



# Memorandum

Subject: **ACTION:** Review of Team Leader Qualifications  
for the National Bridge Inspection Standards

Date: April 13, 2015

From: /s/ Joseph L. Hartmann, Ph.D., P.E.  
Director, Office of Bridges and Structures

In Reply Refer To: HIBS-30

To: Division Administrators  
Federal Lands Highway Division Directors

Many State Transportation Departments and Federal agencies are planning for bridge inspections that will be starting this spring and continuing through the summer and fall seasons. Fully qualified team leaders on a bridge inspection team are necessary because they ensure safety, they are familiar with bridge inspection terminology and techniques as well as data collection practices and procedures, and they ensure inspections are completed with the utmost quality.

We ask you to remind your State and Federal partners of the requirements for the team leaders involved in the bridge inspection program. The National Bridge Inspection Standards (NBIS) establish the minimum standards for team leaders which include education, experience, and training. The NBIS is defined in 23 CFR 650, Subpart C and can be found, along with the preamble, at <http://www.gpo.gov/fdsys/pkg/FR-2004-12-14/pdf/04-27355.pdf>. The last significant update was published on December 14, 2004 and became effective on January 13, 2005.

Additionally, the Division offices are asked to perform an in-depth review of Metric 3, Qualifications of Personnel – Team Leader(s), as part of the bridge inspection compliance review process for PY 2016 with a specific focus on reviewing the FHWA approved comprehensive bridge inspection training requirements. We appreciate your time in reviewing the qualifications of team leaders.

A questions and answers document about team leader qualifications is attached for your use to assist with the review of Metric 3.

Please contact Shay Burrows at (202) 366-4675 or [shay.burrows@dot.gov](mailto:shay.burrows@dot.gov) with any questions.

Attachments

cc:

Associate Administrator for Office of Infrastructure

Directors of Field Services

Director of Technical Services

HIBS-30

Archived

## Questions and Answers on the Review of Metric 3 – Team Leader Qualifications

### Q1. How does someone qualify to be a team leader?

The qualifications of a team leader are described in 23 CFR 650.309(b). There are five ways to qualify as a team leader. Each includes some level of education, experience and training.

1. Be a registered professional engineer (PE) and successfully complete an FHWA approved comprehensive bridge inspection training course
2. Have five years of bridge inspection experience and successfully complete an FHWA approved comprehensive bridge inspection training course
3. Be a certified NICET Level III or IV Bridge Safety Inspector and successfully complete an FHWA approved comprehensive bridge inspection training course
4. Have a bachelor's degree in engineering from an ABET accredited college or university, successfully pass the NCEES Fundamentals of Engineering exam, have two years of bridge inspection experience, and successfully complete an FHWA approved comprehensive bridge inspection training course
5. Have an associate's degree in engineering or engineering technology from an ABET accredited college or university, have four years of bridge inspection experience, and successfully complete an FHWA approved comprehensive bridge inspection training course

Comprehensive bridge inspection training is the one consistency among all the ways to qualify as a team leader. The people in these roles must successfully complete an FHWA approved comprehensive bridge inspection training course.

### Q2. What is comprehensive bridge inspection training?

Comprehensive bridge inspection training is defined in 23 CFR 650.305 as “Training that covers all aspects of bridge inspection and enables inspectors to relate conditions observed on a bridge to established criteria (see the Bridge Inspector's Reference Manual for the recommended material to be covered in a comprehensive training course).”

### Q3. How does a comprehensive bridge inspection training become FHWA approved?

The Bridge Inspector's Reference Manual (BIRM) was first published in 2002 and had updates in 2006 and 2012. The BIRM is the basis for the National Highway Institute's (NHI) *Safety Inspection of In-Service Bridges* training course (#130055). As the BIRM was updated, the NHI course was also updated to stay current. This NHI course is an FHWA approved course that satisfies the FHWA approved training requirement.

