

# 2024 Field Manual with 2025 updates

Note: Page number is based on 2024 Field Manual with 2025 updates on website.

## 1. Element List, Pg. 6, Added Element 312

312	Enclosed/Concealed Bearing	EA	NBE	85
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## 2. Element List, Pg. 7, Changed name for 8207 and 8209

0000	wearing surface (bare)	SF	ADE	100
8207	Median	SF	ADE	103
8209	Sidewalk	SF	ADE	103
8508	Asphaltic Chip Seal	SF	ADE	103

## 3. Chapter 2.D, Pg. 14, Added new language for animal nesting

- vi. Animal Nesting/Roosting Presence on the Structure: Check the box in HSIS under Note/requirements tab if the possible migratory bird nesting or bat roosting presence is on the bridge. Provide comments on observations (i.e. swallow nests or droppings on girders. Bat droppings below joints. Observed swallows in flight under bridge). The presence of nesting materials of unknown origin should also be noted. See BOS Website for animal nesting/roosting presence on structure guide.

## 4. Chapter 2.D, Pg. 15, Added new language for clarity

### D. General Guidance on Element Level Inspection

- 1) Structural defects include Settlement and Scour and occur only at substructures (abutments and piers) elements only. Structural defects do not count toward the total element quantity and associated condition states. Agency Defined Defects (ADD) do not count toward the overall National Bridge Elements (NBE) quantity, but do apply to the Bridge Management Elements (BME) and Agency Defined Elements (ADE). ADD's include defects such as wingwall movement, wingwall deterioration, discoloration, chloride concentration among others. NBE defects that apply must also be identified when using an ADD.

## 5. Chapter 3.B, Pg. 32, Added new language for sidewalk and median

**Element 12/38** - The quantity for deck and slab will be edge to edge including any sidewalk or median areas, flares, and ramps. The evaluation area will include the bottom surface and fascia. Do not consider the sidewalk or median condition in the (NBI) rating for Deck Condition Rating, except insofar as they impact the condition of the deck/slab itself. ie. a full depth sidewalk patch extending into the deck/slab.

## 6. Chapter 3.B, Pg. 33, Added discoloration updates

- Defect 8904** - Discoloration defect is for use with deck and slab elements. The intent is to quantify areas of the deck or slab which show signs of higher permeability or water retention. Discoloration covers all quantity of the element and if it overlaps with other defects you still count that area for discoloration. Discoloration from construction materials or locomotive exhaust is not considered a defect. This defect does not require a structural review.

## 7. Chapter 3.G, Pg. 85, Added Element 312 in table

312 – Enclosed/Concealed Bearing      EA

## 8. Chapter 3.G, Pg. 85, Added language to Element 310 Narrative

- Element 310** - Includes elastomeric and laminated bearing pads, but not thin, non-laminated bearing pads. The condition rating for elastomeric bearing elements will no longer consider the corrosion defect or steel protective coating for any steel that make up the elastomeric bearing. This includes the steel sole plate, steel masonry plate, or other steel portions of the elastomeric bearing assembly. The condition and maintenance issues related to any steel portion of the elastomeric bearing are to be recorded in the bearing element narrative and maintenance actions, as necessary and not considered when rating the elastomeric bearings.

9. Chapter 3.G, Pg. 85, Added Element 313 Narrative

Element 313 - This element defines only those bridge bearings that provide for rotation only (no longitudinal movement).

10. Chapter 3.J, Pg. 104, Changed name for 8207 and 8209

J. Wearing Surfaces

Wearing Surfaces	
510 – Wearing Surfaces (Other)	SF
8000 – Wearing Surface (Bare)	SF
8207 – Median	SF
8209 – Sidewalk	SF
8500 – Asphalt/Concrete	SF

11. Chapter 3.J, Pg. 106, updated language for Defect 8912

- Defect 3210 - IR/Thermography results for delaminations down to the top layer of reinforcement should be quantified under Defect 3210 under the applicable wearing surface element. Code all chert pop-outs less than 3" in diameter as Condition State 1 and anything 3" and greater as Condition State 2. Under Defect 3210-~~and~~ include notes describing extent of pop-outs.

12. Chapter 3.J, Pg. 106, updated language for Defect 8912

- Defect 8912 – Used for steel and timber defects.

