

Bridge Safety Standards Compliance Manual

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CHAPTER 1 – Introduction and General Guidance

Introduction to This Manual

The Bridge Safety Standards Compliance Manual provides technical guidance to Federal bridge specialists. This manual provides guidance for enforcement of Title 49 Code of Federal Regulations (CFR) Part 237, Bridge Safety Standards (BSS). The guidance provided in this manual may be revoked or modified without notice by a memorandum from the Associate Administrator for Railroad Safety and Chief Safety Officer. This manual does not modify, alter, or revise the regulatory provisions in the Bridge Safety Standards (BSS) in any way.

Comments, additions, and suggestions for future changes should be directed to the Chief Engineer–Structures for consideration.

Bridge specialists should refer to this manual as often as necessary for clarification of Federal Railroad Administration (FRA) regulation interpretation and policy. When a bridge specialist is unsure of meaning or intent in this manual, the bridge specialist should promptly contact the Chief Engineer–Structures for guidance. This manual can be viewed at http://www.fra.dot.gov/eLib/Find#p1_z50_ICM_s66_s43_s67_kcompliance%20manual.

Safety

FRA's first priority is safety. Therefore, all activities are to be conducted with personal safety and the safety of accompanying personnel in mind. Bridge specialists must conduct activities in accordance with the safety instructions contained in the General Manual. Guidance for Roadway Worker Protection (RWP), bridge worker safety, and on-track roadway maintenance machine safety is contained in the Track and Rail and Infrastructure Integrity Compliance Manual, Volume III.

Bridge Safety Oversight

A bridge specialist's primary duty is to conduct inspections to determine whether the railroads are complying with the BSS as well as railroad workplace safety regulations (bridge worker safety, roadway worker protection, and roadway maintenance machine safety). Effective inspection requires identification, evaluation, and reporting of conditions and practices that fail to meet minimum Federal compliance requirements.

All instances of noncompliance with the BSS are to be documented as defects on the Form FRA F6180.96, Inspection Report (Form FRA F6180.96 or F6180.96). Refer to Chapter 2, Field Reporting Procedures and Forms, for more information.

Because the purpose of regular inspection activity is to evaluate the performance of the carrier and the carrier's representatives in conducting thorough inspections and complying with the BSS, an evaluation of bridge inspection records maintained by the carrier, as required by 49 CFR § 237.109, is also necessary.

The adequacy of the carrier's bridge inspections is determined by evaluating what is recorded on the carrier's inspection reports and whether these reports reflect the actual conditions of the bridge structure.

Prior to inspection, the following preparations should be made:

- Obtain the names and locations of the supervisor's territory to be inspected.
- Advise the supervisor of the territory to be inspected and invite them to have a railroad representative accompany you.
- Set a date, time, and location for the inspection.
- Make appropriate transportation arrangements necessary to execute the inspection.
- If you must change the date, time, or location, make every effort to contact the railroad as soon as possible to advise it.
- Always have a copy of the BSS and this manual as references.
- Carry measuring and inspection equipment (tape measure, level, string line, plumb bob, hammer, binoculars, etc.).

Bridge specialists should review the following information before the inspection:

- Current carrier bridge management program (BMP)
- Recent carrier bridge inspection reports
- Timetables and special instruction for speeds, restrictions, and load capacities
- Current slow orders
- Train, tonnage, and hazardous material information
- Current and recent program work

For information on general FRA inspection policies, bridge specialists should review the General Manual, Chapter 2, for guidance about issues such as property entry, refusal to permit inspections, forcible interference with official duties, and release for entry, as well as strike or labor disputes.

Activity-Code Specific Guidance

Ideally, the first bridge safety oversight activity to be performed would be a BMP review. However, any of the following activities can be conducted independently of one another and at any time, or as a result of an inquiry, complaint, accident, or natural event.

BIR – Bridge Inspection Record Field Audit – A Bridge Inspection Record Field Audit is used to evaluate whether a bridge inspection record accurately documents the condition of the subject bridge. The bridge specialist should exercise care when picking bridge inspection reports to audit to ensure that a representative sample is selected. In addition to selecting bridges that appear to have deterioration, reports for bridges that appear to be in good condition should be

sampled to ensure that inspection reports accurately document field conditions. Further, the audit must be performed in two directions: first, evaluate whether conditions shown on the report actually exist on the bridge; and second, evaluate whether all deficient bridge conditions observed are documented on the report.

BMP – Bridge Management Program Review – (Note: The acronym BMP has two uses. In the title of this paragraph and in one reference in the Bridge and Track Activity Code Table of Definitions, it is the activity code used in the Railroad Inspection System for Personal Computers (RISPC). In the body of this paragraph and elsewhere in this manual, BMP is the abbreviation for Bridge Management Program.) A BMP review is a method used to determine whether a track owner has adopted a bridge management program, and whether it complies with the requirements stipulated in 49 CFR Part 237, Bridge Safety Standards. It is important that the bridge specialist perform a thorough BMP review to ensure that all occurrences of noncompliance with the BSS are documented on Form FRA F6180.96. Use the BMP checklist to ensure that all required items are covered in the review and included on Form FRA F6180.96. Follow-up reviews need to be equally as thorough as initial reviews since additional noncompliant conditions may have been introduced during revision of the earlier BMP.

BREC – Bridge Inspection Record Review – A Bridge Inspection Record review is an opportunity to verify that bridge inspection records adhere to the requirements of the track owner's BMP and the BSS. This activity code is used for the office audit of bridge inspection records/reports. Unless all of a track owner's inspection reports for a given territory and year are being reviewed, care must be taken to select a random sample. Records selected must be evaluated to determine whether they conform to the requirements of the track owner's BMP and include all information required by 49 CFR §§ 237.109(b) and 237.109(c) of the BSS. Timeliness of inspections and submission of completed inspection records should also be evaluated.

BSSE – Bridge Safety Standards Compliance Evaluation – This code encompasses multiple activities involved in determining whether a track owner is following the policies and procedures outlined in their BMP. These activities include, but are not limited to:

- Evaluating the accuracy of the track owner's railroad bridge inventory.
- Verifying that bridge inspections are being conducted in conformance with the track owner's bridge inspection procedures.
- Determining if inspections are being documented on the specified form, using the correct nomenclature, and following the BMP-specified numbering/identification protocol.
- Determining if weight and dimension restrictions are being followed.
- Determining whether inspection reports are being adequately reviewed.
- Verifying that instructions for the protection of train operations following natural or man-made accidents are being followed.
- Determining whether internal audits are being performed as specified in their BMP.
- Determining whether repairs/modifications that affect bridge load capacity are being

supervised by a designated Railroad Bridge Supervisor, following plans, specifications, and/or procedures developed by a qualified, designated Railroad Bridge Engineer.

Use of other bridge-related activity codes such as BREC and BIR, in conjunction with BSSE, is permitted and expected. All activities performed under activity code BSSE are to be identified on Form FRA F6180.96 to document the extent of the evaluation. Use the BSSE checklist to organize your notes and ensure a complete inspection report.

BWI – Bridge Waiver Investigation – Evaluating a petition for a waiver of compliance with the requirements of the BSS requires determining whether the track owner’s petition proposes alternative methods of providing for railroad bridge safety at least equal to the level that would be provided were the regulations followed. The bridge specialist should conduct such an investigation in a manner similar to performing a BMP review to ensure a complete and thorough evaluation.

Prioritizing Oversight Activities

To efficiently allocate FRA’s resources throughout the Nation and ensure the safety and viability of the railroad system, bridge specialists should prioritize their inspection activities by considering the following characteristics:

- Operational size of a railroad
- Tonnage – annual tonnage traveling over a railroad’s tracks
- Passenger trains operating on a railroad’s tracks
- Critical energy routes
- Hazardous materials (toxic inhalation hazard (TIH)/poison by inhalation hazard (PIH)) transported on a railroad’s system
- Speed authorized for trains on tracks
- Compliance history of a railroad
- Accident history of a railroad
- Strategic Rail Corridor Network (STRACNET) Route within a railroad’s track system.

In addition to the above, previous safety reviews, audits, and travel efficiency should be considered. Prioritize Class III and other small railroads that do not handle passengers, hazardous materials, or energy products by their operational size and compliance history.

To effectively analyze and manage risk related to the bridge safety program, FRA established a systematic, data-driven, risk-based methodology for prioritizing BMP reviews. The output of this model is a list of track owners ranked according to the potential for a bridge failure and the impact on operations and safety should a failure occur. The prioritized list of track owners enables FRA to efficiently plan and allocate resources for BMP reviews, and establishes a framework for other bridge safety activities.

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BMP reviews will be prioritized using a model that evaluates the following criteria:

Criteria		Criteria Description	Priority Levels	
1	Operational Size (miles)	Total length of railway routes open for public passenger and freight services. Due to maintenance requirements, a larger size indicates a higher potential for safety issues.	< 20	1
			20 - 40	2
			40 - 200	3
			200 - 1000	4
			> 1000	5
2	Total Train Miles (per year)	Total mileage operated by trains in a calendar year. Due to maintenance requirements, a larger size indicates a higher potential for safety issues.	< 10k	1
			10k - 20k	2
			20k - 200k	3
			200k - 2M	4
			> 2M	5
3	Passengers Carried (per year)	Railroads carrying passenger trains are evaluated due to the potential loss of life if bridge failure occurs. Impact of an incident would be high. Priority level is based on number of passengers carried in a calendar year.	< 10k	1
			10k - 100k	2
			100k - 1M	3
			1M - 10M	4
			> 10M	5
4	Energy Products (tank cars/year)	Railroads carrying energy products are evaluated due to the potential loss of life and environmental damage if bridge failure occurs. Impact of an incident would be high. Priority level is based on the number of tank cars per year where energy products are carried by railroad.	< 1k	1
			1k - 5k	2
			5k - 10k	3
			10k - 220k	4
			> 220k	5
5	Hazardous Materials (tank cars/year)	Railroads carrying hazardous materials are evaluated due to the potential loss of life and environmental damage if bridge failure occurs. Impact of an incident would be high. Priority level is based on the number of tank cars per year where hazardous materials (TIH/PIH) are carried by railroad.	< 100	1
			100 - 500	2
			500 - 1k	3
			1k - 15k	4
			> 15k	5
6	Strategic Rail Corridor Network	Does railroad operate over a portion of the STRACNET?	No	0
			Yes	5

Opening Conference

Before starting an inspection, bridge specialists should introduce themselves to all present and obtain a list of individuals participating in the inspection. A bridge specialist may then explain the reason for the inspection as:

- Regular – To ensure the carrier’s process is adequate in finding, reporting, and remedying non-BSS-compliant conditions.
- Follow-up or “Re-inspection” – Regular inspection to ensure proper remedial action.
- Complaint – Inspection of unsafe conditions alleged by an individual, group, or entity. Caution must be used not to identify the complainant. It is not mandatory to divulge that you are on a complaint investigation, as it may compromise the investigation. Bridge specialists should consult, if appropriate, with appropriate regional track or signal specialists.
- Accident – Investigations of derailments or accidents, etc.
- Waiver – Investigation for relief from BSS.
- Special Inspections – Focused inspections or program enforcement.

During the Workplace Safety Briefing prior to the inspection, all parties involved must understand that FRA’s goal is to help the railroad improve safety, and that we welcome suggestions and ideas.

Closing Conference

Upon completion of an inspection, the bridge specialist must provide the railroad representative a report (F6180.96) with all conditions that do not meet minimum Federal BSS regulations. Field reporting is discussed in Chapter 2. The reporting of exceptions to the standards is discussed in Chapter 4.

Defect Tracking

All defects must be tracked on Form FRA F6180.96 and corrective actions noted. Corrective actions include remediation, procedural changes, training, and follow-up. Defects that cannot be remediated or do not warrant follow-up must be recorded on F6180.96, but considered closed once noted.

If a defect is identified, but a civil penalty is not recommended, the bridge specialist must use the following process to track corrective action. Since 49 CFR Part 209 Subpart E only requires the regulated entity to complete and return the remedial action report (back page of the F6180.96) when a civil penalty is being recommended, the track owner’s response is voluntary and not required.

1. Create a F6180.96 with a line item that includes a comment indicating the bridge specialist is requesting remedial action reports be completed for whatever line items of F6180.96 the bridge specialist deems necessary to ensure proper remedial action is

applied. (Example comment: “Reporting of your remedial action is requested for Items #3 and #6. The completion of a remedial action report for these defects is not required by regulation; completing the report is voluntary and assists FRA in documenting corrective actions without re-inspection. Within 60 days, please complete the remedial action report (on the last page of this report) by entering the appropriate remedial action code and providing a brief description of the corrective action you took in the narrative section, then return it to me at first.last@dot.gov.”)

2. Enter a remedial action request for each line item that warrants follow-up (Example comment: “Please complete the remedial action report for this defect indicating your corrective action.”). In completing the report, verify “O” is selected in the Written Notifications to FRA of Remedial Action box for each line item requesting a voluntary response. Place a “W” in the Railroad (Remedial) Action Code box to indicate a voluntary remedial action report is being requested. Initially, the Railroad Action Code date is to show the date of the inspection.
3. Provide the track owner with the inspection report.
4. If the track owner opts not to provide the remedial action within the timeframe specified (typically 60 days), the bridge specialist must contact the track owner to confirm the remedial action was completed and, if necessary, conduct a re-inspection to ensure the remedial action was satisfactory.
5. When the remedial action report is returned or when the remedial action follow-up has been completed, the bridge specialist must enter the updated information into the remedial action reporting section of RISPC. This will document the follow-up and remedial action.
6. At least once per month, bridge specialists must run a query on the Safety Data Secure Site to determine which defects have not been remediated within the specified timeframe and plan appropriate follow-up.

This process ensures compliance with the BSS, documents remedial actions taken, and aids in follow-up prioritization planning.

