BUREAU OF STRUCTURES

DATE: March 3, 2025
TO: Highway Structures Information System (HSIS) Users
FROM: DTSD – Bureau of Structures
SUBJECT: **February 2025 HSIS updates**

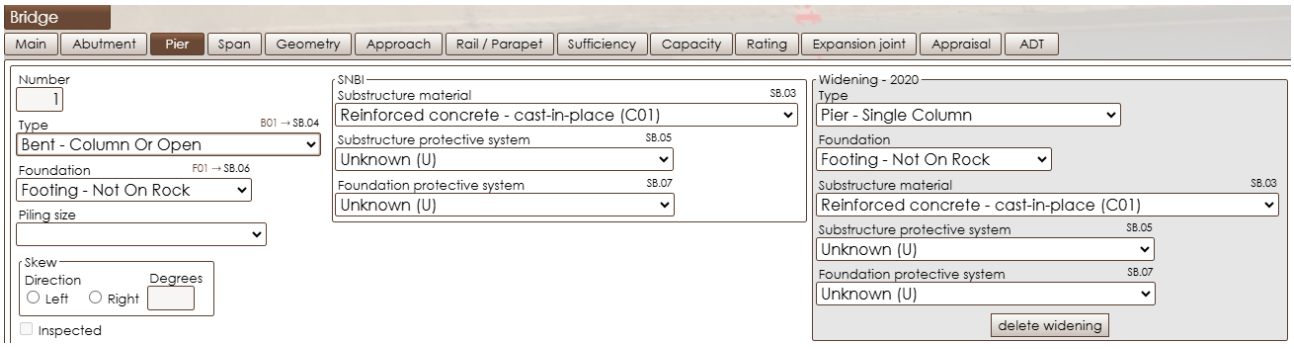
Version 3.0.1-1406 of HSIS was released on 2/25/25. The following is a list of some of the enhancements added and bugs fixed in these releases. This may not be a comprehensive list.

Version 3.0.1-1406 contains many changes related to implementing the NBIS and SNBI. If you believe something is not working correctly, if you cannot enter something you think you should be able to, or you have questions on where to find something, please contact me.

If you discover any bugs or have suggestions for enhancements, please email ryan.bowers@dot.wi.gov. If you do find a bug, please provide as much information as possible about what structure you were working on, what browser you used, if you were using a mobile device or not, items you were editing or clicking on prior to the bug occurring, etc. The more information you provide, the better chance we have at replicating the issue, determining the cause, and fixing it. Any screenshots or videos you can take are helpful.

Enhancements

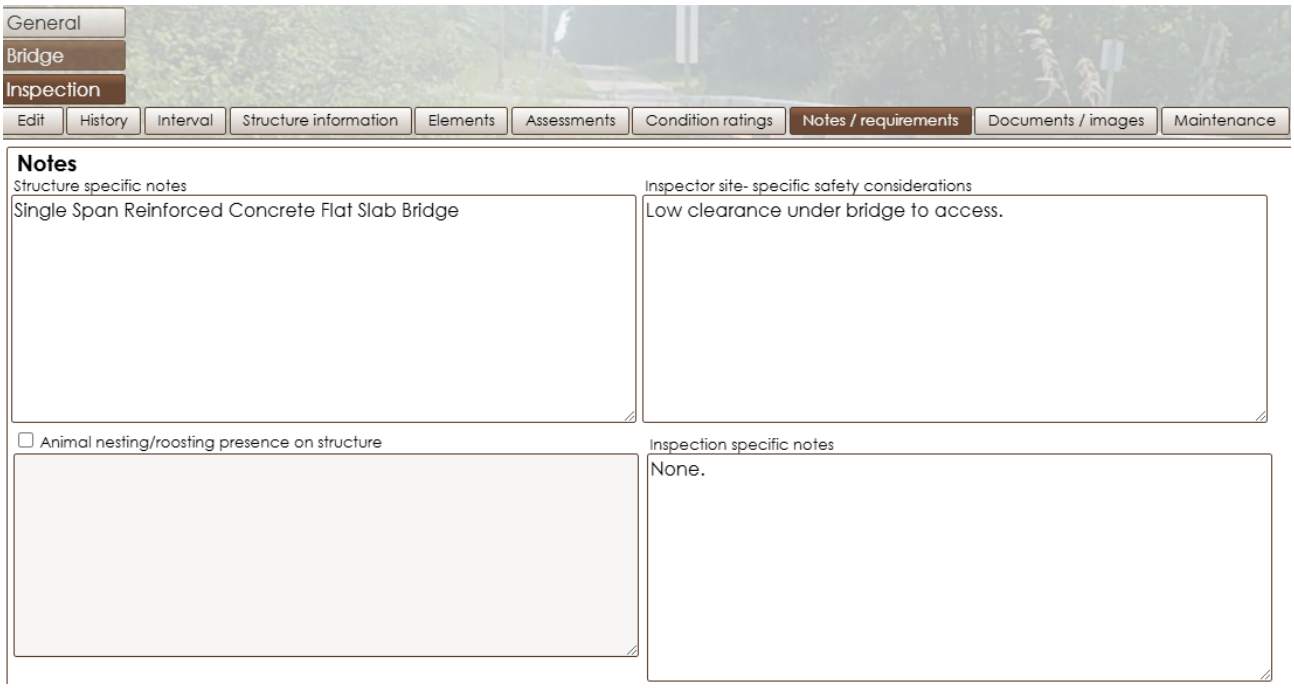
1) Data for span, abutment, and pier widenings can now be stored in HSIS. The SNBI requires this data be recorded if it differs from the original construction. The widened data is shown next to the existing data in HSIS. BOS will work on populating the data we have in the upcoming months. If you notice something that is wrong or missing, please let me know.



