – Approx. \$5m

- Load Rating
 - » Support of Fully Automated Permitting with ProMiles
- Inspection Bridges & Tunnels
 - » Support of 2 UBITs
 - » Routine
 - » Damage Inspections
 - » UW Program
 - » Special Inspections
 - » QC and QA
 - » Local Program Coordination
- Sign Structures
 - Plan reviews
 - Inspections
 - Follow-up
- Scour
 - » Committee
 - » Hydraulic Analysis
 - » Scour
 - » Planning
- Planning
 - » Optimizer
 - » Support of Districts in Addressing Maintenance Recommendations



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Idaho Resources

ITD Inspectors

- 3 Team Leaders
- 2 Trainees
- 1 UBIT Operator
- Supplemented with Consultants
- PM completes QC of reports.

Local System Inspectors

- 7 Consultant firms ranging in resources and areas of expertise
- PM completes QA of reports.

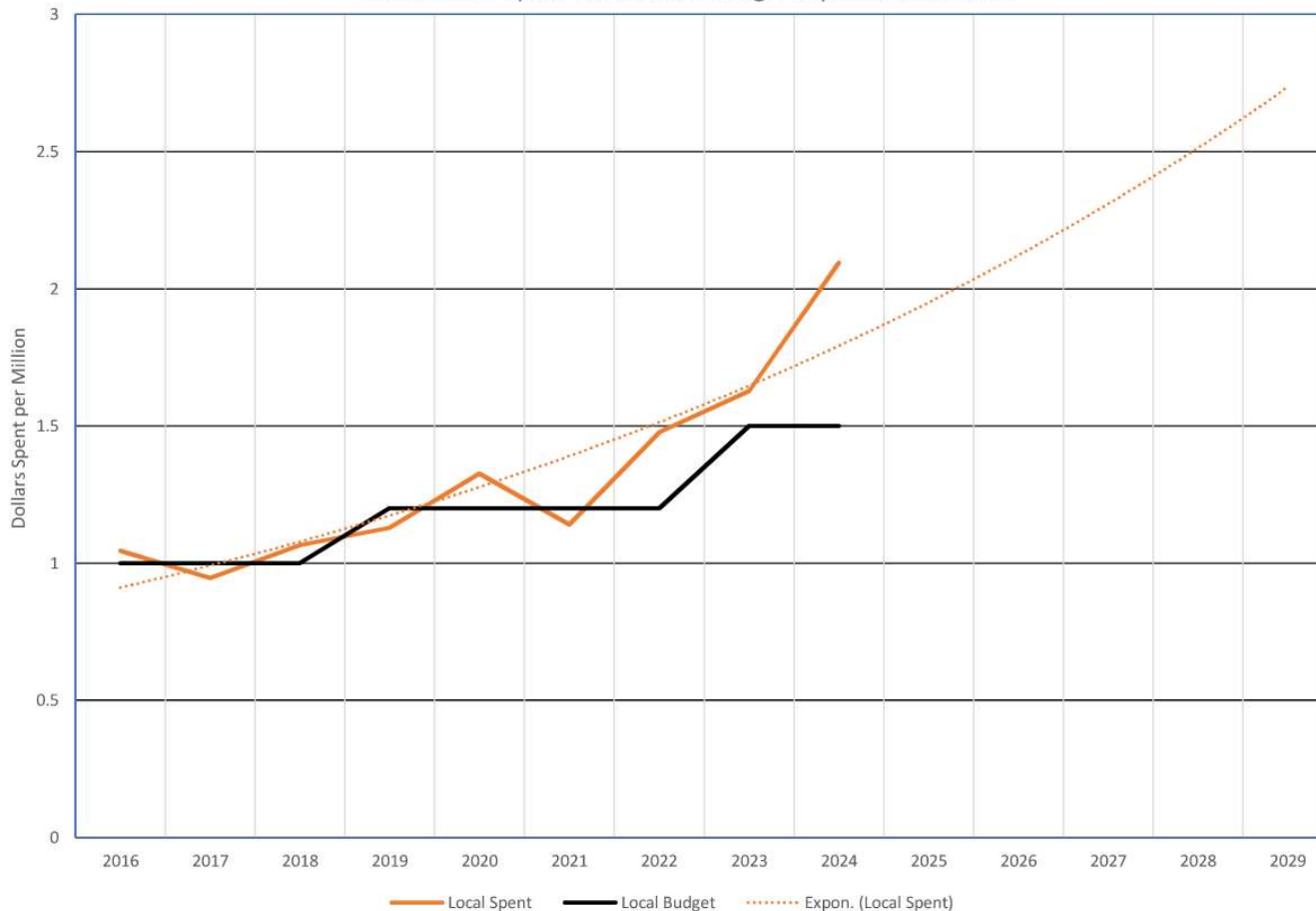


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Idaho Resources

Local Dollars Spent on Routine Bridge Inspections in Idaho



- Year over Year Average – 16.5% increases in inspection cost with consultants.
- Anticipating even higher costs for the SNBI Implementation.