If a bridge specialist notifies a railroad both that (1) assessment of a civil penalty will be recommended for the railroad’s failure to comply with a provision of the BSS, and (2) that a remedial actions report must be submitted, the railroad must report actions taken to remedy that failure to the bridge specialist within 30 days after the end of the calendar month in which such notification is received. This requirement, found in 49 CFR Part 209, Subpart E, is outlined in the “Reporting of Remedial Actions” section of Chapter 3 of the General Manual.

CHAPTER 2 – Field Reporting Procedures and Forms

Introduction

Bridge specialists must record each field inspection on Form FRA F6180.96 (also called “Form 96” and “F6180.96 report”). Inspection reports must be completed and promptly submitted, even when an inspection is free of defect observations. The data contained in each Form FRA F6180.96 (including a railroad’s reply to corrective action items) transfers to FRA’s safety database for processing to permit the generation of several management reports. This data helps to determine the effectiveness of the overall inspection program, the degree of compliance, and the effect of the BSS on reducing bridge-related accidents.

Inspection Report, Form FRA F6180.96

General Instructions

This section describes the methods used to prepare an inspection report. Since January 1995, inspectors have been recording their inspection activities on a multidiscipline form, Form FRA F6180.96. The purpose of the form is to record inspections and defects for placement into FRA’s safety database.

RISPC provides inspectors with the capability to enter inspection data via their laptop computers. This program allows inspectors to maintain electronic records, which facilitates data analysis. Throughout RISPC, help instructions are available to assist in the navigation and use of the software (by using the menu’s “Help” selection or the question mark icon).

Each inspector engaged in field inspection activities must promptly complete one or more F6180.96 reports as necessary, sign them electronically, and submit the completed F6180.96 reports to the railroad representative. Electronic RISPC-generated inspection report entries are the preferred method to be used.

Bridge specialists must provide notice of defective conditions found on the day of the inspection by either: 1) an electronic PDF copy of F6180.96 (email or another electronic medium) or 2) verbal notification followed up promptly by a PDF copy of the F6180.96. If F6180.96 reports contain line items recommending a civil penalty, then a copy, electronically signed by the bridge specialist, must be provided to the railroad representative.

For instructions on the completion of each field in Form FRA F6180.96, refer to [Instructions, Form FRA F6180.96, Inspection Report](#), later in this chapter.

Special Instructions—Inspections from/to State Lines

Complete an inspection report that begins within a State and terminates at the State line as follows: Enter the name of the community (if not originating in a community, use the county) nearest the inspection starting point in the “From City” block on the inspection report and the State line name from the drop-down menu in the “Destination City” block to indicate the State line. A four-digit artificial identifier code, starting with the digits “99,” to indicate a State line, followed by the two-digit State code for the adjacent State, is in the drop-down menu. For example, an inspection conducted from Erie, PA, to Ashtabula, OH, would be reported on two separate reports as follows:

First Report

From			Destination		
City:	Erie	2640			
State:	PA	42	City:	PA/OH State line	9939
County:	Erie	C049	County:	Erie	C049

Second Report

From			Destination		
City:	OH/PA State Line	9942			
State:	OH	39	City:	Ashtabula	0330
County:	Ashtabula	C007	County:	Ashtabula	C007

Inspection reports should be numbered consecutively. They can then be associated with each other in a listing of inspection activity, and a clear picture of the location of the entire inspection will be available.

An inspection crossing an entire State must show State line identifiers at each end, and must be associated with adjoining inspection reports by use of consecutive report numbers. For example, report an inspection from Pittsburgh, PA, through WV, to Columbus, OH, as follows:

First Report

From			Destination		
City:	Pittsburgh	6600			
State:	PA	42	City:	PA/WV State Line	9954
County:	Allegheny	C003	County:	Allegheny	C003

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Second Report

From			Destination		
City:	WV/PA State Line	9942			
State:	WV	54	City:	WV/OH State Line	9939
County:	Brooke	C009	County:	Brooke	C009

Third Report

From			Destination		
City:	OH/WV State Line	9954			
State:	OH	39	City:	Columbus	1800
County:	Jefferson	C081	County:	Franklin	C049

Use a county or nearest city code for inspections beginning or ending at international borders (e.g., Canada or Mexico).

Note: When an inspection occurs at one point only, for example an inspection within the confines of a yard in one municipality, it is not necessary to fill in the “destination” fields.

Defect Line Item Form FRA F6180.96

Bridge specialists must upload their RISPC inspection reports on a weekly basis. If an error is discovered requiring correction of a report, then the corrected report must be issued to the railroad representative. Furthermore, as soon as possible, the corrected report must be uploaded to FRA’s data contractor.

When making an unaccompanied inspection, the bridge specialist must deliver a copy of the report to the railroad personnel having jurisdiction in the area covered by the report. However, when an inspection such as one from a train occurs and no defects are noted, it is not necessary to deliver a copy of the report.

In the Bridge and Structures discipline, do not mix defect-only line items and items checked “yes” in the “Violation Recommended” field on a Form FRA F6180.96. In the case where a bridge specialist discovers defect items and violation items during an inspection, these will require at a minimum two separate reports (one with defects only and another with violation items only). See below for line items with a recommendation for violation.

Violation Recommended Line Item Form FRA F6180.96

Bridge specialists must complete a separate Form FRA F6180.96 for any items identified as recommended for violation. However, the above instructions pertaining to uploading and corrections also apply to reports containing items checked “yes” in the “Violation Recommended” field. In addition, carefully monitor the “Written Notification to FRA of Remedial Action Required” field to ensure railroads are complying with this requirement.

Failure of the railroad to comply with the written notification requirement must be considered for a violation (Part 209, Section 405(a)).

Multiple violation line items on a F6180.96 must be of the same CFR part, because all items from such a report will automatically populate into a Form FRA F6180.111 violation narrative report (see below).

Violation Report Narrative – Form FRA F6180.111

General Instructions

It is always necessary to provide supplemental information to a Form FRA F6180.96 by writing a narrative report (Form FRA F6180.111) when recommending a violation. These written narratives will accompany the Form FRA F6180.96.

In RISPC, use F6180.96 forms that contain items recommended for civil penalty to generate a Form FRA F6180.111. Open the RISPC main menu and perform the following actions:

1. Select “Other Programs”
2. Select “New Violation Report”
3. At the blank violation screen, select “New Report”
4. Highlight the report and line item number you want and click on “Select and Create Violation Report”
5. Bridge specialists are to enter their sequential violation number and click on “OK”

Note: When recommending a violation for a Roadway Workplace Safety item, select the Track-214 form. This will open a Part 214 Railroad Workplace Safety Violation Report Form, FRA F6180.119.

To complete each field in the Form FRA F6180.111, refer to [Instructions, Form FRA F6180.111, Track Violation Report Form](#), later in this chapter.

A narrative submitted with an inspection report must contain sufficient detail to completely describe and support the inspection activity. Copies of all pertinent data should also be furnished to further support the inspection activity; pertinent data includes railroads’ plans, records, bulletins, or orders; any pertinent photographs; the names and titles of railroad employees who were witnesses; the time of day when the inspection or investigation was conducted; and the location of any violation with reference to some fixed object. GPS coordinates, if available, may also be used.

When filing a violation report, take great care to obtain adequate evidence to support each element of each violation recommended in the violation report. This should include evidence obtained through personal observation and/or records indicating noncompliance.

If pertinent, include copies of previous FRA reports or the railroad's own records to document the railroad's prior knowledge of the presence of the defect. Establish knowledge of a defect by constructively showing that the defect is of such a nature that the railroad would have known of the defect from past inspections. In this regard, it is helpful to note the date of the railroad's last inspection (and include the railroad's last inspection record) and explain why the condition must have been present at that time by stating that this type of condition takes a longer time to develop than the time between the railroad's last inspection and FRA's inspection. See [Chapter 4](#) of this manual for additional instructions concerning the knowledge standard.

In the narrative report, bridge specialists must be careful to identify all circumstances or facts that they did not witness by stating the source of such information. If necessary, attach a report of an interview to the narrative report. Identify all copies of records by providing the name, title, and address of the custodian of original records.

If more than one count (or occurrence) is listed in a line item of an inspection report, the narrative of the violation report must clearly state whether all counts are being recommended as separate violations or as one violation for the entire line item, as the intent is not always clear. If separate violations are being requested for each count, the Transmittal of Violation Report cover sheet must list each violation as a separate line item (the Railroad Enforcement System (RES) must list each violation as a separate line item as well unless multiple days are being requested). This will ensure that FRA's Office of Chief Counsel (RCC) is aware of both the bridge specialist's intent and the Chief Engineer-Structures' approval of the number of counts requested. Note that entering the violations as multiple occurrences on F6180.96 in RISPC automatically generates a footnote indicating that penalties have been assessed for 2 or more days on which the violation continued, which is not correct in many cases.

Submission of Photographs as Evidence

Photographs can be very strong evidence in support of a violation. When using photographs in the violation narrative package, explain what each photograph shows. Clearly identify what each photograph illustrates to support the violation. In violations with multiple counts or line items, caption each photograph to link it to a specific violation item (e.g., CES_001, Line Item 2).

Photographs must be in digital format. It is acceptable to place descriptions or pointers using software to help the reader understand the nature of the violation. However, photographs must not be digitally manipulated in any manner to alter the appearance of any item or element in the photograph. **Digital photographs must be annotated to indicate that there are no electronic alterations.**

Statements of Witness

Unless a violation is substantiated by a bridge specialist's personal knowledge, the railroad's own records, or admissions of railroad officials contained in reports of interview, the violation report should be accompanied by one or more witness statements on the appropriate "Statement of Witness" form. (That form is designed for use when obtaining statements by railroad employees; if a statement is being obtained from a nonemployee, consult RCC about how to proceed.) The witness statement must clearly substantiate any elements of the violation not established by other evidence. As in any case where a violation report is based on information received from a complainant, neither the report nor any of its attachments should reveal that the case arose from a complaint or identify any person as a complainant. The whistleblower protections found at 49 U.S.C. § 20109(i)(1) prohibit FRA from revealing the identity of anyone who brings a safety complaint to FRA without that person's written consent. However, 49 U.S.C. § 20109(i)(2) states that the U.S. Department of Transportation (DOT) will disclose to the Attorney General the name of an employee described in 49 U.S.C. § 20109(i)(1) if the matter is referred to the Attorney General for enforcement.

Each witness statement must contain the time, date, full name, title, and mailing address of the person who was interviewed. Note: Bridge specialists should reference the General Manual, Chapter 5, for witness statement guidance and an example of a witness statement form.

FRA Guidelines for Conducting Interviews

Bridge specialists should reference the General Manual, Chapter 5, for guidance in conducting interviews.

Copies of Railroad's Records

When necessary, the violation report must be accompanied by legible copies of the railroad's relevant records containing information that will provide RCC with substantiating documentation of the violation. The violation report should give a clear understanding of how the documents help demonstrate the violation of Federal safety regulations.

This information may be submitted in the form of duplicated copies of the railroad's records or through comprehensive, word-for-word extracts taken from the railroad's records.

Violation Report Package Arrangement

When the violation report and all supporting documents have been converted into a PDF format, these documents must be combined into one master document.

Each violation report is required to have a master file in PDF format. The filename must contain the following information: Region, Case Type, Bridge Specialist Initials, and Violation Number (for example: R4-TS-CLD-49.pdf). The following table lists violation case types.

Violation Case Type List

Code	Type
AD	Alcohol and Drug Regulations
AR	Accident Reports Regulations
BSS	Bridge Safety Standards
BW	Bridge Worker Safety Standards
CC	Conductor Certification
CIS	Critical Incident Stress
EO	FRA Emergency Order
EP	Railroad Enforcement Procedures
EQ	Engineer Qualification Regulations
FCS	Freight Car Safety Standards
GC	Grade Crossing Signal Safety Regulations
GS	Safety Glazing Standards
HMT	Hazardous Materials Regulations
HS	Hours of Service Laws
HSR	Hours of Service Record Keeping Regulations
LI	Locomotive Safety Standards and Statutes
LIS	Steam Locomotive Safety Standards and Statutes
PEP	Passenger Train Emergency Preparedness Regulations
PEQ	Passenger Equipment Safety Standards
REM	Rear End Marking Device Regulations
RMM	Roadway Maintenance Machines
ROP	Railroad Operating Practices
ROR	Railroad Operating Rules
RSP	Railroad Communications Regulations
RW	Roadway Worker Protection Regulations
SA	Safety Appliance Statutes and Regulations
SI	Signal Inspection Regulations and Statutes
TH	Train Horn/Quiet Zone
TS	Track Safety Standards

The violation report package must be arranged in the following order: Violation Report, List of Exhibits page, and exhibits in order of relevance. The requirements for these documents are detailed as follows:

1. **Violation Report – Form FRA F6180.111, including any continuation sheets:** Bridge specialists must ensure all reports in the violation report package are signed using an authenticated electronic signature.
2. **List of Exhibits:** A List of Exhibits page must be created and inserted immediately after the Form FRA F6180.111.
 - a. The Exhibit List must be a separate document titled “List of Exhibits.”
 - b. The list must not be entered in the narrative of the Violation Report (field 34).

- c. All exhibits must be listed in order of relevance, and must not be numbered 1, 2, 3 or lettered A, B, C.
3. **Exhibits:** Exhibits include, but are not limited to, the following:
- a. Original Form FRA F6180.96, railroad copy, containing the recommendation for civil penalty.
 - b. Form FRA F6180.96 for the inspection that includes the defects not recommended as violations – railroad copy.
 - c. Statements of Witness, if any.
 - d. Copies of pertinent pages of the timetable and any other instructions that are in effect at the time of violation.
 - e. Photographs, as described above. Photographs should clearly illustrate the severity of the violation, or anything to further document why the defect is recommended for violation. Do not include photographs if they do not show something that is significant in supporting the violation.
 - f. Copies of railroad records when they are available and are part of your determination to recommend a violation.
 - g. Include any other items that may further substantiate the violation.

For identification purposes, each exhibit of the violation report package must be labeled with the bridge specialist's initials and the violation report number (for example, JDP-55), which must be placed in the lower right corner of each sheet.