Widening example.

2) Many items in Errata Number 1 for the SNBI have been addressed in HSIS. Items such related to load ratings and inspection equipment will be addressed in a future HSIS version. https://www.fhwa.dot.gov/bridge/snbi/errata1_to_snbi_march_2022_publication.pdf
3) A scour plan of action is required for bridges with B.AP.03 scour vulnerability coded C, D, E, U, or 0.
4) A special component was added for “NDT – ultrasonic peening UPT”.

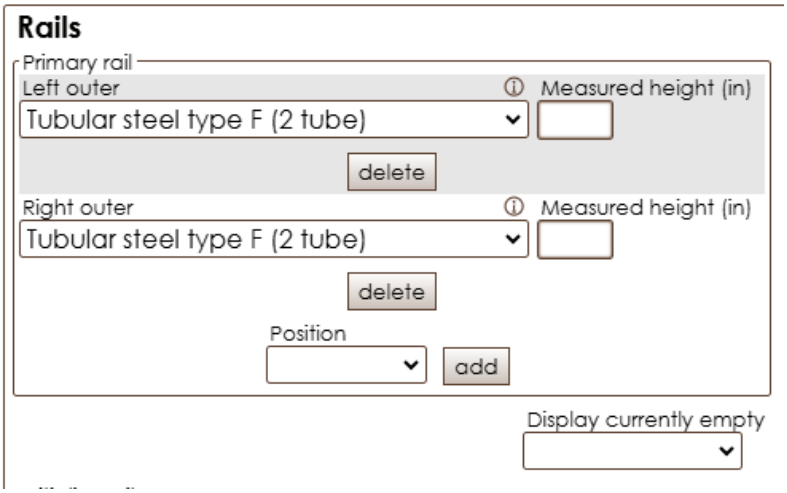
5) A critical finding will be triggered automatically when any of the following occur during an inspection:
    a. A nonredundant steel tension member (NSTM) inspection condition rating (B.C.14) is less than or equal to 3.
    b. The deck, superstructure, substructure, or culvert condition rating (B.C.01, B.C.02, B.C.03 or B.C.04, respectively) is less than or equal to 2.
    c. The channel or scour condition rating (B.C.09 or B.C.11, respectively) is less than or equal to 2.
6) There is a checkbox for noting is there is an "animal nesting/roosting presence on structure". If this box is checked, additional notes can be entered. This is found on the Inspection > Notes / requirements tab. Please refer to the inspection manual for additional guidance.



"Animal nesting" checkbox and notes field.