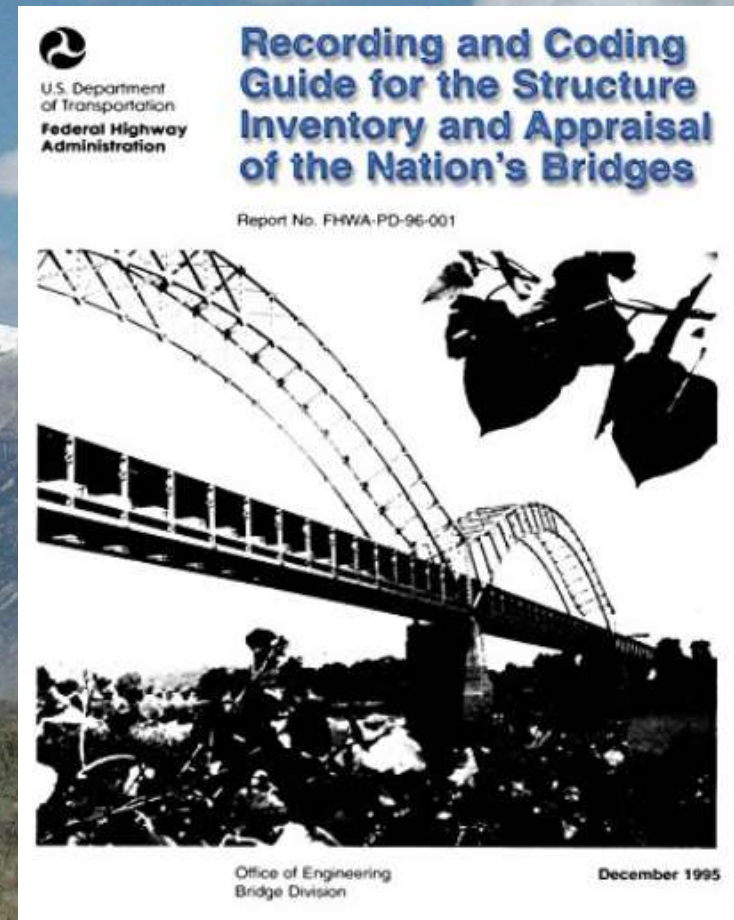


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SNBI Background

- Silver Bridge Collapse in December 15, 1967.
- National Bridge Inspection Standards (NBIS) developed in 1971.
- FHWA Coding Guide goes back to 1972.
- Several Revisions of the Coding Guide were issued.





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SNBI Background

- Moving Ahead for Progress In the 21st century (MAP-21) signed into law by Obama in July 6, 2012.
- MAP-21 required updating the NBIS and FHWA Coding Guide.
- The National Bridge Inspection Standards(NBIS) are in the Code of Federal Regulations(CFR).



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National Bridge Inspection Standards (NBIS)

Code of Federal Regulations 23 CFR Subpart C

National Bridge Inventory (NBI)

The Database

Specifications for the National Bridge Inventory (SNBI)

What information is to be collected and how it is to be collected for the NBI.