If a bridge specialist recommends that a violation receive special handling, the bridge specialist must submit an additional cover memo (to be signed by the Chief Engineer–Structures) justifying the recommendation. Special handling includes a penalty above the amount shown in the penalty schedule (Appendix B to Part 237), up to or including the aggravated maximum penalty of \$113,894, or when counts for multiple days are recommended. Please ensure that the cover memo is included as a separate attachment from the violation report package and that the memo provides the information and justification required by the “Enhanced Penalties” memo dated August 31, 2016 (see General Manual, Appendix D).

The entire violation package for transmittal contains:

- 1. TFR – F6180.72x (transmittal document)
- 2. Cover letter regarding extraordinary penalties (if applicable)
- 3. Violation report package

Note: One and two are separate files and do not require a digital signature by the bridge specialist.

Supervisory Review

Upon receipt of a bridge discipline inspection report, or any other report submitted by a bridge specialist, the Chief Engineer–Structures must make a thorough review to determine that:

- The report is complete.
- It has been prepared in accordance with existing instructions.
- The type and number of inspections are consistent with the goals of FRA.
- With respect to violation reports that the bridge specialist has recommended for civil penalty, the bridge specialist's recommendation for prosecution demonstrates the degree of seriousness of the violation and that, where a willful violation or an extraordinary penalty is sought, the report and/or Chief Engineer–Structures cover memo provides the additional justification to support a penalty beyond the ordinary level stated in the penalty schedule for the BSS violated.

Before uploading a Form FRA F6180.111 to RISPC and sending the electronic package to headquarters, bridge specialists are to send a draft copy to the Chief Engineer–Structures for review. An electronic draft copy can be generated by “printing to PDF” and emailing it. The Chief Engineer–Structures—after considering the hazard of the specific BSS violation, the railroad's record of accidents, and its overall compliance attitude—must indicate his or her concurrence or non-concurrence with the bridge specialist's estimate of the seriousness of the violation. The Chief Engineer–Structures may also indicate edits or corrections the bridge specialist can incorporate into the final report package.

If the Chief Engineer–Structures does not concur with the bridge specialist's estimate of the seriousness of the violation, the Chief Engineer–Structures must prepare a memo stating that fact and the reasons for his or her non-concurrence and attach a copy to the violation report, with a copy furnished to the bridge specialist. The report must then be discussed with the bridge specialist.

Violation Report Package Distribution

Upload the Form FRA F6180.111 to RISPC within 30 days after the date of the inspection report. After the upload process, bridge specialists must prepare an electronic master document of the entire violation package and send it to the Chief Engineer–Structures. The violation report package must include a copy of the inspection report and supporting documentation bookmarked for easy reference.

After review, the Chief Engineer–Structures will electronically submit the violation report package, including the original report, exhibits and photographs, to RCC.

The bridge specialist must number the violation narrative reports sequentially throughout his/her career without regard to the end of any calendar or fiscal year.

Source Codes

(From April 2015 General Manual, Chapter 3)

A: Regular Inspection (All) – A periodic inspection activity conducted by Federal and/or State railroad safety inspectors, in accordance with established procedures, to determine railroad, shipper, consignee, contractor, and manufacturing facility compliance with Federal statutes, rules, regulations, orders, and standards within the jurisdiction of FRA.

B: Complaint Investigation (All) – Any inspection initiated for the purpose of performing a complaint investigation. A complaint file number must be assigned and indicated on the inspection report when this code is used.

C: Accident Investigation (All) – Any inspection resulting from an accident/incident investigation. An accident file number must be assigned and indicated on the inspection report when this code is used.

D: Special Inspections or Investigations (All) – Inspections initiated for a specific reason or purpose not otherwise identified. A file number must be assigned and indicated on the inspection report when this code is used.

E: Waiver Investigation (All) – Inspections resulting from either investigating requests for temporary relief from Federal regulations or validating compliance with any waiver conditions already in effect. Use of this source code automatically requires an entry in the File Number Field. When validating compliance with existing waiver conditions, inspectors may list all inspection results on the same report, including results not associated with the waiver. The Federal Register docket number, i.e., the waiver investigation file number, must be indicated in the File Number field of the inspection report when this code is used.

F: Reserved for future use.

G: ECP Brake-Equipped Trains (MP&E) – Inspectors must complete a separate inspection report using Source Code G, along with all related inspection activity associated with the electronically controlled pneumatic (ECP) brake-equipped trains (e.g., 49 CFR Parts 215, 231, and 232). Source Code G must also be used when inspection activities, such as CFR Parts 218, 223, and 229, involve ECP brake-equipped trains and equipment.

H: Nuclear Route Shipment (HM, OP, MP&E, S&TC) – Inspections of nuclear routes or shipments as specified in the Safety Compliance Oversight Program Plan.

I: Automated Track Inspection Program (ATIP) Survey (OP, Track) – Survey while on board specialized FRA track geometry vehicles.

J: ATIP Follow-up (Track) – Field inspections to determine railroad remedial action resulting from noncompliance identified by specialized FRA track geometry vehicles.

K: Reserved for future use.

L: Regular Inspection of a STRACNET Segment (Track).

M: Special Investigation or Assessment on STRACNET Segments (Track).

N: ATIP Survey (Using Test Car) on STRACNET Segments (Track).

O: RS&I Investigation (S&TC) – Inspections performed while investigating a request of relief

from the requirements of the rules, standards, and instructions (RS&I) contained in 49 CFR Part 236. A file number must be assigned and indicated on the inspection report when this code is used.

P: BS-AP Investigation (S&TC) – Inspections performed while investigating a request for discontinuance or material modification of a signal or train control system (block signal application). A file number must be assigned and indicated on the inspection report when this code is used.

Q: False Proceed Investigation (S&TC) – Inspections performed while investigating a false proceed signal occurrence. A file number must be assigned and indicated on the inspection report when this code is used.

R: Re-inspection (All) – Inspection activity carried out to examine, monitor, or further develop previously conducted work. Inspectors must use good judgment when deciding the appropriate interval for the re-inspection, taking into consideration factors such as the inherent seriousness of the noncompliance and the railroad's general level of current compliance as revealed by the original inspection as a whole. S&TC and Track inspectors must also be governed by discipline-specific guidelines. The File Number field must contain the inspector identification and the previous inspection report number.

S: Reserved for future use.

T: Reserved for future use.

U: Waiver Inspection (Follow-up).

V: Inspection of or at Manufacturers Facility (MP&E/HM).

W: Reserved for future use.

X: Activation Failure (Signal) – Inspections performed while investigating an activation failure occurrence. A file number must be assigned and indicated on the inspection report when this code is used.

Y: Reserved for future use.

Z: Outbound Extended Haul Trains (MP&E)

Multidiscipline Activity Code Table of Definitions

(The table is based on the RISPC Database Revised on January 17, 2012)

Activity	Discipline	Definition	Comments
174A	H, M	General Requirements – The purpose of this inspection is to determine compliance with §§ 174.3, 174.5, 174.9, 174.14, 174.16, and 174.50. This code is to be used for railroad facility inspections. Record one unit for the inspection of each car transporting hazardous materials.	
174B	H, O	<p>General Operating Requirements – The purpose of this inspection is to review a train crew's documentation for each rail car containing hazardous material, including any changes in placement of the car. The inspection should include determining compliance with the basic hazardous materials shipping paper descriptions as required in § 174.26. Record one unit for each train consist inspected, and one subunit for each inspection of the basic shipping paper description of each car containing hazardous materials.</p> <p>Note 1: Inspectors must use Activity Code TPLH to record inspections associated with train placement requirements.</p> <p>Note 2: Inspectors must use this code instead of Code 172C when inspecting shipping papers specific to a particular train.</p>	
209	ALL	Remedial Action – The purpose of this inspection is to report a railroad that has not complied with a requirement to provide a remedial action as noted in a previous inspection report. Record one unit for each remedial action not in compliance. (See General Manual for additional guidance).	
215D	H, O, S, T	<p>Freight Car Mechanical Inspection – The purpose of this inspection is for any inspector <u>other than an MPE inspector</u> to determine compliance with Part 215, including Appendix D. The inspection includes those performed by an FRA inspector or when an FRA inspector observes railroad employees performing this inspection. MPE inspectors should reference Activity Code 215. Record one unit for each freight car inspected or observed inspected for compliance with § 215. For articulated cars, count each platform as one unit.</p> <p>Note 1: HM and OP inspectors should use the Activity Code HM for ALL of their Part 215 inspections.</p> <p>Note 2: Properly stenciled maintenance-of-way equipment is exempt from Part 215.305(b).</p>	

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Activity	Discipline	Definition	Comments
217E	ALL	Emergency Order – The purpose of this inspection is to determine compliance with a current Emergency Order. Record each unit and subunit as directed by the unique instructions issued by FRA Headquarters regarding each specific Emergency Order. Inspectors must thoroughly explain the inspection in the inspection report's narrative.	
217O	ALL	<p>Other Operations Observations – The purpose of this inspection is to observe railroad employees of any craft performing duties regarding railroad operating rules (ROR) and railroad safety rules (RSR). It will include all related RORs, RSRs, railroad bulletins, and any written railroad policy not otherwise covered in Federal regulations. Noncompliance will be recorded as a non-FRA defect under this activity code. Record one unit for an entire yard or equivalent facility monitored, and one subunit for each crewmember, yardmaster, contractor, track employee, mechanical employee, signal maintainer, etc., that the inspector continually observed a sufficient amount of time to determine compliance or noncompliance.</p> <p>Note: Unlike noncompliance with Federal regulations, it is FRA policy that inspectors provide information recorded under this activity code regarding noncompliance of an ROR/RSR, <u>without identifying the noncompliant employee by name</u>, in the Federal inspection report. See the General Manual for further explanation.</p> <p>Example 1: An FRA Track inspector observes a <u>20</u>-person section gang working for approximately 45 minutes when the inspector observes a track employee sitting on the rail. The FRA inspector intervenes by addressing the employee's noncompliance with an RSR, and then discusses the noncompliance with the employee's supervisor. The inspection report will include the recording of one occurrence of a non-FRA defect for a track employee's failure to comply with the specific RSR that prohibits employees from sitting on a rail. The inspector will record the inspection as one unit and <u>20</u> subunits.</p> <p>Example 2: An FRA MPE inspector observes <u>four</u> persons working on a railroad car with proper Blue Signal Protection for approximately 10 minutes when the inspector observes one of the workers perform a task while not wearing the required protective equipment. The FRA inspector intervenes by addressing the employee's noncompliance with an RSR by discussing it with the employee's supervisor. The inspection report will include the recording of a non-FRA defect for a car shop employee's failure to comply with the specific RSR that prohibits performing the task without the proper protective equipment. The inspector will record the inspection as one unit and <u>four</u> subunits.</p>	
218C	O, S, T	Camp Car Protection - The purpose of this inspection is to determine compliance with camp car protection. Record one unit for each track inspected that requires camp car protection.	

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Activity	Discipline	Definition	Comments
218M	M, O	<p>Blue Signal Protection on Main or Other than Main Track – The purpose of this inspection is to determine if the protection provided railroad employees requiring Blue Signal Protection is in accordance with §§ 218.25, 218.27, and 218.30. Record one unit for each track that requires Blue Signal Protection. If the track requiring Blue Signal Protection has more than one train or cut of cars requiring protection, record one unit for the entire track.</p> <p>Regarding inspecting compliance with Blue Signal regulations involving a remotely controlled switch, record one unit for all associated recordkeeping requirements at that location, and one subunit for each track associated with those records.</p> <p>Note 1: Except for stub tracks, both ends of the track must be inspected for compliance with the Blue Signal regulations.</p> <p>Note 2: There is a drop-down FRA observation code inspectors may use in lieu of writing a comment when there are not any exceptions noted.</p>	
218O	ALL	<p>Part 218, Subpart F – The purpose of this inspection is to determine a railroad's compliance with Part 218 Subpart F, including the requirement for a railroad to have complying railroad operating rules as indicated in the regulation. Record one unit for each day, or partial day, spent reviewing relevant railroad rules, or for each yard or equivalent facility monitored. Record one subunit for each crewmember, yardmaster, contractor, track employee, mechanical employee, signal maintainer, etc., that the inspector continually observed for a sufficient amount of time to determine compliance or noncompliance.</p> <p>Note: It is FRA policy that inspectors provide information regarding incidents recorded under this activity code as noncompliance of a Federal regulation. It will include identifying the noncompliant individual by name in the inspection report. See the General Manual for a further explanation.</p> <p>Example 1: An FRA Track inspector observes a <u>12</u>-person section gang working for approximately 45 minutes when the inspector observes a track employee throwing a switch with equipment in the foul of the switch. The FRA inspector intervenes by addressing the employee's noncompliance with Part 218 Subpart F, and then discusses the noncompliance with the employee's supervisor. The inspection report will include the recording of the noncompliance for the track employee's failure to comply with Part 218, Subpart F, and the name of the employee in noncompliance. The inspector will record the inspection as one unit and <u>12</u> subunits.</p> <p>Example 2: An FRA MPE inspector observes <u>six</u> persons switching railcars in a car shop for approximately 10 minutes when the inspector observes one of the workers fails to properly protect a shoving movement. The FRA inspector intervenes by addressing the</p>	