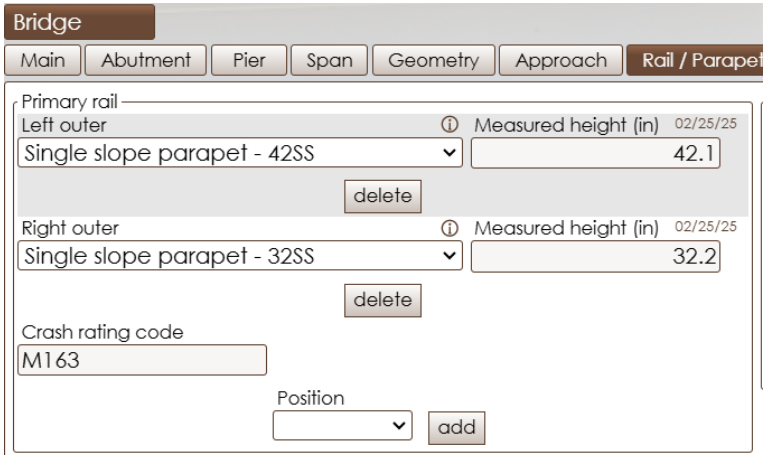
7) Railing data has been overhauled to comply with SNBI requirements. Previously, one rail could be selected for each of the left outer, left inner, right inner, and right outer rail. Now, a primary rail, decorative rail, screening, and transition rail can all be defined, and each can be defined for the left outer, left inner, right inner, and right outer rail if they exist.

The primary rail and transitions require a field-measured height to be entered during an inspection. These heights will be used to determine the codes submitted to FHWA for SNBI items B.RH.01 Bridge Railings and B.RH.02 Transitions. HSIS will determine the codes to be submitted. Heights are entered on the Inspection > Structure information tab. If the rail isn't shown in HSIS, or the type shown is incorrect, the inspector is able to and should update this information. Additional guidance will be provided at the inspector refresher training on March 19, 2025.



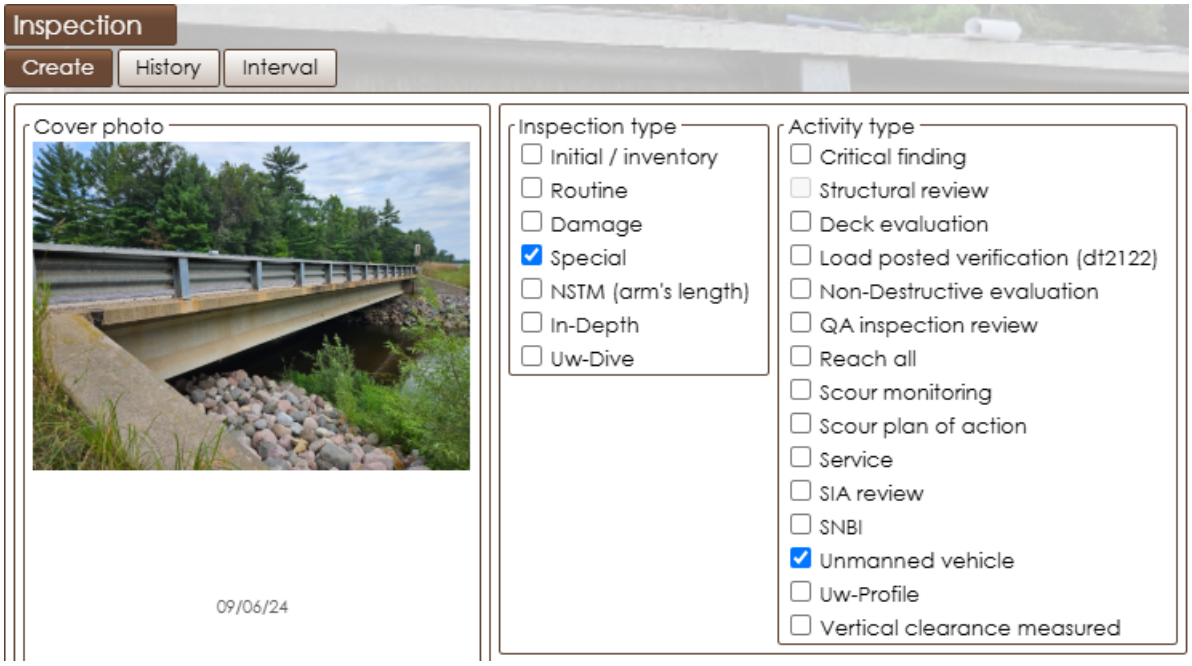
Railing data fields on the Inspection > Structure Information tab.