Q4. Is there an option other than the NHI course to satisfy the requirement for FHWA approved comprehensive bridge inspection training?

Yes. The FHWA recognizes the course offered by NHI is not the only option available. States and Federal agencies may develop their own course; however, the course must be approved by FHWA. This is discussed in the preamble to the NBIS and is further covered by guidance given through questions and answers published on the Office of Bridges and Structures website at <http://www.fhwa.dot.gov/bridge/nbis/index.cfm>. Specifically, questions Q309-8 and Q309-9 address alternates to the NHI course and are repeated below.

**Q309-8** May a State or Federal Agency develop its own comprehensive bridge inspection training class instead of using the NHI training class #130055A? (listed 6/21/05, updated 5/18/09)

**A309-8** Yes. The current comprehensive training course offered by the National Highway Institute is not the only option available. A few States have developed their own comprehensive training and certification programs. In recognition of the need to retain this flexibility, States and Federal organizations are permitted to develop their own "comprehensive bridge inspection training" programs subject to approval by the FHWA.

**Q309-9** How do States or Federal Agencies obtain approval of alternate training classes? (listed 6/21/05)

**A309-9** The local FHWA Division office, in consultation with the FHWA Headquarters Office of Bridge Technology (*now Office of Bridges and Structures*) will review and approve alternate training proposals from the States. The FHWA Headquarters Office of Bridge Technology will review and approve alternate training proposals from Federal Agencies. It is expected that alternate training proposals will include a complete copy of all slides, workbooks and other materials to be used in the training. An agenda showing the course schedule and duration of each topic should be part of the proposal. The FHWA will use the "comprehensive bridge inspection training" definition in the new regulation along with the Bridge Inspector's Reference Manual (BIRM) as criteria to apply when reviewing these programs.

Q5. Have any States or Federal agencies implemented the alternate training option?

Yes. The Office of Bridges and Structures maintains a list of approvals given to States and Federal agencies. Below is a table of States that have received approval for alternate training. No Federal agencies have sought permission to have an alternate training course.

Idaho	Approved to use a local consultant to deliver comprehensive bridge inspection training based on the NHI course material
Louisiana	Approved to allow team leaders that have completed the Pennsylvania approved comprehensive bridge inspection training course
Nevada	Approved to use comprehensive bridge inspection training through New Mexico State University
New Hampshire	Approved to use comprehensive bridge inspection training through New Mexico State University for underwater bridge inspection divers
New Jersey	Approved to allow team leaders that have completed the Pennsylvania approved comprehensive bridge inspection training course
New Mexico	Approved to use comprehensive bridge inspection training through New Mexico State University
New York	Approved to use a 1-week, in-house comprehensive bridge inspection training course for Professional Engineers.
Ohio	Approved to use an in-house comprehensive bridge inspection training course
Pennsylvania	Approved to use a consultant to deliver comprehensive bridge inspection training based on the NHI course material and additional materials
Washington	Approved to use an in-house comprehensive bridge inspection training course

Q6. If a team leader successfully completed comprehensive bridge inspection training prior to the NBIS update in 2005, is that still valid?

Yes. There was not a requirement for the comprehensive bridge inspection training to be FHWA approved prior to January 13, 2005. A version of the NHI's *Safety Inspection of In-Service Bridges* training course has been available since 1993. Anyone who completed this specific course prior to January 13, 2005 also meets the intent of completing the training requirements in the NBIS today. In addition, other resources to complete the training were available and didn't need to be FHWA approved. Contact your Bridge Safety Engineer if you come across a situation in your review and are uncertain if the training is valid.

Q7. Were professional engineers required to successfully complete comprehensive bridge inspection training when the NBIS was updated in 2005?