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Activity	Discipline	Definition	Comments
		<p>employee's noncompliance with Part 218 Subpart F, and then discusses the noncompliance with the employee's supervisor. The inspection report will include the recording of the noncompliance for the car shop employee's failure to comply with the Part 218 Subpart F, and the name of the employee in noncompliance. The inspector will record the inspection as one unit and <u>six</u> subunits.</p> <p>Example 3: An inspector reviews the railroad rules to determine if they are in compliance with the requirements set forth regarding railroad equipment in the foul and operating switches. The inspection report will include the recording of one unit for this inspection and will also reference the precise railroad rules, or lack thereof, in the inspection report's narrative.</p>	
218S	M, O	<p>Blue Signal Protection Locomotive or Car Shops – The purpose of this inspection is to determine compliance with regulations requiring Blue Signal Protection in a locomotive servicing track area, a car shop repair track area, or a track that has been designated as a repair track or expedite track. Record one unit for each area inspected.</p> <p>If § 218.29(c), <i>Alternative methods of protection</i>, applied in a car shop repair track area or a locomotive servicing track area, one unit is recorded for the entire area, regardless of the number of tracks in the area or the number of cars or locomotives on those tracks.</p> <p>Note: There is a drop-down FRA observation code inspectors may use in lieu of writing a comment when there are not any exceptions noted.</p>	
221	M, O	<p>Rear End Markers – The purpose of this inspection is to monitor compliance with Part 221. This activity code <u>should not be used</u> when inspecting an End of Train (EOT) device under Part 232. Record one unit for each train, locomotive (including distributed power units (DPUs)), or caboose inspected for compliance.</p> <p>The inspection of each rear end marking device in rooms or locations where rear end marking devices are stored and/or recharged and maintained is one unit. Each rear end marker ID must be recorded in the line item along with the appropriate observation. Individual marking devices that are not attached to trains or in storage areas not subject to service are not recorded as a unit.</p> <p>Note: There is a drop-down FRA observation code inspectors may use in lieu of writing a comment when there are not any exceptions noted.</p>	
227N	IH	<p>227N - Occupational Noise Exposure - The purpose of this inspection is to determine compliance with Part 227 regarding occupational noise exposure in the <u>locomotive cab</u>. It will include audiometric test records, employee noise exposure monitoring plan and monitoring records, cab noise monitoring records, postings of monitoring results, training plans and records, or interviewing persons regarding noise exposure. Record one unit for</p>	

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Activity	Discipline	Definition	Comments
		each day or partial day of an inspection and one subunit for each Part 227 record reviewed. Note: This activity may only be claimed when accompanied by a member of the Industrial Hygiene staff.	
228	O, S	Hours of Service Records Inspection – determine if Hours of Service (HOS) records are in compliance with Part 228. Record one unit for each day or partial day of inspection, and one subunit for each HOS record reviewed. This activity code includes any examination of HOS logs, HOS report forms, HOS documents, interviewing employees regarding HOS, and any other HOS records review activity. This activity code is not used to document an employee exceeding the HOS. Note: Reports <u>taking exception to</u> an employee exceeding the hours of service should not be recorded under this activity code; please reference the proper activity code associated with the employee's type of work or discipline. Example: Activity Code 228P, 211, or HSL.	
228C	O, S	Construction of Employee Sleeping Quarters – The purpose of this inspection is to determine compliance with Part 228, Subpart C. Record one unit for each day, or partial day, spent reviewing relevant facilities regarding Part 228, Subpart C.	
229X	H, O	Locomotive Inspection in Operations – The purpose of this inspection is for any inspector, other <u>than an MP&E inspector</u> , to determine a railroad's compliance with Part 229. Record one unit for any locomotive inspected. The inspection may include, but is not limited to, the locomotive daily inspection, any passageway tripping hazards, cab sanitation, cab lighting, speed indicator check, etc.	
232E	M, O	End of Train Device – The purpose of this inspection is to inspect an End of Train (EOT) device for compliance with Part 232. The inspection must include verifying that the information on the calibration sticker is legible, and that it contains the date, name of person, and location of the last calibration. This activity also includes comparing the quantitative values between the front and rear unit, as well as the ability of the rear unit to effect an emergency application in response to an emergency application initiated from the front unit. Record one unit for each EOT inspected or observed for compliance. Note: This activity code will be used when citing defects on the Head End Device (HED) associated with the EOT device	
232O	H, O, S, T	Freight Train Brake Test Observation – The purpose of this inspection is for any inspector, <u>other than an MP&E inspector</u> , to determine compliance with Part 232 not covered in activity	

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Activity	Discipline	Definition	Comments
		code 232E or 232X. It includes any airbrake test required by Part 232. Airbrake test inspections should include in the narrative of the inspection report if the inspector was observing or accompanying a railroad employee or contractor employee performing the airbrake test. Record one unit for each observation or inspection, and one subunit for each railcar involved.	
232X	M, O	<p>Securement of Locomotive and Cars – The purpose of this inspection is to determine if railroad equipment is in compliance with § 232.103(n). Record units as follows:</p> <ol style="list-style-type: none"> 1. Record one unit for an inspection of unattended equipment that consists of a single locomotive or locomotive consist, either attached to cars or not. This inspection includes determining compliance with the requirements for throttle position, status of the reverse lever, position of the generator field switch, status of the independent brakes, position of the isolation switch and handbrake, and position of the automatic brake valve. 2. Record one unit for an inspection of unattended equipment NOT attached to locomotives that are required to be secured under this regulation. This unit includes inspections for bottled air. <p>Note 1: If a train is separated to avoid blocking any type of crossing, it should have each section of the equipment recorded as a separate unit.</p> <p>Note 2: The inspection report that records a defect or recommended violation identified should clearly state the number of handbrakes found to be applied, the number of handbrakes required to be applied, and the current operating rule in place that indicates the precise number of handbrakes required to be applied.</p> <p>Note 3: This inspection also includes an inspector reviewing railroad rules for compliance of this part.</p> <p>Example: If 30 unattended railcars are found on a track that is required to have seven handbrakes applied but the inspection reveals that only one handbrake is applied, it will be recorded as one unit with one occurrence for the failure to have the other six handbrakes applied.</p>	
238O	H, O, S, T	<p>Passenger Equipment Inspection (Partial) – The purpose of this inspection is for any inspector, <u>other than an MP&E inspector</u>, to determine compliance with Part 238 that is not covered in activity codes 232X or 238T. Record one unit for each inspection and a subunit for each passenger car inspected.</p>	

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Activity	Discipline	Definition	Comments
238T	M, O	<p>Passenger Train Brake Test Observation – The purpose of this inspection is to document an observation of a passenger train airbrake test, excluding tourist equipment. Record one unit for each entire brake test observed for compliance with Part 238, and one subunit for each railroad record associated with the Class I air brake test.</p> <p>Note: There is a drop-down FRA observation code inspectors may use in lieu of writing a comment when there are not any exceptions noted.</p>	
238X	M, O	<p>Passenger Equipment Securement – The purpose of this inspection is to determine if passenger or commuter equipment is properly secured (excluding tourist equipment). Record one unit for each train, whether or not a locomotive is attached.</p>	
BPL	H, M	<p>Bulk Packages (Applies to bulk packagings, including Intermodal Portable Tanks and Intermediate Bulk Containers, other than tank cars) – Record one unit for each limited, ground-level inspection of both sides of the bulk package and does not include a top-level inspection. This activity code may only be used when assessing compliance with §§ 172.302, 172.304, 173.326, 172.502, 172.516, and 174.50.</p> <p>Note 1: Use TCL & TCT codes to record tank car inspections.</p>	
BWS	S, T	<p>Bridge Worker Safety – An inspection concerning Part 214, Subpart B, Bridge Worker Safety Standards. Record one unit for each bridge gang or work group, and one subunit for each member of the gang or work group.</p>	
FCL	H, M	<p>Inspection of Freight Containers, General Handling and Loading Requirements – The purpose of the inspection includes inspecting the exterior of freight containers for markings, placards, structural integrity, and securement to the railcar. Record one unit for each freight container inspected.</p> <p>Note 1: Use BPL & BPT codes to record intermodal tank inspections.</p>	
NOIR	ALL	<p>Noise Test Records – The purpose of this inspection is to document a review of a locomotive's noise testing session or a locomotive's noise testing record. Record one unit for each locomotive's noise testing session monitored and/or all noise testing records associated with that locomotive tested.</p> <p>Example 1: A short line railroad has three records on file documenting a locomotive horn test performed on locomotive SP 1234. Record one unit for the examination of all three records.</p> <p>Example 2: A short line railroad has three records on file documenting a locomotive horn test</p>	

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Activity	Discipline	Definition	Comments
		<p>performed on locomotive SP 1234, and two records on SP 2345. Record two units for the inspection of the noise testing records for two locomotives.</p> <p>Example 3: An inspector monitors three noise testing sessions on SP 4567, and then reviews three noise testing records regarding that same locomotive. Record one unit for the locomotive and testing records involved.</p> <p>Note 1: This activity code should only be used by inspectors who have been trained to inspect locomotive horn testing records.</p> <p>Note 2: This activity code should not be used with Part 227 Occupational Noise Exposure inspections (activity code 227N), or when performing a noise test (activity code NOIS).</p>	
NOIS	ALL	<p>Noise Tests – The purpose of this inspection is to perform a noise test in accordance with Federal regulations. This activity code should only be used by inspectors who have attended the FRA training course regarding the equipment used to conduct these inspections. Record one unit for each day or partial day of an inspection.</p> <p>This activity code should not be used with Part 227 Occupational Noise Exposure inspections (activity code 227N), or when reviewing noise records (activity code NOIR).</p>	
RADX	H, O, T	<p>Radar Speed Monitoring – The purpose of this inspection is to monitor and/or accurately validate the speed of trains and railroad equipment for compliance with Federal regulations and/or railroad operating rules. Record one unit for each speed monitoring session and one subunit for each locomotive, train, or railroad equipment on the rail monitored. Noncompliance with railroad operating rules should be recorded under activity code 217O.</p> <p>Note 1: When entering this code, the inspector must indicate the initials and number of the lead locomotive, or a locomotive within the consist, in the Train # / Site field. This field permits the entry of 15 characters. Each train or piece of equipment monitored will require a new line item.</p> <p>Note 2: FRA and participating state employees must not perform radar monitoring sessions unless they receive a certificate of qualification from an FRA employee who holds a current certificate as a stationary radar trainer. See Chapter 3 of the General Manual for a complete discussion of FRA policy.</p>	Revised 2/26/2011

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Activity	Discipline	Definition	Comments
RMM	T, S	<p>Roadway Maintenance Machine & Hi-Rail – The purpose of this inspection is to document an observation or inspection concerning Part 214 Subpart D, On-Track Roadway Maintenance Machines and Hi-Rail Vehicles. Record one unit for each roadway maintenance machine or hi-rail vehicle inspected.</p> <p>Example: If a large-scale tie unit consisting of 20 roadway maintenance machines and one Hi-Rail vehicle is operating on the tracks, and only five of those machines are inspected, then record five units.</p> <p>Note: If a machine operator fails to comply with railroad rules not covered by Part 214 or any Federal regulation, the inspector must note the non-compliance by recording it using a Non-FRA defect under activity code 217O, as provided in the guidelines of that activity code.</p>	
RWP	O, S, T	<p>Roadway Worker Protection – The purpose of this inspection is to determine compliance with Part 214, Subpart C, Roadway Worker Protection (RWP). Record one unit for an individual worker or group of employees (with a roadway worker in charge) at a specific location. This will include attending a job briefing with a group of RWP employees. Record each train required to provide an audible warning signal as a separate unit, and each employee requiring RWP as a subunit.</p> <p>Note: When performing multi-point inspection work with the same employee (or group of employees), record only one unit for determining compliance, and one subunit for each employee of the workgroup per day.</p> <p>Example 1: When observing or inspecting a large production crew, record a separate unit for each different location where an employee (or group of employees) is monitored for compliance. For instance, large projects may have multiple teams or workgroups at various locations along the right of way, record each worker, team or workgroup at each different location as a separate unit.</p> <p>Example 2: You observe an RWP crew consisting of <u>one</u> Employee-In-Charge and <u>20</u> track employees together at a single location. Record one unit for the location and <u>21</u> subunits for the entire RWP work group.</p>	
TCL	H, M	<p>Tank Car Inspection – The purpose of this inspection includes inspecting for markings, placards, and structural integrity, and securement. Record one unit for each ground-level inspection that did not include a top-level inspection. This activity code may only be used when assessing compliance with §§ 172.302(a)(1), 172.304, 172.502(a)(1)(i), 172.516(c)(2) and (6), 174.50, 179, and 180.</p>	

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Activity	Discipline	Definition	Comments
TPLH	H, M, O	In-Train Placement of Placarded Rail Cars, Transport Vehicles, and Freight Containers – The purpose of this activity is to determine compliance with positioning in-train of placarded cars, §§ 174.84 and 174.85. Record one unit for each train inspected.	
RULE	ALL	<p>Rulebook Review - The purpose of this inspection is to record an inspector's review or formal discussion with a railroad manager, regarding railroad rules that will determine if they accurately correlate with current FRA regulations. Record one unit for each day, or partial day, spent reviewing a railroad rule(s) for compliance with Federal regulations. Record a subunit for each CFR section involved. Only comments should be recorded under this activity code. Any defects should be recorded under the proper corresponding activity code.</p> <p>Note: Inspections regarding reviewing railroad rules to ensure compliance regarding § 232.103 (n) and Part 218, Subpart F, should not be recorded under this activity code. Inspectors should reference activity code 232X and 218O respectively for those railroad rule inspections.</p> <p>Example 1: An inspection of NEBR railroad's rulebook determined that railroad rules regarding signal systems (Part 234 and Part 236) comply with Federal regulations. Record one unit and two subunits.</p> <p>Example 2: An inspection that included discussions with railroad managers regarding NEBR railroad's rulebook and bulletins determined that the railroad's rules regarding Part 217 and Part 220, Subpart C, correlated with FRA regulations. Record one unit and two subunits.</p>	

