

QC.1 GENERAL

Quality Control (QC) is simply a check on every document, inspection dataset, or activity completed for the Bridge Inspection Program (BIP). When QC is completed on the work, ideally there are no errors, omissions or inaccuracies. QC may be done by the organization or another party engaged by the organization to complete QC.

The person who completes QC is called the “QC Officer” in accordance with quality management practice. The QC Officer must have a working knowledge of the BIP and associated manuals and publications. QC review is nearly always completed by an individual with equal or better qualifications than the document/dataset originator.

Quality Assurance is done by an independent party on a small random sample to assure that QC is attaining the required level of quality. See the BIP Manual Chapter 1, Section 10 for additional information.

QC.2 OWNER RECORDS, BIP MANUAL CHAPTER 2

QC items

- Individual Bridge Records
- Master lists of Critical Findings
- Master list of Scour Critical Bridges

QC Officer

- Any member of the Bridge Owner’s staff who is familiar with the BIP Program

QC example activities

- Creating and maintaining a record for each structure under a Bridge Owner’s control
- Systematic and regular updates of the information in the records
- Filing new load ratings in the bridge record within one week of receipt from Load Rating Engineer
- Filing a Scour Assessment within one week of receipt from the Hydraulic Engineer
- Filing inspection documents (revised SIA, BrM print out, fracture critical reports, special reports) within one month of the completion of the inspection data input or receipt of report
- File information on maintenance or repair work done within one month of completion
- Maintaining a log of critical findings activity and updating when new reports are filed or closed
- Maintain a log of activities related to monitoring for Plans of Action

QC.3 INSPECTION CODING & REPORTS, MANUAL CHAPTERS 3 & 4

QC items

- Data such as condition codes
- Inspection reports such as fracture critical reports
- Critical Finding reports

QC Officer

- An in-house Team Leader (TL) or a TL from a neighboring agency
- The TL's supervisor
- An in-house engineer (PE or EI) or engineering technician
- A consulting engineer
- County highway superintendent
- Local Public Agency Responsible Charge (RC)
- An Assistant Team Leader (ALT) for BrM input completed by others

QC example activities

- TL name on every page of the document. The QC reviewer name the on first page of the document and initials all pages that are reviewed. Many NDOR forms for inspection include a field for this purpose.
- An additional TL can be present when the inspection is being completed. The additional TL's name and initials should be included on the inspection document.
- Data input from manual field notes is often input by administrative staff. The TL must review the BrM file when the input has been completed.
- A TL may determine BrM values in the field, record manually, and then revisit their coding on a later date prior to input into BrM.
- A TL may determine BrM values within BrM in the field, then have another TL or ATL review a BrM printout of the values against the inspection notes and photos.
- Critical finding reports are reviewed with the TL who originated the report.

QC.4 LOAD RATING, BIP MANUAL CHAPTER 5

QC items

- Load rating reports
- Load rating calculations, both manual and electronic
- Load Rating Summary Sheets (LRSS) and Load Rating Review Sheets (LRRS)

QC Officer

- A Nebraska PE with experience that equals or exceeds the originator of the work. An engineering intern can be the originator, but QC must be completed and sealed by the PE.

QC example activities

- Check manual calculations then initial each sheet of the document
- Check software input then initial the first sheet of the document
- Check software output then initial the first sheet of the document
- Check the document then initial the first sheet of any multi-page documentation. For example field measurements documenting the cause for rerating, photos, etc.
- Seal of PE on the LRSS

QC.5 SCOUR, BIP MANUAL CHAPTER 6

QC items

- Scour assessment reports
- Hydraulic calculations, both manual and electronic
- DR385 Bridge Scour Report, DR385B Bridge Scour Assessment, DR385C Bridge Scour Plan of Action, DR385D Bridge Scour Worksheet, DR385E POA Monitoring log, DR385F Change in Scour Conditions

QC Officer

- A Nebraska PE with experience that equals or exceeds the originator of the work. An engineering intern can be the originator, but QC must be completed and sealed by the PE.

QC example activities

- Check manual calculations then initial each sheet of the document
- Check software input then initial the first sheet of the document
- Check software output then initial the first sheet of the document
- Check the document then initial the first sheet of any multi-page documentation. For example channel cross sections, USGS maps, photos, etc.
- Seal of PE the Scour Assessment Report

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