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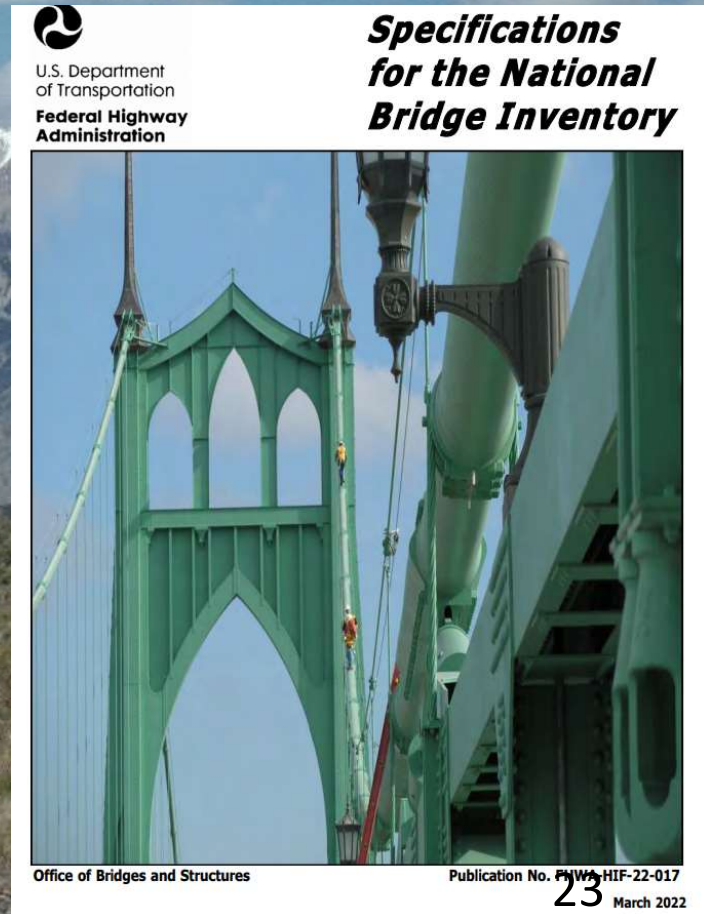
FHWA Rule Making Process

2019 Notice of Proposed Rule Making (NPRM)

Public Comment

AASHTO
T-18 (Safety
and Evaluation)

23 CFR 650 Subpart C
May 2022 - SNBI





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AASHTO Comments

- In the Rulemaking process FHWA received over 1600 comments regarding the SNBI.
- The top 10 SNBI items that received comment included Scour Condition Ratings, Bridge Railings, and Load Posting Status.
- Major concerns from commenters revolved around high implementation costs and long implementation timelines (4 to 10 years)