Bridge and Track Activity Code Table of Definitions

Revised March 17, 2014

Activity	Discipline	Definition	Comments
ATIP	T	<p>Automated Track Inspection Program Surveys (ATIP) – The purpose of this activity code is to document an inspection onboard an FRA geometry car. Record one unit for monitoring and accessing each mile of track tested.</p> <p>Note: Not to be used by OP inspectors for ATIP on-board assignments. OP inspectors must use activity code 217R.</p>	
BAI	T	Bridge Accident Investigation – The purpose of this activity code is to document accident investigations involving railroad bridges. Claim one unit for the investigation. Count each bridge observed as part of the accident investigation using Activity BOBS.	
BCI	T	Bridge Complaint Investigation – The purpose of this activity code is to document bridge observations and evaluations relating to a complaint. Claim one unit per complaint. Count each bridge observed using Activity BOBS.	
BCR	T	Bridge Capacity Review – The purpose of this activity code is to document the review of the safe load capacity determination for a specific bridge. Claim one unit for each capacity determination reviewed.	
BIR	T	Bridge Inspection Record Field Audit – The purpose of this activity code is to document a comparison of existing bridge conditions with a track owner's bridge inspection records. Claim one unit per bridge inspection record audited in the header of the F6180.96 inspection report. If the inspection record accurately reflects the conditions present at the bridge, document the bridge observation using Activity Code BOBS as a single Item on the F6180.96 inspection report. If the bridge inspection record is sufficiently inaccurate to warrant a defect, then a second Item using BIR should be entered on the inspection report.	
BMP	T	Bridge Management Program Review – The purpose of this activity code is to document the review of a track owner's Bridge Management Program and other	

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Activity	Discipline	Definition	Comments
		written policies for compliance with Part 237 requirements. Claim one unit per program review.	
BMSC	T	Miscellaneous Structure Observation – The purpose of this activity code is to document observations and evaluations of retaining walls, station platforms, culverts, overhead bridges, and other miscellaneous structures not covered by Activity Codes BOBS, BTNL, or BMV. Claim one unit per structure observed.	
BMV	T	Movable Bridge Observation – The purpose of this activity code is to document movable bridge observations. Claim one unit per movable bridge observed.	
BOBS	T	Bridge Observation – The purpose of this activity code is to document railroad bridge structural observations. A unit may only be recorded when specifically observing or evaluating bridge structural components, including ties on an open-deck bridge where the timbers are an integral structural load distribution element of the bridge. Claim one unit per bridge observed.	
BREC	T	Bridge Inspection Record Review – The purpose of this activity code is to document the review of bridge inspection records to determine if inspections were performed on a timely basis, if the record is complete, and whether the record complies with the requirements of the track owner's bridge management program. This activity is an office audit. Refer to BIR for field inspection record audits. Claim one unit per inspection day and one subunit for each inspection record reviewed.	
BSSE	T	Bridge Safety Standards Compliance Evaluation – The purpose of this activity code is to document evaluation of a track owner's compliance with their adopted Bridge Management Program as well as compliance with Part 237 requirements falling outside of the BMP. Claim one unit per day of the compliance evaluation.	
BTNL	T	Tunnel Observation – The purpose of this activity code is to document railroad tunnel observations. Claim one unit per tunnel observed or for tunnels exceeding one mile in length, claim one unit per tunnel mile or fraction thereof.	
BWI	T	Bridge Waiver Investigation – The purpose of this activity code is to document evaluation of Part 237 Bridge Safety Standards waiver applications. Claim one unit per waiver application.	

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Activity	Discipline	Definition	Comments
DER	T	Derail – The purpose of this activity code is to document a complete inspection of any derailing device used to divert free-rolling equipment off the track to ensure the device functions as intended. Record one unit per derail inspected.	
GRMG	T	Gage Restraint Measurement Vehicle–Government Owned – The purpose of this activity code is to document an inspection onboard an FRA-owned gage restraint measurement vehicle used to determine compliance with § 213.110 (GRMS track). Record one unit for monitoring and accessing each mile of track tested.	
GRMS	T	Gage Restraint Measurement Vehicle–Other Than Government Owned – The purpose of this activity code is to document an inspector's observations occurring on board a railroad owned gage restraint measurement vehicle. Record one unit for monitoring and accessing each mile of track tested.	
HGCT	T	Highway-Rail Grade Crossing–Track – The purpose of this activity code is to document a walking inspection to determine whether vegetation on railroad property interferes with motorist visibility of highway-rail grade crossing warning devices. See §§ 213.37(a)(2) and 213.321(a)(2). Record only one unit per highway-rail grade crossing installation.	
LRA	T	Lift Rail Assembly – The purpose of this activity code is to document a complete inspection of a railroad bridge lift-rail assembly and associated devices such as expansion joints. Record one unit per assembly or device. Each assembly on a bridge is considered a unit and each track on a moveable bridge should have four lift rails.	
LTT	T	<p>Life Tips Track – The purpose of this activity code is to document and record one unit for interacting with/briefing railroad or contractor employees regarding Federal regulations or issues regarding railroad safety. Count each member of the work group as a subunit. When using this code, the inspector must write a brief description (two sentences or so) in the “Comments” section of the F6180.96 report.</p> <p>Example 1: You attend a safety meeting to discuss railroad safety issues (Part 214, Part 218 Subpart F, etc.). This meeting consisted of one track supervisor and two inspection and repair foremen. Record this activity as one unit under LTT, and three subunits under LTT.</p>	

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Activity	Discipline	Definition	Comments
		<p>Example 2: You have active involvement in a job safety briefing with a train crew, group of roadway workers, etc. Your involvement may include FRA regulations regarding personal or operational safety (Parts 214, 218, etc.) Record this activity as one unit under LTT, and record one subunit for each train crew member, work crew member, etc.</p> <p>Example 3: You have active involvement in a discussion with five railroad workers regarding an FRA Safety or Emergency Advisory. Record this activity as one unit and five subunits under LTT.</p> <p>Note 1: This activity code does not include an FRA inspector debriefing a railroad representative(s) in connection with an FRA inspection report (F6180.96).</p> <p>Note 2: This activity code does not include attending meetings with short line railroad operators, labor organizations, etc., regardless of whether the inspector discussed safety regulations.</p>	
MSB	T	<p>Bridge Track Inspection – The purpose of this activity code is to document an inspection of track located on a railroad bridge. Record only one unit per bridge. A unit may only be recorded when specifically inspecting bridge track components such as ties, rail, rail fastenings, joint bars, etc.</p>	
MTH	T	<p>Main Track–Hi-Rail – The purpose of this activity code is to document a main track inspection while on board a hi-rail or other on-track vehicle such as a motorcar.</p> <p>Note 1: Inspectors will monitor compliance with the note to the requirements of 213.233 Track inspections.</p> <p>Note 2: Hi-rail vehicles should be operated at a speed 5 mph below the maximum speed recommended by the manufacturer for the safe operation of the hi-rail and apparatus during use on the rail, where practicable.</p> <p>Record one unit per mile of track inspected.</p>	

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Activity	Discipline	Definition	Comments
MTW	T	Main Track–Walking – The purpose of this activity code is to document a main track inspection while walking. Record one unit per track mile walked. Example: if an inspector walked three curves at three different milepost locations each curve having about 528 feet per curve, only one unit should be documented. If the total accumulated footage is less than 5280 feet, one unit is to be recorded; if more than 5280 feet is inspected, record a second unit.	
BMSC	T	Miscellaneous Structure Observation – The purpose of this activity code is to document observations and evaluations of retaining walls, station platforms, culverts, overhead bridges, and other miscellaneous structures not covered by Activity Codes BOBS, BTNL, or BMV. Claim one unit per structure observed.	
BMV	T	Movable Bridge Observation – The purpose of this activity code is to document movable bridge observations. Claim one unit per movable bridge observed.	
BOBS	T	Bridge Observation – The purpose of this activity code is to document railroad bridge structural observations. A unit may only be recorded when specifically observing or evaluating bridge structural components, including ties on an open-deck bridge where the timbers are an integral structural load distribution element of the bridge. Claim one unit per bridge observed.	
BREC	T	Bridge Inspection Record Review – The purpose of this activity code is to document the review of bridge inspection records to determine if inspections were performed on a timely basis, if the record is complete, and whether the record complies with the requirements of the track owner's bridge management program. This activity is an office audit. Refer to BIR for field inspection record audits. Claim one unit per inspection day and one subunit for each inspection record reviewed.	
BSSE	T	Bridge Safety Standards Compliance Evaluation – The purpose of this activity code is to document evaluation of a track owner's compliance with their adopted Bridge Management Program as well as compliance with Part 237 requirements falling outside of the BMP. Claim one unit per day of the compliance evaluation.	
BTNL	T	Tunnel Observation – The purpose of this activity code is to document railroad tunnel observations. Claim one unit per tunnel observed or for tunnels exceeding one mile in length, claim one unit per tunnel mile or fraction thereof.	

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Activity	Discipline	Definition	Comments
BWI	T	Bridge Waiver Investigation – The purpose of this activity code is to document evaluation of Part 237 Bridge Safety Standards waiver applications. Claim one unit per waiver application.	
DER	T	Derail – The purpose of this activity code is to document a complete inspection of any derailing device used to divert free-rolling equipment off the track to ensure the device functions as intended. Record one unit per derail inspected.	
GRMG	T	Gage Restraint Measurement Vehicle–Government Owned – The purpose of this activity code is to document an inspection onboard an FRA-owned gage restraint measurement vehicle used to determine compliance with § 213.110 (GRMS track). Record one unit for monitoring and accessing each mile of track tested.	
GRMS	T	Gage Restraint Measurement Vehicle–Other Than Government Owned – The purpose of this activity code is to document an inspector's observations occurring on board a railroad owned gage restraint measurement vehicle. Record one unit for monitoring and accessing each mile of track tested.	
HGCT	T	Highway-Rail Grade Crossing–Track – The purpose of this activity code is to document a walking inspection to determine whether vegetation on railroad property interferes with motorist visibility of highway-rail grade crossing warning devices. See §§ 213.37(a)(2) and 213.321(a)(2). Record only one unit per highway-rail grade crossing installation.	
LRA	T	Lift Rail Assembly – The purpose of this activity code is to document a complete inspection of a railroad bridge lift-rail assembly and associated devices such as expansion joints. Record one unit per assembly or device. Each assembly on a bridge is considered a unit and each track on a moveable bridge should have four lift rails.	
LTT	T	Life Tips Track – The purpose of this activity code is to document and record one unit for interacting with/briefing railroad or contractor employees regarding Federal regulations or issues regarding railroad safety. Count each member of the work group as a subunit. When using this code, the inspector must write a brief description (two sentences or so) in the “Comments” section of the F6180.96 report.	

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Activity	Discipline	Definition	Comments
		<p>Example 1: You attend a safety meeting to discuss railroad safety issues (Part 214, Part 218 Subpart F, etc.). This meeting consisted of one track supervisor and two inspection and repair foremen. Record this activity as one unit under LTT, and three subunits under LTT.</p> <p>Example 2: You have active involvement in a job safety briefing with a train crew, group of roadway workers, etc. Your involvement may include FRA regulations regarding personal or operational safety (Parts 214, 218, etc.) Record this activity as one unit under LTT, and record one subunit for each train crew member, work crew member, etc.</p> <p>Example 3: You have active involvement in a discussion with five railroad workers regarding an FRA Safety or Emergency Advisory. Record this activity as one unit and five subunits under LTT.</p> <p>Note 1: This activity code does not include an FRA inspector debriefing a railroad representative(s) in connection with an FRA inspection report (F6180.96).</p> <p>Note 2: This activity code does not include attending meetings with short line railroad operators, labor organizations, etc., regardless of whether the inspector discussed safety regulations.</p>	
MSB	T	<p>Bridge Track Inspection – The purpose of this activity code is to document an inspection of track located on a railroad bridge. Record only one unit per bridge. A unit may only be recorded when specifically inspecting bridge track components such as ties, rail, rail fastenings, joint bars, etc.</p>	
MTH	T	<p>Main Track–Hi-Rail – The purpose of this activity code is to document a main track inspection while on board a hi-rail or other on-track vehicle such as a motorcar.</p> <p>Note 1: Inspectors will monitor compliance with the note to the requirements of 213.233 Track inspections.</p>	

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Activity	Discipline	Definition	Comments
		<p>Note 2: Hi-rail vehicles should be operated at a speed 5 mph below the maximum speed recommended by the manufacturer for the safe operation of the hi-rail and apparatus during use on the rail, where practicable.</p> <p>Record one unit per mile of track inspected.</p>	
MTW	T	<p>Main Track–Walking – The purpose of this activity code is to document a main track inspection while walking. Record one unit per track mile walked. Example: if an inspector walked three curves at three different milepost locations each curve having about 528 feet per curve, only one unit should be documented. If the total accumulated footage is less than 5280 feet, one unit is to be recorded; if more than 5280 feet is inspected, record a second unit.</p>	
RII	T	<p>Rail Integrity Inspection – The purpose of this activity code is to document an inspection of a non-destructive rail testing operation. Record one unit per operation.</p>	
ROWP	T	<p>Review Subpart G Right-of-Way Plan – The purpose of this activity code is to document the monitoring of a railroad’s high-speed "right of way" plan by an inspector. Record one unit per plan monitored.</p>	
RREC	T	<p>Review Railroad’s Rail Inspection Records – The purpose of this activity code is to document an inspection of the carrier’s rail inspection records. Record one unit for records associated with one day of inspection by one test car, and one subunit if any supplemental records exist.</p>	
RXM	T	<p>Rail Crossing–Main Track – The purpose of this activity code is to document a walking inspection of an at-grade rail-to-rail crossing (diamond) located in a main track. Record one unit per rail crossing.</p>	
RXY	T	<p>Rail Crossing–Yard Track – The purpose of this activity code is to document a walking inspection of an at-grade rail-to-rail crossing (diamond) located in other than main track. Record one unit per rail crossing.</p>	
TGMS	T	<p>Inspection from a Track Geometry Measurement Vehicle (Other Than Government Owned) – The purpose of this activity code is to document an inspector’s observations occurring on board an other than government owned geometry measurement vehicle. Record one unit for monitoring and accessing each mile of track tested.</p>	

