Summary Sheet Instructions

General

- Note that there are three different tabs. Use the appropriate tab based on rating methodology (LRFR, LFR or ASR)
- Cells to be manually entered (or pull-down) are shaded in light grey

Section 1 - General Bridge Information and Span Data

- Once the MDT Bridge ID is manually entered, most cells will automatically populate by referencing the information in a master data tab. Any cells that don't automatically populate can be manually input by choosing from a pull-down menu or typing in information
- Auto-populated data is based on a snapshot of SI&A data from MDT's Structure Management System (SMS). If there's a discrepancy with information found on the bridge plans or based on current conditions indicated by the inspection report, overwrite the cell with the correct data and contact MDT's Load Rating Engineer with the changes that need to be made to SMS.
    - *Note - Discrepancies are expected and could be due to several reasons – the snapshot is outdated, the bridge has been replaced, incorrect data in the first place, etc.*
- For new bridge design (i.e. structure has not yet been built) or newly discovered bridge, info will not auto-populate because an SMS asset has not yet been created. Fill in as much data as possible, and contact MDT's Load Rating Engineer to request remaining information.
    - *Note – it's possible that a replacement structure has the same MDT ID as an existing structure and will pull incorrect data. In this case - delete all incorrect data, fill in as much as possible, and contact the Load Rating Engineer for the remaining info.*
- For rehabs on existing structures, overwrite summary sheet data as applicable to reflect changes made as part of the designed/constructed rehab.

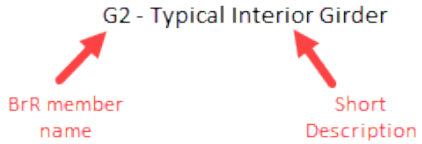
Section 2 - Load Rating Information

- "Method" is a static cell. Make sure the correct methodology form is used.
- Load Rating Status – select the appropriate dropdown
    - Preliminary (Design)
        - *Rating typically performed when design is complete, to verify that posting will not be required for legal vehicles*
    - Intermediate (Shop Drawings)
        - *Rating typically performed when shop drawings are submitted for approval by the fabricator, to ensure that posting isn't required for legal vehicles*
    - Final (In-Service)
        - *Final rating performed for the structure when its construction is complete or substantially complete. This is the rating that is entered into MDT's structure management system, and is also kept on file in MDT's BrR database for future analysis and update.*
- Load Rating Program Used/Version – this will typically be "BrR", but fill in otherwise. Indicate if more than one program was used, and include additional commentary within the report.
- Table
    - Rating Factor
        - This is manual input – report to the thousandth
    - Controlling Load (*LRFR only*)

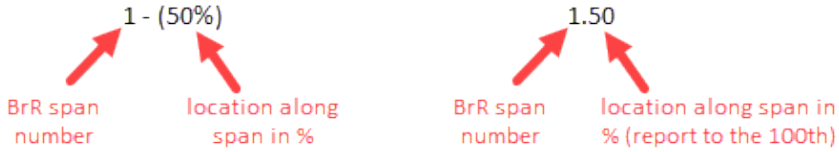
- Manual input for Design Load and EVs
- Key is located at the bottom of the table on the summary sheet
  - 1 = Truck + Lane
  - 2 = Tandem + Lane
  - 3 = (0.9 Tr + 0.9 Lane)
  - For EVs – indicate Single or Multi-lane

- Controlling Member
  - Manual input
  - Naming convention – member name in BrR (*i.e. G1)*, with a brief description of member type (*i.e. exterior, interior, typical, deteriorated, reduced capacity, etc.)* If girders are linked, please indicate when 'typical' girder controls.

    Example:



- Controlling Location
  - This is manual input, and can be found on the controlling member's individual rating results summary (*BrR*)
  - Format can be Span – (%) or Span.%
    - This closely follows what is found on the controlling member's individual rating results summary
    - *Example – To indicate that Span 1 controls at midspan:*



  - If there are similar spans, please indicate all spans that apply
    - *i.e. If spans 1 and 3 are the same and control at midspan, please enter 1/3 – (50%)*

- Limit State
  - This is manual input, and can be found on the controlling member's individual rating results summary
- Safe Load Capacity
  - This is automatically calculated based on the rating factor and tonnage of the rating vehicle

    ***Note – safe load capacity is based on 36 tons even if tandem controls*
- Safe Posting Load
  - This is automatically populated with a default value based on general MBE or MDT Manual guidance. If posting is required, a Load Posting Form will be filled

out and authorized by the Bridge Management Engineer with a final determination on posting values.

- Posting Required for Legal Vehicles, Within Reasonable Access to Interstate, Posting Required for EVs
    - These should auto-populate – verify to make sure they're reasonable
    - If "Within Reasonable Access" cell remains blank or says *Review*, contact MDT's Load Rating Engineer for further guidance

Section 3 – Comments and Assumptions

- The intent of this section on the summary sheet is to highlight and provide a brief summary of:
    - Anything that needs to be flagged for attention (i.e. reduced capacity for timber members, EV live load factor (if different than default value 1.3), removal of optional limit state checks)
    - Anything unique about rating (i.e. alternate superstructure was created in BrR for xxx reason, mixed materials, BrR workarounds)
- More detailed documentation of engineering judgement and calculations should be attached as additional pages. Please include a note referencing any additional comments/assumptions/calculations (i.e. "Additional assumptions and calculations are detailed within the attached load rating report)
- See MDT Load Rating Report Requirements on MDT's Load Rating Website for specific comments/assumptions to address.

Section 4 – Finalization

- Once the load rating has been completed and has gone through a QC process, it should be finalized.
    - Consultants – summary form should be converted to PDF and sealed (digitally is acceptable) by the Load Rater of Record.
    - Internal – summary form should be converted to PDF and signed (digitally is acceptable) by the Load Rater of Record.
      ***Note – the Load Rater of Record must be a Professional Engineer licensed in the State of Montana who has performed the load rating or is responsible charge and has directly supervised the work.*