13. Chapter 3.J, Pg. 107,108, Added timber defects to 8912

Deterioration/Distortion – Wearing Surface (8912)*	<del>None</del> Timber checks/cracks penetrate <5% of member thickness.	Minor corrosion, arrested cracks, or loose fasteners, but functioning as intended. Distortion not requiring mitigation or has been mitigated. Timber decay affects<10% of member section, checks/cracks	Section loss, cracks not arrested, or missing fasteners. Distortion that requires mitigation that has not been addressed. Timber decay affects 10% or more of member section, checks/cracks penetrate >50% of member thickness or >5% tension zone. Condition does not warrant structural review.	Advanced section loss, cracks, or missing fasteners. Loose grating sections that could pose a safety hazard. Distortion that requires mitigation that has not been addressed.
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		penetrate 5%-50% of member thickness and not in tension zone.		
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14. Chapter 5.D, Pg. 162, Added Enclosed/Concealed Bearing description

Enclosed/Concealed Bearing (Element 312) – This element defines only those bridge bearings that are enclosed so that they are not open for detailed inspection. This element should be used for bearings that cannot be inspected.

15. Chapter 6 Pg. 169, updated Sidewalk and Median description/guidance

## A. Medians/Sidewalks

### Median/Sidewalk Elements

**Median** (Element 8207) – This element is for medians measured on the top side by the SF of exposed horizontal surface. Exposed sides or bottom are not measured. Medians located within the bridge approach should not be rated as part of the approach element/assessment; record the condition and findings in the narrative under the structural approach slab (Element 321) or approach roadway (Assessment 9322, 9323 or 9324).

**Sidewalk** (Element 8209) – This element is for sidewalk raised from the deck/slab and greater than 18 inches wide measured 18 inches wide measured in SF the length of the sidewalk on the bridge times the width including the area under railing when the railing is set on the sidewalk. Condition of a raised sidewalk or pedestrian path located on a bridge approach should not be rated with the approach element/assessment; record the condition and findings in the narrative under the structural approach slab (Element 321) or approach roadway (Assessment 9322, 3923, or 9324). Sidewalk or pedestrian paths that are not raised above the deck/slab are assessed as a wearing surface element. Include condition of sidewalks on buried structures in the comments under Assessment 9325 Roadway Over Structure.

## 16. Chapter 9 Pg. 218, updated description for Code 8 and Code 5 for SNBI Condition Ratings table

Code	Condition	Description
N	Not Applicable	Component does not exist.
9	Excellent	Isolated inherent defects.
8	Very Good	Some inherent defects, <u>or isolated minor defects.</u>
7	Good	Some minor defects.
6	Satisfactory	Widespread minor or isolated moderate defects.
5	Fair	Some <u>or widespread</u> moderate defects, <u>isolated major defects</u> ; strength and performance of the component are not affected.
4	Poor	Widespread moderate or isolated major defects; strength and/or performance of the component is affected.

## 17. Chapter 9 Pg. 219, updated quick assessment chart including defect extent guidance

### Chapter 9 – SNBI Condition Rating System

#### Quick Assessment Chart for SNBI Table 20

SNBI Table 20 Expanded <sup>④</sup>		SEVERITY <sup>①</sup>				
		INHERENT (CS1)	MINOR (CS2)	MODERATE (CS3)	MAJOR (CS4)	STRENGTH & PERFORMANCE AFFECTED <sup>③</sup>
Code <sup>②</sup>	Condition					
GOOD	9	Excellent	Isolated			
	8	Very Good	Some	Isolated		
	7	Good		Some		
FAIR	6	Satisfactory		Widespread OR Isolated		
	5	Fair		Some or Widespread	Isolated AND NO	
POOR	4	Poor		Widespread OR Isolated	AND YES 12 MO INTERVAL	
	3	Serious		See Table 20	SERIOUSLY AFFECTED <12 MO INTERVAL	
	2	Critical		See Table 20	COMPONENT COMPROMISED <6 MO INTERVAL	
1 & 0 BRIDGE IS CLOSED. 1 = may return to service, 0 = replacement is required.						

① Refer to SNBI item commentary and Appendix C for rules and clarification.

② The whole description must read true for the code to apply.

③ Strength and performance determined by Structural Review findings.

④ SNBI Table 20 governs for any conflict with this SNBI Table 20 Expanded

#### Defect Extent Guidance

Extent	Quantity (SF & LF)
Isolated	≤ 5%
Some	> 5% to 20%
Widespread	> 20%

- Correlates well with SF and LF defect quantities.
- Not so well with steel cracking or steel distortion.
- Use inspector judgement when reviewing quantities.

**Note:** This table is to be used as a general guideline and is not an official table from the SNBI nor FHWA. Verify the assigned ratings match the SNBI Table 20.