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Activity	Discipline	Definition	Comments
TOM	T	<p>Inspect Main Track Turnout – The purpose of this activity code is to document a walking inspection of a turnout located in a main track. Record one unit per turnout inspected.</p> <p>Note: A yard is a system of auxiliary tracks used exclusively for the classification of passenger or freight cars according to commodity or destination; assembling of cars for train movement; storage of cars; or repair of equipment. If a track doesn't fit this definition, inspectors must consider it a main track.</p>	
TOY	T	<p>Inspect Yard Track Turnout – The purpose of this activity code is to document a walking inspection of a turnout located in other than main track. Record one unit per turnout inspected.</p> <p>Note: A yard is a system of auxiliary tracks used exclusively for the classification of passenger or freight cars according to commodity or destination; assembling of cars for train movement; storage of cars; or repair of equipment. If a track doesn't fit this definition, inspectors must consider it a main track.</p>	
TREC	T	Review Railroad's Track Inspection Records – The purpose of this activity code is to document an inspection of a carrier's track inspection records. Record one unit per subdivision and one subunit per record reviewed.	
TRM	T	Inspection from a Train – The purpose of this activity code is to document an observation or inspection of track/train interaction, right-of-way signage, signals obscured, etc., when on board a train. Under this activity code, Part 213 defects are limited to items an inspector can clearly justify in an inspection report, such as vegetation. Record one unit per train and one subunit per track mile.	
VTI	T	Inspection from a Vehicle/Track Interaction Car – The purpose of this activity code is to document an observation occurring on board a VTI vehicle. Record one unit for monitoring and accessing each mile of track tested.	
WPI	T	Inspect Welding Plant Facility – Document an officially directed visit to a rail welding facility. Claim one unit per facility.	
YTH	T	Inspect Yard Track–Hi-Rail – The purpose of this activity code is to document an inspection of other than main track while onboard hi-rail or other on-track vehicle such as a motor car. Record one unit per mile of track hi-railed. Example: if an	

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Activity	Discipline	Definition	Comments
		<p>inspector hi-railed three yard tracks with about 528 feet per track, only one unit is to be documented. If the total accumulated footage is less than 5280 feet, one unit is to be recorded; if more than 5280 feet is inspected record a second unit.</p> <p>Note: Yard means a system of tracks, not including main tracks and sidings, used for classifying cars, making-up and inspecting trains, or storing cars and equipment. If a track doesn't fit this definition, inspectors must consider it a main track.</p>	
YTW	T	<p>Inspect Yard Track–Walking – The purpose of this activity code is to document an inspection of other than main while walking. Record one unit per mile of track walked. Example: if an inspector walked three yard tracks with about 528 feet per track, only one unit is to be documented. If the total accumulated footage is less than 5280 feet one unit is to be recorded, if more than 5280 feet is inspected record a second unit.</p> <p>Note: Yard means a system of tracks, not including main tracks and sidings, used for classifying cars, making-up and inspecting trains, or storing cars and equipment. If a track doesn't fit this definition, inspectors must consider it a main track.</p>	

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Defect Codes

CFR	RULE	SUBRULE	DESCRIPTION
237	0031		FAILURE TO ADOPT BRIDGE MANAGEMENT PROGRAM.
237	0033	Ai	LACK OF RAILROAD BRIDGE INVENTORY.
237	0033	Aii	RAILROAD BRIDGE INVENTORY LACKS UNIQUE IDENTIFIER FOR EACH BRIDGE.
237	0033	Aiii	RAILROAD BRIDGE INVENTORY LACKS BRIDGE LOCATION FOR EACH BRIDGE.
237	0033	Aiv	RAILROAD BRIDGE INVENTORY LACKS CONFIGURATION FOR EACH BRIDGE.
237	0033	Av	RAILROAD BRIDGE INVENTORY LACKS TYPE OF CONSTRUCTION FOR EACH BRIDGE.
237	0033	Avi	RAILROAD BRIDGE INVENTORY LACKS NUMBER OF SPANS FOR EACH BRIDGE.
237	0033	Avii	RAILROAD BRIDGE INVENTORY LACKS SPAN LENGTHS FOR EACH BRIDGE.
237	0033	Aviii	RAILROAD BRIDGE INVENTORY LACKS OTHER INFORMATION NECESSARY TO PROVIDE FOR THE MANAGEMENT OF BRIDGE SAFETY.
237	0033	Aix	RAILROAD BRIDGE NOT LISTED IN RAILROAD BRIDGE INVENTORY.
237	0033	Ax	RAILROAD BRIDGE INVENTORY INACCURATE.
237	0033	B	BRIDGE MANAGEMENT PROGRAM LACKS RECORD OF SAFE LOAD CAPACITY OF EACH BRIDGE.
237	0033	Ci	BRIDGE MANAGEMENT PROGRAM LACKS PROVISION TO OBTAIN AND MAINTAIN THE DESIGN DOCUMENTS OF EACH BRIDGE.
237	0033	Cii	BRIDGE MANAGEMENT PROGRAM LACKS PROVISION TO DOCUMENT ALL REPAIRS AND MODIFICATIONS.
237	0033	Ciii	BRIDGE MANAGEMENT PROGRAM LACKS PROVISION TO DOCUMENT ALL BRIDGE INSPECTIONS.
237	0033	D	BRIDGE MANAGEMENT PROGRAM LACKS BRIDGE INSPECTION PROGRAM CONTENT.
237	0033	D1	BRIDGE INSPECTION PROGRAM LACKS INSPECTION PERSONNEL SAFETY CONSIDERATIONS.
237	0033	D2	BRIDGE INSPECTION PROGRAM LACKS TYPES OF INSPECTION INCLUDING REQUIRED DETAIL.
237	0033	D3i	BRIDGE INSPECTION PROGRAM LACKS DEFINITIONS OF DEFECT LEVELS.
237	0033	D3ii	BRIDGE INSPECTION PROGRAM USING CONDITION CODES LACKS DEFINITIONS OF DEFECT LEVELS ASSOCIATED WITH CONDITION CODES USED.
237	0033	D4	BRIDGE INSPECTION PROGRAM LACKS METHOD OF DOCUMENTING INSPECTIONS INCLUDING STANDARD FORMS OR FORMATS.
237	0033	D5i	BRIDGE INSPECTION PROGRAM LACKS DEFINITION OF STRUCTURE TYPES.

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CFR	RULE	SUBRULE	DESCRIPTION
237	0033	D5ii	BRIDGE INSPECTION PROGRAM LACKS COMPONENT NOMENCLATURE.
237	0033	D6	BRIDGE INSPECTION PROGRAM LACKS PROTOCOL FOR NUMBERING OR IDENTIFICATION OF SUBSTRUCTURE UNITS, SPANS, AND INDIVIDUAL COMPONENTS.
237	0051	A	RAILROAD BRIDGE ENGINEER NOT DETERMINED BY TRACK OWNER TO BE COMPETENT TO PERFORM REQUIRED FUNCTIONS.
237	0051	B	RAILROAD BRIDGE ENGINEER LACKS NECESSARY EDUCATIONAL QUALIFICATIONS.
237	0053	i	RAILROAD BRIDGE INSPECTOR NOT DETERMINED BY TRACK OWNER TO BE TECHNICALLY COMPETENT.
237	0053	ii	RAILROAD BRIDGE INSPECTOR NOT DESIGNATED TO AUTHORIZE OR RESTRICT THE OPERATION OF RAILROAD TRAFFIC OVER A BRIDGE ACCORDING TO ITS IMMEDIATE CONDITION OR STATE OF REPAIR.
237	0055		RAILROAD BRIDGE SUPERVISOR NOT DETERMINED BY TRACK OWNER TO BE TECHNICALLY COMPETENT.
237	0057	i	FAILURE OF TRACK OWNER TO DESIGNATE THOSE INDIVIDUALS QUALIFIED AS RAILROAD BRIDGE ENGINEERS.
237	0057	ii	FAILURE OF TRACK OWNER TO DESIGNATE THOSE INDIVIDUALS QUALIFIED AS RAILROAD BRIDGE INSPECTORS.
237	0057	iii	FAILURE OF TRACK OWNER TO DESIGNATE THOSE INDIVIDUALS QUALIFIED AS RAILROAD BRIDGE SUPERVISORS.
237	0057	iv	TRACK OWNER DID NOT INCLUDE BASIS FOR DESIGNATION OF INDIVIDUALS AS QUALIFIED RAILROAD BRIDGE ENGINEERS, RAILROAD BRIDGE INSPECTORS, AND RAILROAD BRIDGE SUPERVISORS.
237	0071	A	FAILURE OF TRACK OWNER TO DETERMINE SAFE LOAD CAPACITY OF BRIDGE.
237	0071	B	FAILURE OF TRACK OWNER TO DOCUMENT BRIDGE LOAD CAPACITY IN BRIDGE MANAGEMENT PROGRAM, ALONG WITH METHOD USED TO DETERMINE CAPACITY.
237	0071	Ci	FAILURE OF TRACK OWNER TO USE A DESIGNATED RAILROAD BRIDGE ENGINEER TO DETERMINE BRIDGE LOAD CAPACITY.
237	0071	Cii	FAILURE OF RAILROAD BRIDGE ENGINEER TO USE APPROPRIATE ENGINEERING METHODS AND STANDARDS TO DETERMINE BRIDGE LOAD CAPACITY.
237	0071	D	USE OF NON-CONFORMING RECORDS, FAULTY DATA, OR IMPROPER METHODS FOR THE DETERMINATION OF BRIDGE LOAD CAPACITY.
237	0071	E	FAILURE OF TRACK OWNER TO PRIORITIZE BRIDGE LOAD CAPACITY DETERMINATIONS, AS ESTABLISHED BY RAILROAD BRIDGE ENGINEER.

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CFR	RULE	SUBRULE	DESCRIPTION
237	0071	F	FAILURE OF TRACK OWNER TO HAVE NEW BRIDGE CAPACITY DETERMINED WHEN RAILROAD BRIDGE ENGINEER HAS FOUND CHANGE IN CONDITION THAT MIGHT ADVERSELY AFFECT ABILITY OF THE BRIDGE TO CARRY THE TRAFFIC BEING OPERATED.
237	0071	G	FAILURE TO STATE BRIDGE LOAD CAPACITY IN TERMS OF WEIGHT AND LENGTH OF EQUIPMENT.
237	0071	H	FAILURE TO COMPLY WITH RESTRICTIONS OR CONDITIONS PRESCRIBED BY A RAILROAD BRIDGE ENGINEER.
237	0073	A	FAILURE OF TRACK OWNER TO ISSUE INSTRUCTIONS FOR CONFIGURATION AND OPERATION OF TRAINS OVER BRIDGES TO PROTECT BRIDGES FROM OVER-WEIGHT OR OVER-DIMENSION LOADS.
237	0073	B	FAILURE TO EXPRESS WEIGHT INSTRUCTIONS IN TERMS OF MAXIMUM EQUIPMENT WEIGHTS, AND EITHER MINIMUM EQUIPMENT LENGTHS OR AXLE SPACING.
237	0073	C	FAILURE TO EXPRESS DIMENSIONAL INSTRUCTIONS IN TERMS OF FEET AND INCHES OF CROSS SECTION AND EQUIPMENT LENGTH, IN CONFORMANCE WITH COMMON RAILROAD INDUSTRY PRACTICE.
237	0073	D	INSTRUCTIONS ISSUED THAT EXCEED THE LOAD OR DIMENSIONAL CAPACITY OF ONE OR MORE STRUCTURES.
237	0101	Ai	FAILURE TO INSPECT EACH BRIDGE IN RAILROAD SERVICE.
237	0101	Aii	FAILURE TO INSPECT EACH BRIDGE IN RAILROAD SERVICE AT LEAST ONCE PER CALENDAR YEAR.
237	0101	Aiii	FAILURE TO INSPECT EACH BRIDGE IN RAILROAD SERVICE NO MORE THAN 540 DAYS BETWEEN SUCCESSIVE INSPECTIONS.
237	0101	B	FAILURE TO INSPECT BRIDGE MORE FREQUENTLY WHEN RAILROAD BRIDGE ENGINEER HAS DETERMINED INCREASED FREQUENCY IS NECESSARY.
237	0101	C	FAILURE OF BRIDGE MANAGEMENT PROGRAM TO DEFINE REQUIREMENTS FOR SPECIAL INSPECTION OF A BRIDGE TO BE PERFORMED WHENEVER BRIDGE IS INVOLVED IN EVENT THAT MAY HAVE COMPROMISED THE INTEGRITY OF THE BRIDGE.
237	0101	D	FAILURE TO INSPECT ANY RAILROAD BRIDGE THAT HAS NOT BEEN IN RAILROAD SERVICE AND NOT INSPECTED IN PREVIOUS 540 DAYS, PRIOR TO RESUMPTION OF RAILROAD SERVICE.
237	0103	A	BRIDGE MANAGEMENT PROGRAM LACKS BRIDGE INSPECTION PROCEDURES.
237	0103	Bi	BRIDGE INSPECTION PROCEDURES NOT SPECIFIED BY A RAILROAD BRIDGE ENGINEER.
237	0103	Bii	FAILURE TO INCORPORATE IN THE BRIDGE INSPECTION PROCEDURES THE METHODS, MEANS OF ACCESS, AND LEVEL OF DETAIL TO BE RECORDED.

