



Michigan Division

FHWA Update 2023 Michigan Bridge Conference March 14th, 2022

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Disclaimer



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• Except for any statutes or regulations cited, the contents of this presentation do not have the force and effect of law and are not meant to bind the public in any way. This presentation is intended only to provide information to the public regarding existing requirements under the law or agency policies.



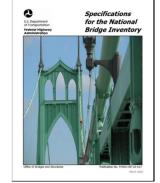
Contents



- National Bridge Inspection Standards
 - Notable Changes
 - References/Resources
- Specifications for the National Bridge Inventory
 - Overview
 - Implementation
 - References/Resources
- Bipartisan Infrastructure Law
 - Discretionary Grants











- § 650.303 Applicability
- Expanded Applicability
 - Tribally owned bridges
 - Privately owned bridges that are connected to public roads immediately at both ends
 - Temporary bridges, and bridges under construction with portions open to traffic





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• § 650.307 Bridge Inspection Organization Responsibilities

 State Transportation Departments, Federal Agencies, and Tribal Governments are responsible for proper inspection and evaluation of all highway bridges

- Delegated functions must be documented
- Border bridges need joint written agreements





- § 650.307 Bridge Inspection Organization Responsibilities
- Added and clarified existing responsibilities, such as:
 - Maintaining a registry of nationally certified bridge inspectors
 - Performing quality control and quality assurance activities
 - Managing the activities and corrective actions taken in response to a critical finding
 - Managing scour appraisals and scour plans of action





- § 650.309 Qualifications Personnel
- Experience/Education for Team Leaders
 - Registered professional Engineer with 6 months of bridge inspection experience
 - 5 years of bridge inspection experience
 - Bachelor's degree in engineering from an accredited college or university, have successfully passed the National Council of Examiners for Engineering and Surveying Fundamentals of Engineering examination and two years of bridge inspection experience.
 - Associate's degree in engineering from an accredited college or university and four years of bridge inspection experience







- § 650.309 Qualifications of Personnel
- Training for Team Leaders
 - Complete an FHWA-approved comprehensive bridge inspection training course and score 70 percent or greater on an end-of-course assessment.
 - Complete a cumulative total of 18 hours of FHWA-approved bridge inspection refresher training over each 60-month period.







- § 650.311 Inspection Interval
- •Method 1: Specified Criteria in 23 CFR 650.311 for 12-, 24-, and 48-month intervals.
- **Method 2:** FHWA formal approval with more rigorous process for 12, 24, 48, and 72-month intervals.





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• § 650.313 Inspection Procedures

• § 650.313 (b) Initial Inspections

• Initial inspection to be performed as soon as practical, but within 3 months

of the bridge being open to traffic.







- § 650.313 Inspection Procedures
- § 650.313 (e) Underwater Inspections
 - The first underwater inspection for each bridge and for each bridge with portions underwater that have been rehabilitated must be completed as soon as practical, but within 12 months of the bridge opening to traffic.
- § 650.313 (f) Non-Redundant Steel Tension Member (NSTM) Inspections
 - The first NSTM inspection for each bridge and for each bridge with rehabilitated NSTMs must be completed as soon as practical, but within **12** months of the bridge opening to traffic.





- § 650.313 Inspection Procedures
- § 650.313 (k) Load Rating
 - Load ratings must be completed as soon as practical, but no later than 3 months after the initial inspection and when a change is identified that warrants a re-rating
 - Analyze routine and special permit loads for each bridge that these loads cross to verify the bridge can safely carry the load.







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• § 650.313 Inspection Procedures

650.313(p) Quality Control and Quality Assurance

- Section 1.4 of AASHTO Manual for Bridge Evaluation, 3rd Edition, 2018
 referenced
- Reviews are to be performed by someone other than those who completed the original report or calculations
- Document results and address findings





- § 650.313 Inspection Procedures
- § 650.313 (q) Critical Findings
- Define critical findings considering the location and the redundancy of the member affected and the extent and consequence of a deficiency. At a minimum, include findings which warrant:
 - Full or partial closure
 - NSTM in serious or worse condition (≤ 3)
 - Component in critical or worse condition (≤ 2)





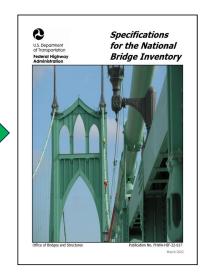
- References/Resources
 - FHWA Bridge Inspection websites
 - https://www.fhwa.dot.gov/bridge/inspection/
 - https://www.fhwa.dot.gov/bridge/nbis2022.cfm
 - Anticipated Timeline for Implementation of NBIS Final Rule
 - Memo Implementation of the SNBI
 - Memo <u>Inspection Interval</u>
 - Memo <u>Inspection of NSTMs</u>
 - Memo Approval of Alternate Bridge Inspection Training Courses
 - Developing guidance
 - Questions and Answers





