

LOAD RATING REPORT CHECKLIST

The Load Rating Engineer prepares the Load Rating Report and transmits the Report and other files to the Owner and to NDOR. See submittal deadlines in BIP Manual Chapter 5.

Load Rating Report

The Load Rating Report includes the items listed below and details are provided for each item in the following sections.

_____ Load Rating Summary Sheet (LRSS) and Load Rating Review Sheets; current version available from <http://www.transportation.nebraska.gov/design/bridge/loadrating.htm>. It is recommended that the LRSS be the first page in the Report (see below).

_____ Structure Geometry and condition information from the inspection report (see below).

_____ Calculations supporting the load rating (see below).

_____ Software analysis input and output in permanent format such as hard copy (PDF, TXT) or other secured electronic files (see below).

As part of the Load Rating package, the following must be completed.

_____ The person completing QC shall initial and date all pages of the Report.

_____ The Load Rating Engineer (LRE) is responsible for sealing and signing the Report in accordance with the NE Engineers and Architects regulation Act §81-3437 (3c and 3d).

_____ The completed report shall be delivered to the Bridge Owner

_____ An electronic copy of the Report shall be submitted to NDOR. A copy must be furnished to NDOR either by the Owner or, at the direction of the Owner, by the LRE.

_____ Deliver to NDOR the software input file that can be executed in the software package.

The following sections provide details about each element of the Load Rating Report

Load Rating Summary Sheet (LRSS) and Load Rating Review Sheets

Use the current version – available from
<http://www.transportation.nebraska.gov/design/bridge/loadrating.htm>.

Analyst shall be the engineer performing the load rating. The Analyst can be the same as the Engineer of Record for the load rating.

Enter the Analyst as first initial, middle initial, last name. For example, F.M.Last.

Notations of rating by hand calculations as appropriate

Include the software version used in the rating analysis in the comments section of the LRSS.

The Additional Comments section of the LRSS should include comments regarding the controlling member, posting required, inspection results, bridge geometry, structure modifications/repairs, rating considerations for the deck, rating considerations for the substructure, dead load and distribution factor calculation assumptions, section losses, member defects, bracing assumptions and allowable stresses (see Chapter 5 for examples).

Identify all members that were analyzed in the Load Rating Evaluation Summary. Don't show members as being analyzed that were not.

Identify the controlling member in the Load Rating Evaluation Summary.

Verify that the LRSS has been completely filled out

Completed LRSS and Load Rating Review Sheets shall be included in the Report (recommended as the first page).

Structure Geometry and Condition Information

Verify that bridge plans and or current field measurements available on the NDOR Bridge Management FTP site. If not, upload a PDF of the bridge plans and/or current field measurement to the NDOR Bridge Management FTP site.

Include basic bridge geometry such as sketches.

Include inspection information that documents the conditions affecting the load rating.

Include section losses and/or member defects.

Structure geometry and condition documentation shall be included in the Report.

Calculations and Documentation Supporting the Load Rating

These are typically hand calculations or spreadsheet calculations.

- Calculation for dead loads (DL).
- Calculation for distribution factors (DF), including assumptions.
- Analysis assumptions.
- Analyst's initials and date of preparation shall be on each sheet.
- QC reviewer's initials and date of review shall be on each sheet.
- Calculations and documentation shall be included in the Report.

Software Analysis Model (LARS or other software)

(Note: LARS comment section is limited to 247 characters. Provide all the detail possible in the comments, but in all cases provide the detail in the Calculations/Documentation supporting the load rating).

_____ Filename includes bridge number and the year of the load rating.

_____ Analyst's initials and date of analysis shall be in the comments.

_____ QC reviewer's initials and date of review shall be in the comments.

_____ Description of the members analyzed shall be in the comments.

_____ Allowable bending and shear stresses shall be in the comments.

_____ Section losses and/or member defects shall be in the comments.

_____ DF shall be in the comments.

_____ If the timber deck is rated, include the NBI condition code and the issue that required the rating in comments.

_____ Software version shall be in the comments.

_____ Data Echo Input file (PDF, TXT) shall be included in the Report.

_____ Output file (PDF, TXT) shall be included in the Report.

_____ The Rating Summary Report file (PDF, TXT) identifying the controlling rating factor shall be included in the Report.

_____ Executable model (input file) shall be uploaded to the NDOR Bridge Document Management folder on the FTP site.