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CFR	RULE	SUBRULE	DESCRIPTION
237	0103	C	FAILURE OF THE BRIDGE INSPECTION PROCEDURES TO ENSURE THAT THE LEVEL OF DETAIL AND INSPECTION PROCEDURES ARE APPROPRIATE TO THE BRIDGE CONFIGURATION, CONDITIONS FOUND DURING PREVIOUS INSPECTIONS, THE NATURE OF RAILROAD TRAFFIC MOVED OVER THE BRIDGE, AND THE VULNERABILITY OF THE BRIDGE TO DAMAGE.
237	0103	D	BRIDGE INSPECTION PROCEDURES ARE INADEQUATE TO DETECT, REPORT AND PROTECT DETERIORATION AND DEFICIENCIES BEFORE THEY PRESENT A HAZARD TO SAFE TRAIN OPERATIONS.
237	0105	A	BRIDGE MANAGEMENT PROGRAM LACKS PROCEDURE FOR PROTECTION OF TRAIN OPERATIONS AND FOR INSPECTION OF BRIDGE DAMAGED BY NATURAL OR ACCIDENTAL EVENT.
237	0105	B	BRIDGE MANAGEMENT PROGRAM FAILS TO PROVIDE FOR DETECTION OF SCOUR OR DETERIORATION OF SUBMERGED BRIDGE COMPONENTS.
237	0107	i	BRIDGE INSPECTIONS NOT CONDUCTED UNDER THE DIRECT SUPERVISION OF A DESIGNATED RAILROAD BRIDGE INSPECTOR.
237	0107	ii	BRIDGE INSPECTION RESULTS NOT ACCURATE.
237	0107	iii	BRIDGE INSPECTION DOES NOT CONFORM TO BRIDGE MANAGEMENT PROGRAM REQUIREMENTS.
237	0109	A	FAILURE OF TRACK OWNER TO KEEP A RECORD OF EACH INSPECTION PERFORMED ON BRIDGES.
237	0109	Bi	BRIDGE INSPECTION RECORD MISSING DATE(S) OF PHYSICAL INSPECTION.
237	0109	Bii	BRIDGE INSPECTION RECORD MISSING DATE RECORD WAS CREATED.
237	0109	Biii	BRIDGE INSPECTION RECORD NOT SIGNED OR CERTIFIED.
237	0109	Biv	BRIDGE INSPECTION RECORD FALSIFIED.
237	0109	C	BRIDGE MANAGEMENT PROGRAM FAILS TO SPECIFY THAT EVERY BRIDGE INSPECTION REPORT CONTAIN THE MINIMUM REQUIRED INFORMATION.
237	0109	C1	BRIDGE INSPECTION REPORT MISSING BRIDGE IDENTIFICATION.
237	0109	C2	BRIDGE INSPECTION REPORT MISSING DATE PHYSICAL INSPECTION COMPLETED.
237	0109	C3i	BRIDGE INSPECTION REPORT MISSING INSPECTOR'S IDENTIFICATION.
237	0109	C3ii	BRIDGE INSPECTION REPORT MISSING INSPECTOR'S WRITTEN OR ELECTRONIC SIGNATURE.
237	0109	C4	BRIDGE INSPECTION REPORT LACKS INDICATION OF TYPE OF INSPECTION PERFORMED.
237	0109	C5i	BRIDGE INSPECTION REPORT LACKS METHOD TO INDICATE A NEED FOR REVIEW BY RAILROAD BRIDGE ENGINEER.
237	0109	C5ii	BRIDGE INSPECTION REPORT LACKS INDICATION OF NEED FOR REVIEW BY RAILROAD BRIDGE ENGINEER, WHERE APPROPRIATE.

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CFR	RULE	SUBRULE	DESCRIPTION
237	0109	C5iii	BRIDGE INSPECTION REPORT LACKS METHOD OF REPORTING RESTRICTIONS PLACED AT TIME OF INSPECTION
237	0109	C5iv	BRIDGE INSPECTION REPORT LACKS INDICATION OF RESTRICTIONS PLACED AT TIME OF INSPECTION, WHERE APPROPRIATE.
237	0109	C6i	BRIDGE INSPECTION REPORT MISSING CONDITION OF COMPONENT INSPECTED.
237	0109	C6ii	BRIDGE INSPECTION REPORT LACKS NARRATIVE DESCRIPTION NECESSARY TO CORRECTLY INTERPRET REPORT.
237	0109	C7	BRIDGE INSPECTION REPORT COVERING LESS THAN ENTIRE BRIDGE LACKS INDICATION OF PORTIONS INSPECTED.
237	0109	Di	FAILURE TO PLACE INITIAL BRIDGE INSPECTION REPORT IN LOCATION DESIGNATED IN BRIDGE MANAGEMENT PROGRAM WITHIN 30 CALENDAR DAYS OF COMPLETION OF THE BRIDGE INSPECTION.
237	0109	Dii	INITIAL BRIDGE INSPECTION REPORT LACKS REQUIRED INFORMATION.
237	0109	Ei	FAILURE TO PLACE FINAL BRIDGE INSPECTION REPORT IN LOCATION DESIGNATED IN BRIDGE MANAGEMENT PROGRAM WITHIN 120 DAYS OF COMPLETION OF THE BRIDGE INSPECTION.
237	0109	Eii	FINAL BRIDGE INSPECTION REPORT LACKS REQUIRED INFORMATION.
237	0109	Fi	FAILURE TO SPECIFY RETENTION PERIOD OR LOCATION FOR BRIDGE INSPECTION RECORDS.
237	0109	Fii	FAILURE TO RETAIN BRIDGE INSPECTION RECORDS AS REQUIRED.
237	0109	G	FAILURE TO PROMPTLY REPORT A DEFICIENT CONDITION ON A BRIDGE THAT AFFECTS THE IMMEDIATE SAFETY OF TRAIN OPERATIONS TO THE PERSON WHO CONTROLS OPERATION OF TRAINS ON THE BRIDGE.
237	0111	A	FAILURE TO REVIEW BRIDGE INSPECTION REPORTS TO DETERMINE WHETHER INSPECTIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH PRESCRIBED SCHEDULE AND SPECIFIED PROCEDURES.
237	0111	B	FAILURE TO REVIEW BRIDGE INSPECTION REPORTS TO EVALUATE WHETHER ANY ITEMS ON THE BRIDGE INSPECTION REPORT REPRESENT A PRESENT OR POTENTIAL HAZARD TO SAFETY.
237	0111	C	FAILURE TO REVIEW BRIDGE INSPECTION REPORTS TO DETERMINE WHETHER ANY MODIFICATIONS ARE NEEDED TO THE INSPECTION PROCEDURES OR FREQUENCY OF INSPECTIONS FOR THAT BRIDGE.
237	0111	D	FAILURE TO REVIEW BRIDGE INSPECTION REPORTS TO DETERMINE WHETHER ANY REPAIRS OR MODIFICATIONS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY SHOULD BE SCHEDULED.
237	0111	E	FAILURE TO REVIEW BRIDGE INSPECTION REPORTS TO DETERMINE WHETHER HIGHER-LEVEL REVIEW IS NEEDED.
237	0131		BRIDGE REPAIR OR MODIFICATION NOT DESIGNED BY RAILROAD BRIDGE ENGINEER, AS REQUIRED.

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CFR	RULE	SUBRULE	DESCRIPTION
237	0133		BRIDGE REPAIR OR MODIFICATIONS NOT PERFORMED UNDER IMMEDIATE SUPERVISION OF A RAILROAD BRIDGE SUPERVISOR, AS REQUIRED.
237	0151		BRIDGE MANAGEMENT PROGRAM LACKS PROVISIONS FOR AUDITING THE PROGRAM, INCLUDING VALIDITY OF BRIDGE INSPECTION REPORTS, BRIDGE INVENTORY DATA, AND THE CORRECT APPLICATION OF MOVEMENT RESTRICTIONS.
237	0153	Ai	BRIDGE MANAGEMENT PROGRAM LACKS PROVISIONS FOR AN INTERNAL AUDIT TO DETERMINE WHETHER THE INSPECTION PROVISIONS OF THE PROGRAM ARE BEING FOLLOWED.
237	0153	Aii	BRIDGE MANAGEMENT PROGRAM LACKS PROVISIONS FOR AN INTERNAL AUDIT TO DETERMINE WHETHER THE PROGRAM IS EFFECTIVELY PROVIDING FOR THE CONTINUED SAFETY OF THE SUBJECT BRIDGES.
237	0153	B	FAILURE TO EVALUATE A REPRESENTATIVE SAMPLING OF BRIDGE INSPECTION REPORTS FOR ACCURACY AT THE BRIDGES NOTED.
237	0155		FAILURE TO MAKE PROGRAM DOCUMENTS AND RECORDS AVAILABLE FOR INSPECTION AND REPRODUCTION BY FEDERAL RAILROAD ADMINISTRATION.
237	0155	A	FAILURE TO COMPLY WITH ELECTRONIC RECORDKEEPING REQUIREMENTS.
237	0155	B	FAILURE TO COMPLY WITH SYSTEM SECURITY REQUIREMENTS.

Note: Defect code descriptions are not regulatory language. They are analytical instruments only, and are subject to change as needed. Activity and source codes are analytical instruments only for use with FRA's RISPC software program. These codes are specific to the Bridge and Structures discipline only and use additional codes for other activities as appropriate.

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Instructions, Form FRA F6180.96, Inspection Report

F6180.96 Field	Format	Instructions/Special Features
Inspector's ID Number	Numeric	RISPC automatically places the inspector's ID number in this field. An inspector using a hand-printed report must show the assigned five-digit identification number. This field is mandatory because RISPC rejects a report without the inspector's ID number.
Report Number	Numeric	A report number is assigned to each inspection activity. Inspectors must number their reports consecutively beginning with number one (1) on the first inspection day of each calendar year. Care must be taken so that subsequent numbers are correct and not duplicated. This field is automatic with RISPC and will generate a mandatory report number, or you can enter a report number up to a maximum of 999. A maximum of three digits is allowed for each number.
Date (of an Inspection Activity)	Date	Inspectors must show the correct inspection date and enter the occurrence of the inspection activity. The field is mandatory and automatically entered by RISPC. Use a two-digit number to indicate the year, month, and day of the inspection. For example, enter June 19, 2001, as 06/19/01. Inspectors can make an entry postdated, but they cannot predate inspection reports.
Violations Recommended	Check Box (Y/N)	If an inspector recommends a civil penalty (violation) against a track owner or other responsible party, a narrative report is generated (Form FRA F6180.111) by RISPC. The narrative numbering sequence begins with the first report submitted by an FRA inspector and continues sequentially throughout their career without regard to the annual inspection numbering. The Form FRA F6180.96 that accompanies an inspector's violation report must have one or more line items with the "yes" field (recommended as violations to RCC). Where a variety of defects are discovered during an inspection (e.g., some of which meet the criteria to support a recommendation for civil penalty), two separate reports must be prepared: 1) a report listing defects only and 2) a report listing items recommended for civil penalty only. See instructions under " Violation Report Narrative – Form FRA F6180.111 ."
Railroad/Company Name and Address	Drop-down List/Text	Enter the name of the railroad/company responsible and the subject of the inspection. RISPC users default to the R/C field first, then enter in the RR/CO. code. This field generates a name and address based upon the railroad code input. In RISPC, click on the "table lookups" button to search for and select a code. Click the scroll bar arrows or drag the field in the scroll bar to look through the entries. You may also search through the entries and enter division and subdivision.

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F6180.96 Field	Format	Instructions/Special Features
R/C	Drop-down (R/C)	Enter either the code “R” if the report is for an inspection of a railroad defined in the general railroad system of transportation or a “C” for a company (facility) not a part of the general railroad system of transportation. This field is mandatory and is necessary for the proper classification of reports. Source code V should be associated with this type of activity (e.g., inspection conducted in a welding plant [Activity Code WPI] or rail plant [RMI] facility).
RR/CO. Code	Drop-down List/Text	Enter the code assigned by FRA for the railroad/company. This field is mandatory. If the required information is missing or invalid, RISPC will flag the report as incomplete pending inspectors’ verification and correction. Indicate the name of the railroad responsible for the maintenance of the track, for which the report is prepared, and the correct alphabetical code for that railroad in the space provided on the form. In addition to the RISPC listing, the source of this code is published in Appendix A of the FRA Guide for Preparing Accident/Incident Reports, without periods, hyphens, or other additions (maximum of four characters).
Division	Text	RISPC allows division codes—an elective for regional inspector purposes. Division is the alphabetic code representing an operating division (or region–district) of a railroad. For railroads not divided into operating divisions show as “System.”
Subdivision	Drop-down List/Text	Railroads can be organized into subdivisions (sometimes called branch lines, or other names), identified in timetables or other railroad special instructions. Using the RISPC drop-down list, enter the name of the subdivision at the location the inspections were made. If RISPC does not contain the subdivision name, use “system.” In such a case, inform the regional track specialist to have the name added into RISPC. This field is mandatory.