- Overview
 - Element Level Data Included
 - Non-NBIS Structures Removed
 - One-to-one and many-to-one data sets
 - Example Primary data set one item to one bridge
 - Example Features data set many features to one bridge









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Overview

 Specification and Commentary format

Data Item Name			
<u>Format</u>	Frequ	iency	<u>Item ID</u>
Specification		Commentary	
Requirements for reporting the data item.		Expanded guidance on the specification.	
Specification Continued, Commentary Continued, or Examples			
Additional space for Specification or Commentary, if needed. Examples are presented to further clarify the specification. Each item typically has brief examples. A more comprehensive example can			

be found at the end of each section or subsection.

- Item Grouping Sections/Subsections
 - E.g. Features/Highways or Bridge Condition/Component Condition
- Item IDs
 - E.g. B.H.01 Functional Classification or B.C.01 Deck Condition Rating

Section	Subsection	<u>Identifier</u>
Condition	Component Condition	С
	Element Identification	E
	Element Conditions	cs
	Appraisal	AP
	Work Events	w





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Overview

- 54 New Items
 - 36 Initial
 - 14 Each Inspection
 - 4 Calculated
- 154 Total Items
 - 113 Initial
 - 37 Each Inspection
 - 4 Calculated

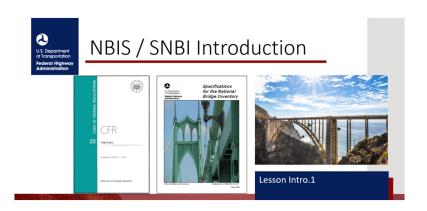
- B.IE.11 Inspection Note
- B.IE.12 Inspection Equipment
- B.C.05 Bridge Railings Condition Rating
- B.C.06 Bridge Railing Transitions Condition Rating
- B.C.07 Bridge Bearings Condition Rating
- B.C.08 Bridge Joints Condition Rating
- B.C.14 NSTM Inspection Condition
- B.C.15 Underwater Inspection Condition

- B.IE.03 Inspection Completion Date
- B.IE.04 Nationally Certified Bridge Inspector
- B.IE.07 Risk-Based Inspection Interval Method
- B.IE.08 Inspection Quality Control Date
- B.IE.09 Inspection Quality Assurance Date
- B.IE.10 Inspection Data Update Date





- SNBI Specific Training
 - Under Development
 - Anticipated / Envisioned:
 - Approximately 2 days in length
 - Both In-person and Virtual options
 - Deployment by FHWA Resource Center







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Implementation Timeline

Target Date	Action
2022 May 6	NBIS Final Rule published with SNBI incorporated by reference
2022 Jul	FHWA publishes Data Crosswalk
2022 Oct	FHWA publishes Data Submittal Schema and Data Submittal Validation Logic
2023 Apr	FHWA makes Transition Tool available online
2024 Oct	FHWA makes NBI NextGen available online for data validation only
2025 Mar 15	Last submittal in 1995 Coding Guide format
2026 Jan 1	 Last date to begin verification of transitioned data and collection of new SNBI data for inspected bridges – Agencies may elect to begin data collection and verification earlier to meet the March 15, 2028 deadline for submittal of a complete SNBI dataset FHWA makes NBI NextGen available for Data Submittals





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• Implementation Timeline

Target Date	Action
2026 Mar 15	First SNBI submittal – Transitioned/Hybrid Dataset – At a minimum, all bridges submitted with transitioned data except for specified fields required to manage FHWA programs, which shall have collected or verified SNBI data – Continue verification of transitioned data and collection of new SNBI data
2026 Jun	Sunset Transition Tool
2027 Mar 15	Second SNBI submittal – Transitioned/Hybrid Dataset – Continue verification of transitioned data and collection of new SNBI data
2028 Mar 15	Third SNBI submittal – 100% populated/verified – No temporary codes permitted – First complete SNBI dataset with collected and verified SNBI data for all bridges





- Michigan Division
- Implementation Resources
- FHWA Bridge Inspection websites
 - https://www.fhwa.dot.gov/bridge/inspection/
 - https://www.fhwa.dot.gov/bridge/snbi.cfm
 - SNBI.PDF
 - Memo Implementation of the SNBI (PDF)
 - Data Crosswalk for "Over" Records and "Under" Records (HTML and XLSX)
 - <u>Detailed Code Mapping</u> for Individual Data Items (HTML and XLSX)
- Developing guidance
 - Questions and Answers
 - Data Submittal Schema/Format
 - Data Submittal Validation Logic