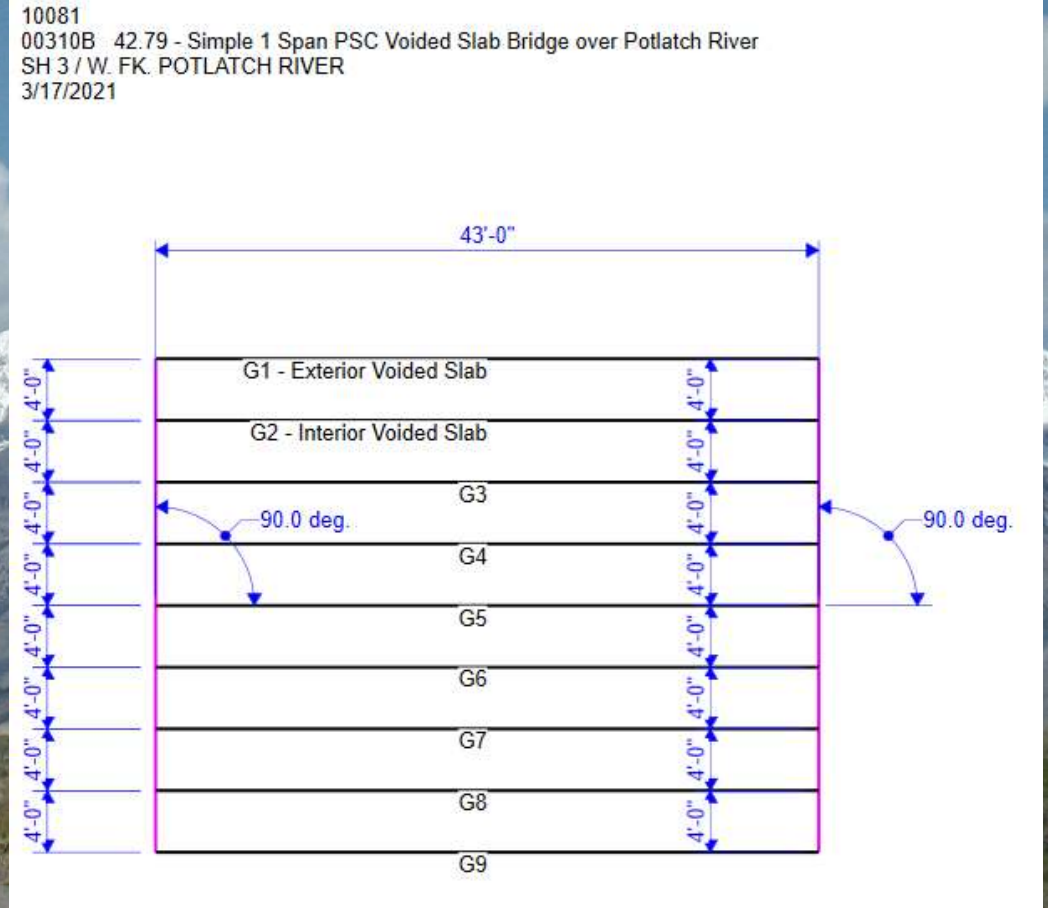


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Idaho Concerns

- Shifting focus of primary purpose of inspection.
- Redundancies of data collection.
 - For example: Idaho utilizes AASHTOware Bridge Rating (BrR) for load rating where some of the requested data already exists.





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2022 SNBI

- Improvements in Organization and Format
- Specification and Commentary with Examples
- No non-NBIS structures
- Data Set Relationships – Many to One
- Total SNBI Items = 154
- 54 new items, 113 initial items likely won't change from inspection to inspection, 37 items reviewed each inspection, 4 items calculated by FHWA





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2022 SNBI – Moving Ahead

- ITD SNBI Transition Plan
 - Create SNBI Transition Team
 - Get FHWA SNBI Training
 - Obtain appropriate data collection software
 - Crosswalk and transition BrM data into newer SNBI versions of BrM
 - Develop extensive QC/QA processes to ensure new data and transferred data is correct





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2022 SNBI – Moving Ahead

- Idaho SNBI Transition Team
 - The Idaho SNBI Transition Team includes design policy, construction, maintenance, and inspection perspectives.
 - The history of Idaho bridge practice is considered to facilitate the transition
 - For example, bridge rail types commonly used in Idaho





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Implementation Timeline

- May 2022: 23 CFR Subpart C signed into law.
 - March 2025: Last submittal of 1995 Coding.
 - March 2026: First SNBI data to be submitted.
- March 2027: Second round of SNBI data to be submitted.
 - March 2028: 3rd submittal and compliant.



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ITD Timeline

- ITD is approaching the Implementation of the SNBI in a planned format starting with 48 month inspection frequency bridges in 2024.

Current Goal is to have all ITD inspections in 2025 and after will be done using the SNBI.





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SNBI Data Collection

Idaho Transportation Department

Patty Fish
Bridge Inspection Project Manager
and Database Coordinator



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Plotting a Course

- Overwhelming – where to start?
- With bridges on a 48 month cycle Idaho was committed to starting the process in 2024
- Idaho has strong background with BrM
- Solid working relationship with Mayvue
- May 8 2023 Mayvue presented a webinar on the SNBI Collector
- Idaho was sold



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Steps forward:

- BrM Mobile License Process Started
- Idaho turned in Plan Of Action to FHWA June 2023
- Started testing the Collector in August 2023
- Mayvue was very responsive to needs
- Issues/Ideas completed by the next day



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Steps forward:

- Easy to get Mayvue the data
 - NBI and NBE files
- SNBI and NBIS inspections will occur in tandem
- The SNBI data will be collected and stored on the Mayvue server until the migration to BrM 7.0
- Mayvue will integrate SNBI inspection data



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Steps Forward:

- Collector can be used on all platforms
 - cell phones, tablets, laptops
- 90% SNBI data fields can be entered in the office
 - plans
 - past inspection data
 - ITD Guidance Worksheets and Spreadsheets
- 10% SNBI data fields actually collected in the field



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Implementation

- Went live with Collector in January 2024
- 517 bridges on 48 month inspection interval
- 37% of 2024 inspections will get SNBI inspections
- Subset of bridges makes it easier on the inspectors
- FHWA 2.5 day SNBI training provided to all of our inspectors

<https://www.fhwa.dot.gov/bridge/snbi.cfm>



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Steps for Inspection

1. Download bridges on device in office
2. Fill out items 1:1 in the office using plans, past inspection data and ITD guidance worksheets spreadsheets
3. Sync bridges back to server
4. Download bridges on tablet
5. Take tablet to the field. Complete NBIS inspection in tandem with SNBI verifying data collected.