Yes. FHWA acknowledged when the updated NBIS became effective January 13, 2005, that the combination of professional engineering licensing requirements, prior on-the-job training, and refresher training would be considered equivalent to the comprehensive training as defined in the updated regulation. This is touched upon in the preamble and is covered in question and answer Q309-6 at

<http://www.fhwa.dot.gov/bridge/nbis/index.cfm>. To satisfy the training requirements using this approach, the team leader must have been in that role prior to January 13, 2005, must have been a registered Professional Engineer prior to January 13, 2005, had extensive on-the-job training of 5 years or more involving direct field inspection of bridges prior to January 13, 2005, and successfully completed bridge inspection refresher training within a reasonable time period after. In 2005, it was expected someone in this situation would receive bridge inspection refresher training by January 2006. However, an individual meeting the first three parts would be a qualified team leader once the bridge inspection refresher training was completed, even if it was after January 2006.

Q8. Since most State Transportation Departments and Federal agencies use the NHI course to satisfy the comprehensive bridge inspection training requirement, what should I look at when I review this metric?

NHI has historically issued certificates to the attendees in its courses and an example certificate is attached as a reference. A new process was implemented in 2010 with NHI to only present certificates for the comprehensive bridge inspection training course to individuals who achieve at least 70% on the final assessment. You should look for the following items on the certificate to verify the course is from NHI:

- It contains the USDOT logo
- It contains the NHI logo and/or “National Highway Institute”
- The proper course name is listed: *Safety Inspection of In-Service Bridges*
- It contains a signature from the NHI Director: Valerie Briggs, Rick Barnaby, Moges Ayele, Joe Toole, or Gary Hamby

If certificates of training cannot be produced and the training was provided by NHI, or if you want to question the validity of the NHI training an individual has taken, transcripts can be requested from NHI for courses completed within the past seven years. Each student's transcript will show the courses attended and the number of CEUs earned – NHI does not print a new copy of a certificate. Request for transcripts can be sent to [NHIRegistrar@dot.gov](mailto:NHIRegistrar@dot.gov).

Q9. Why is bridge inspection refresher training not listed in the qualifications but is part of the review of Metric 3?

It is important for team leaders to have periodic refresher training to maintain consistency of the bridge inspection program. The requirement for refresher training is described in 23 CFR 650.313(g) as part of the QC/QA provisions, which is why it is not listed as a requirement in Q1, above. The refresher training requirement was added to Metric 3 since the processes to review FHWA approved comprehensive bridge inspection and bridge inspection refresher training is similar.

Q10. What is bridge inspection refresher training?

Bridge inspection refresher training is defined in 23 CFR 650.305 as “The National Highway Institute ‘Bridge Inspection Refresher Training Course’ or other State, local, or federally developed instruction aimed to improve quality of inspections, introduce new techniques, and maintain the consistency of the inspection program.”

Q11. How much refresher training is required for team leaders?

Team leaders are required to complete periodic bridge inspection refresher training. Since the NBIS does not prescribe the duration of refresher training nor the interval between trainings, the State Transportation Departments and Federal agencies should have established policies addressing these.

Q12. How do I determine if the bridge inspection refresher training through NHI is valid?

You can use the criteria in the response to Q8, above, to determine the validity of bridge inspection refresher training through NHI. Instead of the course name, *Safety Inspection of In-Service Bridges*, the certificate will list the course as *Bridge Inspection Refresher* or *Bridge Inspection Refresher Course*.

Q13. What if I performed an intermediate or in-depth review of Metric 3 in PY 2015?

If an intermediate or in-depth review was performed in PY 2015 and you still have the supporting data, all which is required to meet the intent of the memo is to review the training certificates from the PY 2015 sample for completeness. In addition, for an intermediate review that was performed in PY 2015, the sample size should be reviewed to ensure the required sample size for an in-depth review was performed. If not, you can add to the existing sample from the remaining population.



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**National Highway Institute**



# *Certificate of Training*

*has participated in*

*hosted by*

**Date:**

**Location:**

**Hours of Instruction:**

**Instructor**

**Instructor**

**Local Coordinator**

*Valerie Briggs*

**Valerie Briggs, Director  
National Highway Institute**