ITD Inspection Report Best Practices

ITD does not dictate the precise report language and formatting. ITD allows Team Leaders discretion on the language and formatting. The following is presented as best practices for clear and readable notes that allow for database queries.

Element Note Formatting

The first paragraph gives a brief description including the following:

- The number of the elements and a brief description.
- Corresponding condition classification includes defect severity, extents, and impact on strength and performance if applicable. Every effort should be made to use SNBI language regarding severity (inherent, minor, moderate, major) and extent (isolated, some, widespread).

  Examples:

  - 10 prestressed bulb girders in satisfactory condition with isolated moderate defects.
  - 5 steel H-piles in fair condition with widespread moderate defects that do not affect strength or performance. Reinforced concrete footing in serious condition with major defects affecting strength of the element.

Second paragraph:

- Any additional relevant or unique information about the element.

Third paragraph or list:

Lists all the individual defect notes corresponding to that element combined. These may be presented in a list or in paragraph form. This does duplicate information in the report and that is well understood. This is important to do so that the database can be queried. Defects should not be listed in the order they were found but in order from beginning of bridge to end of bridge.

Defect Note Formatting

Each defect may be on its own line or in paragraph form limiting hard returns and should include the following:

1. Identifier Leaders
2. Element units
3. Location of defect
4. Defect type
5. Dimensions
6. Additional information as needed

Defects should not be listed in the order they were found but in order from beginning of bridge to end of bridge.

Identifier leaders are within parenthesis at the front of the defect. They are used:

1.) Included when the condition state of the defect is CS3 or CS4. All CS3 or CS4 defects must have an accompanying photo.

2.) Used to assist with clarity of identifying defects the Team Leader for what inspection type the defect is most thoroughly observed shortened to a single letter: R for routine inspection, I for in-depth inspection, and U for underwater inspection. This should be accompanied with the year.

Example: (CS3) (U-2025).

Element unit is the element type and number. Progressively "zoom in" to the element being described. Examples: Abutment 1 footing; Pier 4, Pile 3; Span 2, Girder 1; Underside of top flange, all bays.

Location of defect is where the defect is located on the element, can be relative or measured.

Examples: below Girder 2, 3 FT from the south edge, mid span on the web north face, 5 FT from the north nose on the east face.

Defect type includes the type and brief description of the defect.

Examples: Scour with undermining, moderate width transverse cracking with efflorescence and isolated rust staining, spall with exposed rebar, corrosion with section loss.

Dimensions should include relevant dimensions and spacing as needed, inspector may use discretion on level of precision needed and include quantities if it helps clarify severity.

Examples: 1 FT delamination; wide cracking 5 FT high x 0.063 IN wide – 1FT, spaced 2-5 FT apart (30 SF).

Additional information is any additional relevant information.

Examples: 2 vertical and 3 horizontal bars exposed with corrosion and 90% section remaining; 11 piles exposed below footing, see scour sketch on Figure 2; see resistance drill measurements # 34-39, patch was completed in 2020.

Complete Examples:

(R-2012) Underside of deck, throughout all bays and all spans has insignificant transverse cracking with light efflorescence that are 5 FT long x 0.004 IN wide, spaced 3-6 FT apart (400 SF CS2).

(CS3) (U-2022) Pier 1 for the full length of the pier has scour with undermining that is 32 FT long (full length) x 2 FT wide (full width) x up to 3.6 FT high (at upstream nose). 11 steel piles are exposed, see scour sketch on Figure 2.

(CS3) (R-2019) Span 3, Girder 1, north stem face at Pier 3 has a spall with exposed reinforcing that is 16 IN long x 5 IN high x 4.5 in deep – 2FT. The ends of 4 prestressing strands are exposed with no corrosion.

(CS3) (R-2024) Abutment 1,3 FT below Girder 4 has a spall and delamination that is 13 IN long x 5 IN high x 2.3 IN deep. Hammer sounding around the spall sounds hollow extending 6-8 IN around the spall extents (2FT CS3, 2FT CS2).

(R-2021) Pier 3, Pile 5, 9 FT below the cap has less than 10% core decay. Resistance drill measurements above and below the area of decay were sound, see Reistograph Inspection Drawing and measurements # 34-39.