There is currently a bug where the new "Rail / Parapet" tab is not visible on the "Bridge" tab. However, railing information is still displayed, field measured heights can be entered, and rail types can be added or modified, during an inspection on the "Structure Information" tab. The rail type shown on the "approach" tab references a different database table; **any changes made to the new rail types on the Structure information tab will not be displayed on the Approach tab, but they are present in the database and will be displayed in the next HSIS version**.



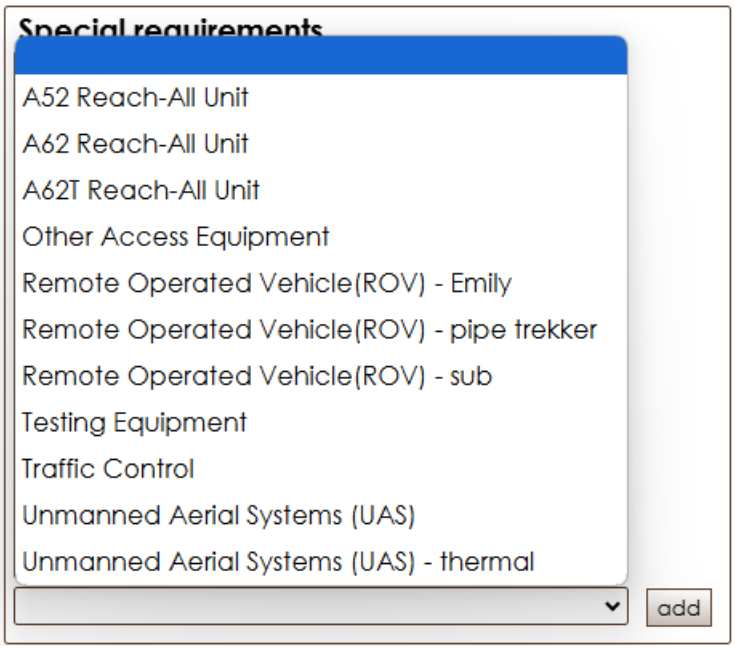
Railing heights and crash rating displayed on Bridge > Rail / Parapet tab.

8) A new activity, “Unmanned vehicle”, is available for use. It currently can only be used for bridge structures at this time. It will be available for other structure types in the next release. This activity is not visible in the activity list until an inspection type is selected.



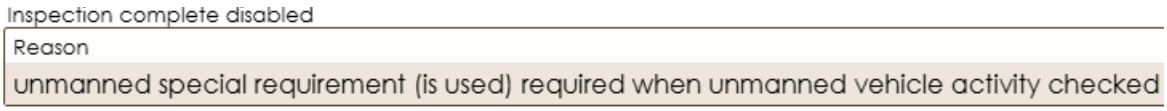
“Unmanned vehicle” activity displayed in activity list.

Use of the unmanned vehicle activity requires one of the following to be selected from the “special requirements” list located on the Inspection > Notes / requirements” tab: remote operated vehicle (ROV) – Emily; remote operated vehicle (ROV) – pipe trekker; remote operated vehicle (ROV) – sub; unmanned aerial system (UAS); unmanned aerial systems (UAS) – thermal.

