Quality Control/ Quality Assurance

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Why is Quality Control/Quality Assurance part of our training?

QC/QA is included in the National Bridge Inspection Standards

23 CFR 650.313(g)

Metric #20
QC/ QA

Metric #20

- Inspection procedures - QC/QA
- Systematic quality control (QC) and quality assurance (QA) procedures are used to maintain a high degree of accuracy and consistency in the inspection program.
QC/QA procedures include periodic field review of inspection teams, periodic refresher training requirements, and independent review of inspection reports and computations.
A plan to implement a systematic quality control and quality assurance procedure should be established by April 13, 2005. The State and/or Federal Agency should fully implement the quality control and quality assurance procedure by January 13, 2006.
The June 2010 Inspection Manual

- Office Reviews: 5 min; 15 max. per county and five per quarter for each state team leader
- The same metrics were used for field reviews
- 500 to 1,500 reviews per year
QC/ QA

- INDOT Systematic Quality Control and Assurance Procedures
  - Quality Control Office Review
  - Quality Control Field Review
  - Quality Assurance Control Bridge and Training
  - Quality Assurance Independent Review
QC/ QA

- INDOT Systematic Quality Control and Assurance Procedures
  - Bridge Files Reviews
  - Load Rating Reviews
  - Quality Control Review Forms
QC/ QA

Metrics for the Oversight of the National Bridge Inspection Program

April 1, 2013
# NBIP Metrics Contents

## National Bridge Inspection Program Metrics

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Metric #22: Inventory – Prepare and Maintain
Metric #23: Inventory – Timely Updating of Data
Metric #12: Inspection procedures – Quality Inspections

NBIS Reference: 23 CFR 650.313 (a) & (b) Inspection procedures – Quality inspections

- Each bridge is inspected in accordance with the nationally recognized procedures in the *AASHTO Manual for Bridge Evaluation (MBE)* contributing to quality assessments, ratings, and documentation, as measured by the following criteria:
  - condition codes within generally acceptable tolerances,
  - all notable bridge deficiencies identified, and
  - condition codes supported by narrative that appropriately justifies and documents the rating or condition state assignment.
- A qualified team leader is at the bridge at all times during each initial, routine, in-depth, fracture critical member and underwater inspection.
- Metric #13  Bridges rated for safe load capacity – accurate for current conditions
- Metric #14  Bridges posted in accordance with MBE
- Metric #15 Bridge Files
The Metrics for the Oversight of the National Bridge Inspection Program

- Gives the review criteria with important objectives listed
- S.W.I.P.E.
- Steel with integrity and pride from everyone
- We use the same forms as FHWA
## NBIP File Review Checklist

**BRIDGE INSPECTION MANUAL**

**PART 2: QA/QC**

**NBIP File Review Checklist**

<table>
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<tr>
<th>Structure No.:</th>
<th>Review Date:</th>
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</table>

**Item 1** - State:  
**Item 7** - Feature Carried:  
**Item 6A** - Feature Crossed:  
**Item 27** - Year Built:  
**Item 90** - Most Recent NBIS Insp. Date:  

**Metrics assessed in file review:**

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**Metric 12** – Inspection Procedures – Quality Inspections

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**Review Observations**

**Metric 12 Notes:**
Quality Control Forms are located in the Bridge Inspection Manual at the end of part 2 QC/QA
QC/ QA

- Each Team Leader is responsible for two offices reviews per year.
- Each Team Leader is responsible for one field review per year.
- The reports will be available upon request.
QC/ QA

Quality Assurance

- SECTION 3.2 of the Inspection Manual
- Control Bridge
- As a minimum, one bridge will be selected every 24 months as a control bridge
- Training Workshop
QC/ QA

- **Bridge File Review**
  - The INDOT Data Base Manager will select 10 bridges files per quarter for review

- **Load Rating Review**
  - The INDOT Load Rating Engineer will select 10 bridges per quarter for review
Section 3.3 Independent Oversight

- 24 Bridge Files will be selected annually for review
  - 8 from Team Leaders that fail to participate in test bridge
  - 8 from Team Leaders that perform poorly on test bridge
  - 8 selected randomly
These are INDOT’s systematic quality control and quality assurance procedures used to maintain a high degree of accuracy and consistency in the inspection program.