

 Office of Structures <i>Guidelines and Procedures</i> <i>Memorandum</i>	INSPECTION
	Number: OOS-GPM-SI-120
	Date: 08-06-2026
Quality Control / Quality Assurance	Approval: 

This document presents the Quality Control and Quality Assurance (QC/QA) procedures & policies related to the National Bridge Inspection Standards. This document is applicable to SHA, Local Agencies and consultant bridge inspection staff. SHA has oversight responsibility for the bridge inspection program for the entire state of Maryland except for federally owned bridges.

Quality Control (QC) Procedures:

The required qualifications and training of personnel involved in bridge inspection are documented in Qualifications of Personnel, OOS-GPM-SI-103.

These qualifications and training will be tracked as follows:

- All documentation relative to required licenses, training certifications, etc. is kept on file by SHA in Assetwise for all inspection personnel including local agencies and consultants as applicable for all types of inspections.
- The requirements of the Bridge Inspection Refresher Training will be monitored using dates programmed into the SAM program as appropriate. A query will be used to track applicable expiration dates.
- SHA will at least once per year verify all required qualifications and training of all inspection personnel.
- Inspection personnel not meeting the training or experience requirements will be suspended or disqualified from team leader or underwater inspection duties until qualifications are met. This process is applicable for in house or consultant inspection personnel participating in the inspection of a bridge in the state of Maryland. There are two ways that a Bridge Inspection Team Leader or underwater diver inspector can be disqualified: delinquency of training certification or inadequate experience.
 - Training certification:
 - In the event that an inspection team leader is disqualified as a result of unsuccessful completion of the three day refresher course, they will lose their team leader status until they take and successfully pass the refresher training course.
 - If an inspector is disqualified as a result of not taking the course within the five year time frame, then they will lose their team leader status until they take and successfully pass the refresher training course.
 - A consultant team leader that is disqualified due to training requirements will be replaced with another qualified consultant team leader approved by SHA until the disqualified consultant team leader obtains requalification.

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Inspection reports, data and load ratings will be reviewed and validated in accordance with the following procedures:

- Each bridge inspection report written shall be thoroughly reviewed and signed/ by the team leader and an additional inspector who was on site at the time of the inspection. Review should verify that all contents are included in the report as per OOS-GPM-SI-119
- The Senior Project Team Leader or the LA Program Manager will perform detailed reviews of at least 10% of all inspection reports completed. The reports chosen for review are to be randomly selected. For every report that the Senior Project Team Leader does not review, a note is added to the SAM workflow indicating as such. Every report without this note has been given a detailed review.
- Additional levels of QC review are provided by the SRED Assistant Division Chief, who reviews every ER (engineering request) report prior to distributing to the applicable SRED Engineering Team. Furthermore, the SRED Engineering Team then reviews the report in detail in order to sufficiently evaluate the ER findings.
- For Consultant bridge inspections, the Division Chief reviews all reports in detail prior to approval or distribution to the engineering teams as appropriate.
- Quality Control for load ratings shall follow the procedures detailed in Structural Load Ratings, OOS-GPM-D-97-47(4).

Data errors and omissions will be identified in accordance with the following procedures:

- The SAM program has a built-in routine which scans for database errors. The user is automatically notified of potential coding errors while making data additions or modifications. These errors are identified, documented and resolved within the log fields for each individual user. With the implementation of the SNBI, Assetwise will be implementing additional error checking features which are currently being deployed.
- At least once per year, all inventory and appraisal data will be scanned for errors and omissions. Prior to the annual data submittal, all inspection data is scanned for errors and omission multiple times.

Quality Assurance (QA) Procedures:

The SHA Structure Management Engineer (SME) leads the QA field review program and follows the below protocols:

- For all bridges including SHA, counties and other state agencies, the SME and the Senior Project Team Leader and/or the Structures Inspection Division Chief shall visit a minimum of 10 bridges in at least 2 geographic regions (SHA districts) per year, for a total of 20 bridges per year. At the discretion of the SME, in a given year, a minimum of 5 bridges in 3

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regions/districts may be visited to allow for better distributed workloads and logistics, still totaling a minimum of 20 bridges

- The regions/districts visited each year shall be alternated to ensure each region is visited at an evenly distributed interval.
- During the field reviews the inspection reports and SIA data shall be reviewed in full, noting the accuracy, clarity and completeness of the NBE's and SIA data relative to the existing bridge conditions. Condition ratings shall be verified and considered acceptable if within ± 1 of the rating determined during the review. Field review results are communicated to the inspectors and/or engineers as necessary. The SHA QA Field Visit Form shall be used to facilitate this process.
- If the bridge is posted, the posting shall be compared against the relevant SIA fields for consistency.
- The reports shall be checked to ensure the noted Inspection Team Leader is qualified as indicated in the QC section of this GPM.
- Any comments, questions or errors found during the field reviews shall be communicated to the appropriate inspection personnel. Based upon the nature of the issue, the LA Program Manager or the Division Chief, SIRE – Structures Inspection will determine the timeline for any required responses and any appropriate actions.

Staff Meetings:

In an effort to communicate with inspection personnel, bridge inspection staff meetings will be held at least every 6 months. The meetings will include the Senior Project Team Leader, Structure Management Engineer, Division Chief -Structures Inspection, and all in-house inspection staff. The meeting will be chaired by Senior Project Team Leader. The meetings may cover topics such as the interpretation of element codings and SIA data, proper inspection techniques and procedures, standards of documentation, use of access equipment, safety concerns, and relevant administrative matters. A memorandum summarizing issues that were discussed during the meeting will be distributed to all inspection personnel within and engineers within SIRE. Communication with consultant inspection staff is typically accomplished through memorandums.