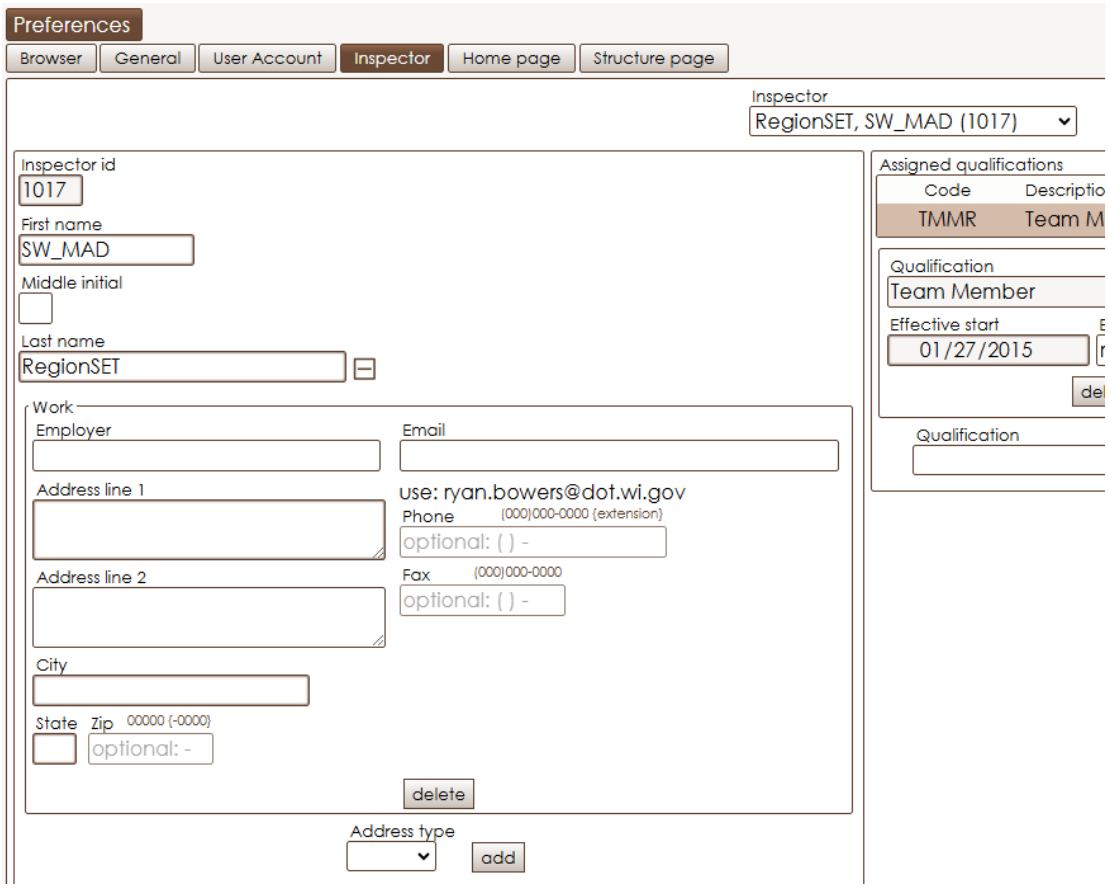


Special requirements dropdown showing new ROV and UAS options.

If the unmanned vehicle activity is selected but a ROV or UAS is not added to the special requirement, an inspection complete disabled reason will appear. Either the activity needs to be removed or a piece of equipment selected to clear the complete disabled reason. A similar complete disabled reason will appear if a piece of equipment is selected without also choosing the unmanned vehicle activity.



9) Additional information about the inspector can now be entered under Preference > Inspector. This is information such as the inspector email address and employer name. The NBIS requires this information. Email address is being required in this location even though it is captured elsewhere in HSIS because other locations connect the email address to the HSIS user ID, whereas the email under inspector is for the specific inspector selected. The user ID email address and inspector email address might not always be the same, such as when someone is entering an inspection into HSIS for a different person.



New data fields for inspector information.

Bugs Fixed

The following bugs were fixed with this version. Additional bugs not listed below were also fixed.

1) Program managers were unable to update the routine inspection interval to 24 months after a special or initial inspection occurred and eliminated the need to a 12-month routine inspection interval.
2) Program managers were unable to edit the uw-profile interval when the bridge also receives a uw-dive inspection.
3) A uw-profile was being required in order to submit a scour POA.
4) An error message appeared when entering expansion joint measurements. The values were being saved despite the message.
5) An error message appeared when assigning inspection qualifications to inspectors.
6) SNBI items B.C.05 bridge railings, B.C.06 bridge railing transitions, B.C.07 bridge bearings, and B.C.08 bridge joints condition ratings could only be entered during routine inspections.
7) Hydraulic files stored in HSIS couldn't be downloaded.
8) Users couldn't add the "uw-dive" inspection type to an open inspection.
9) Some bridges had an inspection on-complete message stating a bridge as eligible for a 48-month routine inspection interval after an initial inspection was completed. Upon inspection completion, the routine interval did not allow 48-months. The bridge is NOT eligible for a 48-month interval, as the NBIS requires the bridge "be in service for 24 months, and receive its next routine inspection before being eligible for inspection interval greater than 24 months."
10) The appropriate notes and quantities were not always copied forward to the next inspection when inspections were entered into HSIS out of sequential order.