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Significance

- Grows the economy, enhances U.S. competitiveness, creates good jobs, and makes the U.S. economy more sustainable, resilient, and equitable
- Around \$550 Billion in new Federal infrastructure investment, including—
 - Largest federal investment in public transit ever
 - Largest federal investment in passenger rail since the creation of Amtrak
 - Largest dedicated bridge investment since the construction of the Interstate System
 - Largest investment in clean drinking water & wastewater infrastructure in U.S. history
 - Largest investment in clean energy transmission & electric vehicle infrastructure in history
 - Ensuring every American has access to reliable high-speed internet





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- Discretionary Grants
 - Notice of Funding Opportunity (NOFO)



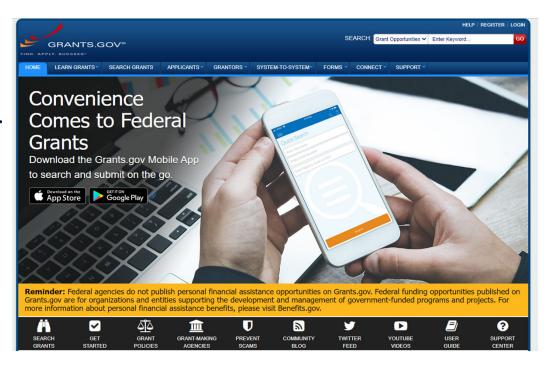
<u>Bipartisan Infrastructure Law - Competitive Grant</u>
Programs | Federal Highway Administration (dot.gov)





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- Discretionary Grants
 - Grants.gov is the most up-todate location for all grant opportunities current and past.



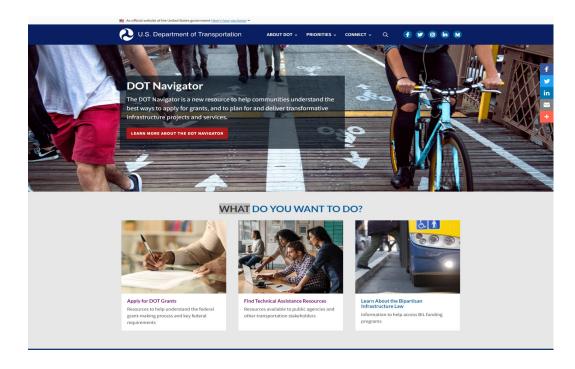
Home | GRANTS.GOV





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- Discretionary Grants
 - How to Apply
 - Technical Assistance for Preparing Grants
 - BIL Overview Information



DOT Navigator | US Department of Transportation





Discretionary Grants

Select BIL Discretionary Grant Opportunities	Release	Close
RAISE - Local and Regional Project Assistance Program	11/30/2022	2/28/2023
Mega, INFRA, Rural - Multimodal Project Discretionary Grant Opportunity	3/25/2022	5/23/2022
BIP - Bridge Investment Program - Planning, Bridge Projects, and Large Bridge Projects	6/10/2022	9/8/2022
PROTECT - Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation	TBD	TBD



Discretionary Grants



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• [NEW] Rural Surface Transportation Grants

Purpose	Improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.
Funding	\$2 B (FY 22-26) in Contract Authority from the HTF
Eligible entities	 State (including Puerto Rico) Regional transportation planning organization (RTPO) Local government Tribal government
Eligible projects	 Highway, bridge, or tunnel projects eligible under NHPP, STBG or the Tribal Transportation Program Highway freight project eligible under NHFP Highway safety improvement project Project on a publicly-owned highway or bridge improving access to certain facilities that support the economy of a rural area Integrated mobility management system, transportation demand management system, or on-demand mobility services



Discretionary Grants



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• [NEW] Bridge Investment Program

Purpose	Improve bridge (and culvert) condition, safety, efficiency, and reliability
Funding	 \$12.5 B (FY 22-26), including— \$3.3 B (FY 22-26) in Contract Authority from the HTF; and \$9.2 B (FY 22-26) in advance appropriations from the GF
Eligible entities	 State (including Puerto Rico) MPO (w/ pop. >200K) Local government Special purpose district or public authority with a transportation function Federal land management agency Tribal government
Eligible projects	 Project to replace, rehabilitate, preserve or protect one or more bridges on the National Bridge Inventory Project to replace or rehabilitate culverts to improve flood control and improve habitat connectivity for aquatic species



Discretionary Grants



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• [NEW] PROTECT Grants

Purpose	Planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure
Funding	\$1.4 B (FY 22-26) in Contract Authority from the HTF
Eligible entities	 State or political subdivision of a State (including Puerto Rico) MPO Local government Special purpose district or public authority with a transportation function Indian Tribe Federal land management agency (applying jointly with State(s)) Different eligibilities apply for at-risk coastal infrastructure grants
Eligible projects	 Highway, transit, intercity passenger rail, and port facilities Resilience planning activities, including resilience improvement plans, evacuation planning and preparation, and capacity-building Construction activities (oriented toward resilience) Construction of (or improvement to) evacuation routes



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Questions