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F6180.96 Field	Format	Instructions/Special Features
RR/CO. Representative (Receipt Acknowledged)	Text	<p>Print the name and title of the railroad official contacted or accompanied. Obtain a signature, acknowledging receipt by an accompanied railroad official and initialed on the continuation sheets, to signify receipt of their copy. RISPC allows you to input data, search, and recover representative record information. If an unaccompanied inspection becomes necessary, show the word “unaccompanied” in this field. If, on the day of inspection, the inspection report cannot be personally delivered, those defects and their locations must be given by phone at the end of the day to a responsible railroad official. Note the time, date, name and title of the person who receives this defect information on the inspection report form. Mail the railroad’s copy to the appropriate railroad official.</p> <p>When using RISPC rather than generating a printed copy, it is acceptable to email a PDF copy to the railroad representative. A return email from the railroad representative is an acceptable alternative to a signature of receipt.</p>
From City/State/County	Drop-down List/Numeric	<p>RISPC allows users to open State codes from a drop-down menu. Identify the city, State, and county name, as applicable, where the inspection activity began. In addition to an imbedded lookup in RISPC, all appropriate codes regarding the city, State, and county names are in the GSA Worldwide Geographic Location Guide books. Leave this field blank whenever an inspection did not take place in the boundaries of a city, town, etc. However, list State and county code identifiers, as they are mandatory. Precede county codes with the letter “C” to ensure that a listed city is within the geographic boundaries of the county identified. If conducting an inspection between two points, enter in the appropriate field the name and code of the county in which the inspection began. Also, see “Special Instructions - Inspections From/to State Lines” above. This is a mandatory field.</p>

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F6180.96 Field	Format	Instructions/Special Features
Destination City and County	Drop-down List/Numeric	<p>Complete this field if the inspection activity involves a destination other than a location identified in the “From City/State/County” field. It is not necessary to complete this field when inspections are contained within a single location, but follow instructions for “From City/State/County.” Enter, in the field, the State and city codes of the inspection point as shown in the GSA. If the inspection point is not near a city, substitute the county name and code from the RISPC table lookup menu.</p> <p>When using the county code, the letter “C” will precede a three-digit number (e.g., C021 or C131 for counties, respectively). Do not record an inspection extending into more than one State on the same form. Use a separate report form to record an inspection for each State. To more fully describe inspected track that is limited by borders, a system has been devised to indicate that the inspection actually extended to a State line rather than having terminated at some point within the boundary county, as would be the case using simply a county code.</p>
Milepost: From & To	Text	<p>When conducting a track inspection or performing another inspection activity, i.e., all ATIP surveys, and train riding, it is mandatory to show a starting milepost identifier in this field. Record, in the “To” field, the milepost of the farthest point your inspection extended over the segment of track inspected.</p> <p>Record the numeric portion of the milepost in an NNNN.NN format. The computer can accommodate a maximum of 10 characters, but only two to the right of the decimal point. For example, 1234.56 and 12.15 are acceptable identifiers of a milepost location (maximum 10 characters). If the railroad uses an alphabetic identifier in conjunction with a milepost number, they should precede the numeric value and not exceed three characters in length. Acceptable field entries include SL12.25, R218.5, YL12.50, ABB146.55, and X12.45.</p> <p>If a portion of track cannot be inspected between “From” and “To” fields, then tracks inspected should also be indicated in the “Inspection Point” field, or, if necessary, in a separate line item “comment.” For example: If inspecting from milepost BF1 to BF22 and BF7 to BF9 was inaccessible, enter BF1 to BF7 and BF9 to BF22 in the “Inspection Point” field and only claim miles actually inspected. Capture only one set of milepost ranges on the database.</p>
Inspection Point	Text	<p>As an elective, enter the name of the site, branch or the milepost location limits of the track inspected (e.g., a repair facility, train yard, interlocking plant, single or double main track). The field has a maximum of 50 characters.</p>

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F6180.96 Field	Format	Instructions/Special Features
Activity Codes (1)	Drop-down List/Text	Pick activity code(s) from the RISPC lookup table. See Activity Codes .
Units	Drop-down List/Numeric	Each mile of track, turnout, record, crossing at-grade, and derail, as inspected, should be counted as a unit. The number of track miles inspected is limited to 125 per report. The number of railroad track records inspected is limited to 650 per report. For additional instructions concerning units, see Activity Codes .
Source Code	Drop-down List/Text	Enter one of the available letter codes to identify the source of (why or purpose for) the inspection. Only one letter may appear on the inspection report. If the required information is missing or invalid, the report will be “incomplete,” pending inspectors’ verification and correction. See Source Codes .
File Number	Text	A file number is required for ATIP activities (Source Codes I & J), complaint investigations with assigned numbers (source code B) and waiver investigations (Source Code E). For an inspection without a file number that is not a re-inspection, leave this space blank. When conducting a re-inspection, inspectors are to type in their ID and report numbers of the previous inspection.
Accompanying Inspectors	Numeric	Use this field when conducting a joint inspection (two or more inspectors). Complete one F6180.96 inspection report. Insert the accompanying inspector ID number.
Item	Numeric	An inspection is limited to not more than 999 line items (maximum three digits).
Note: The following fields repeat for each line item.		
Initials/Milepost	Text	Indicate the location of the defect to the nearest one hundredth of a mile (52.8-feet). In this field, it is necessary to use the same milepost criteria as described in the “Milepost: From & To” field as shown above.
Equipment/Track #	Text	Indicate the track number where the defect exists. For a track with a name (no number), enter an abbreviation (maximum three digits or characters).

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F6180.96 Field	Format	Instructions/Special Features
Type/Kind	Drop-down List/Text	<p>Enter the appropriate type code listed at the bottom of the form (maximum one digit).</p> <p>“M”– defects located on controlled and non-controlled main tracks. However, for defects in turnouts, see “T” and “X” below. Use care in distinguishing the type of track distinctions among main and other than main trackage identified in § 213.233(c).</p> <p>“S”– defects located on controlled and non-controlled sidings identified in timetables or other pertinent information conveyed to allow opposing trains to pass (but, not where defects are located in the turnout).</p> <p>“Y”– defects located within yard classification tracks or other tracks designated to store or make-up trains. For tracks such as industrial spurs and auxiliary tracks designated other than main tracks use “I.”</p> <p>“I”– defects located on industrial track (i.e., grain elevator tracks, spur and back tracks owned and maintained by the railroad).</p> <p>“T”– defects located within a turnout area, whether on the straight side or the turnout side. The turnout area extends from the point of a switch to the heel of the frog.</p> <p>“X”– defects located on a track that is between the two turnouts (heel of the frog to heel of the frog) of a crossover, independent of track centerline distance.</p>
49 CFR/USC	Drop-down List/Text	Refers to the CFR parts pertaining to the BSS under Part 237; Roadway Workplace Safety, under Part 214; etc.
Defect (Rule)	Drop-down List/Numeric	Refers to the defect codes explained and listed in Chapter 3 of this manual. The defect code or “Rule” refers specifically to the digits to the right of the decimal point.
Subrule (Defect Code)	Drop-down List/Text	Subrule refers specifically to the digits to the right of the decimal point. Some defect codes have fewer than six digits, therefore use zeros as fillers. For example, defect code 7.1 would be recorded as 0007 (Defect) and 01 (Subrule).
Speed	Text	Speed, in miles per hour, is for the track as authorized by the railroad. If freight and passenger speeds differ, show only the speed that establishes the highest track class under § 213.9(a). Do not attempt to show more than one speed.

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F6180.96 Field	Format	Instructions/Special Features
Class	Numeric	Class of track for the speed designated is under the speed field above and in accordance with §§ 213.9(a) and 213.307(a) of the regulations that prescribe the maximum allowable operating speed for each track class. If the railroad has designated the track as excepted, insert "X."
Train #/Site	Text	This is an option to capture additional descriptions of defect locations.
SNFR	Dropdown (Y/N)	Use when issuing a Special Notice for Repairs (SNFR), FRA F6180.8.
RCL	Drop-down (Y/N)	This field will indicate whether the line item relates to remote control locomotives.
# of Occ. (Occurrences)	Numeric	<p>Special instructions. Inspectors can record multiple defects of the same type in this field as long as the number of times the defects occur is on a specific unit of inspection. Defects captured in this field will be the number entered. For no entry, use a single defect count of one (1). Other noncompliance items (i.e., an inaccurate bridge inspection report) are recorded by a point-by-point basis and summarized.</p> <p>If a systemic condition is found over an area, in addition to identification of specific identified defects/locations, inspectors may add a comment in the last noted defect and indicate that the above defects are "representative conditions." In such a case, the specific limits and track number/name of the respective conditions should be noted. An occurrence would only be taken for each item identified. Only record an occurrence for each item specifically identified by location. An acceptable alternative method of identifying each occurrence would be where all items between two specific locations are defective.</p>
Activity Code (for each line item)	Text	Choose a code that matches the activity occurring when observing the defect. It must match one of the activities listed in the activity code field in the form header.
Description (type)	Check Box	Choose: 1) Defect, 2) Non-FRA Defect or Observation, or 3) Comments to Railroad/Company. Non-FRA defects include items of concern that are not regulated by FRA, such as rough highway/rail grade crossing surfaces, items that are imminently close to becoming an FRA defect, etc. Observations include information such as suggestions to improve a bridge management program or bridge inventory, deficient bridge conditions recommended for evaluation by a railroad bridge engineer, or noting an inspection with "no defect found."

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F6180.96 Field	Format	Instructions/Special Features
Description	Text	Provide a description of the defect in this space. It must include actual field dimensions of the defect, when applicable, and a description of physical conditions associated with defects not involving numbers or dimensions. Confine any comments concerning the defect to the description field. If necessary, use more than one line to describe the nature and location of defects. Brevity is desirable, but it is essential that the railroad representative understand the defect and its precise location or nature to take corrective action. Record dimensions or adequate description of the defect to evaluate the appropriateness of the railroads' reported follow-up action. The field is limited to 1,000 characters.
Latitude/Longitude	Numeric	GPS coordinates, where applicable (e.g., ATIP program), may be used in addition to standard location descriptive in description field. General use is anticipated for the future.
Violation Recommended	Drop-Down (Y/N)	This is a required field. This field signifies whether or not a RR/Company is to receive a Federal violation.
Remedial Action	Drop-down (R/O/Blank)	Railroads, under § 213.5(a), must bring the track into compliance when any defective condition is discovered. In addition, railroads must inform FRA in writing of the remedial action taken to abate those deficiencies identified as violations whenever the "Y" is selected in the "Violations Recommended" section of the header (as per § 209.405). All line entries must contain an "R" (Required), "O" (Optional), or blank check mark in the "Required" block field. It is optional, not mandatory, to return the report to you when the "N" is selected in the "Violations Recommended" section of the header.

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F6180.96 Field	Format	Instructions/Special Features
Railroad Action Code & Date	Date/Text	<p>When an inspection report indicates that an inspector recommends a violation, the codes on the reverse side of the form are for the railroad representative to record what remedial action was taken to correct the defect and the date it took place. The railroad should provide a brief description of corrective action according to the list of codes on the reverse side of Form 96. Enter the comment regarding the corrective action opposite the item number; it does not have to be confined to one line. The railroad must correct the defects immediately and must report the corrective action taken within 30 days following the end of the month the inspection took place. A responsible railroad employee should sign and date the report in the space provided on the back before returning it to the inspector. Remember, the return of this form is mandatory when a violation ("Yes" box checked) is recommended, with notations of railroad corrective action being voluntary. Return of the form is strictly voluntary and no violation of law or regulation is incurred for the railroad's refusal to submit forms when defects are cited for correction ("No" box checked). However, railroads should be encouraged to return the form as requested. Two alternatives in RISPC exist: print the backside after printing the F6180.96 report or have a supply of copies of the backside page and continuation sheet available to print reports on.</p>

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Instructions, Form FRA F6180.111, Track Violation Report Form

Field #	F9180.111 Field	Editable	Auto in 96	Format	Instructions/Special Features
1	Inspectors Name	No	Yes	Text	Mandatory field.
2	Inspector's Violation Number	Yes	No	Numeric	Inspector to type in the first number—subsequent sequential numbers generated automatically. Mandatory field.
3	Annual F6180.96 No.	No	Yes	Numeric	Mandatory field.
4	Inspection Date	No	Yes	Date	Mandatory field.
5	Violation Date	Yes	Yes	Drop-down Date	RISPC populates this field with the same date as field 4. However, this date-formatted field is editable to allow the inspector to place a date of the violation report if that date is not the same as the inspection. Mandatory field.
6	Violation Report Number	Yes	Yes	Drop-down Date	Same as field No. 5. Mandatory field.
7	RR/Co. Initial	No	Yes	Text	Mandatory field.
8	Railroad/Company Name	Yes	Yes	Text	RISPC populates this field with the full name of the company only, if available. Otherwise, type in the name for entities such as a contractor. Mandatory field.
9	Division	No	Yes	Text	Mandatory field.
10	Subdivision	No	Yes	Text	Mandatory field.
11	Inspection Point	No	Yes	Text	Mandatory field.
12	Track Type	No	Yes	Text	Mandatory field.
13	Track Number/Name	No	Yes	Text	Mandatory field.
14	Initials/Milepost	No	Yes	Text	Mandatory field.
15	Speed	No	Yes	Text	Mandatory field.
16	Track Class	No	Yes	Text	Mandatory field.

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Field #	F9180.111 Field	Editable	Auto in 96	Format	Instructions/Special Features
17	MGT (Million Gross Tons)	Yes	Yes	Text	Optional field (e.g., MGT may not be known at some locations such as a yard track or may be a track inspection record violation).
18	HazMat	Yes	No	Drop-down (Y/N)	Check box. Since an activity might be a record inspection, this is an optional field.
19	Method of Operation	Yes	No	Drop-down List/Text	Drop down list: Manual Block; Traffic Control System; Automatic Block System (ABS); Yard/Restricted Limits; Automatic Block Signal with Manual Block; Interlocking Rules; and Other Than Main Track. Since an activity might be a record inspection, this is an optional field.
20	Line Item	No	Yes	Numeric	RISPC automatically populates in the F6180.96 line item number. Since an activity might be a record inspection, this is an optional field. Mandatory field.
21	Part No.	No	Yes	Text	RISPC automatically populates in "213." Mandatory field.
22	Part Title	No	Yes	Text	RISPC automatically populates in "Track Safety Standards." Mandatory field.
23	Section No.	No	Yes	Text	RISPC automatically populates "defect" No. from the F6180.96. Mandatory field.
24	Section Title	Yes	Yes	Text	RISPC automatically generates the title based on No. 23 above (e.g., 53 = gage, 109 = crossties, etc.). Mandatory field.
25	Paragraph Code	No	Yes	Numeric	RISPC automatically populates from the F6180.96 the subrule field. Mandatory field.
26	# of Occ.	No	Yes	Text	RISPC automatically populates the field from "# of Occ." from the F6180.96. This is a numeric field allowing three characters. Mandatory field. Note, fields 12 through 26 will repeat as a block group in the F6180.111 for multiple line items on an F6180.96 recommended for civil penalty.
27	Text of Violated Paragraph	Yes	Yes	Text	RISPC populates in the entire subrule paragraph text corresponding to No. 25. If the paragraph includes a table, RISPC will not populate the table. Mandatory field.

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Field #	F9180.111 Field	Editable	Auto in 96	Format	Instructions/Special Features
28	Synopsis of Violation	Yes	No	Text	The synopsis is an opening paragraph that briefly describes what the report is about and includes: 1) who, what, where, when, the date of the inspection; 2) who was involved; railroad, contractor, FRA, and others; 3) what regulation was violated, and the actual violated condition (what did you find?); and 4) where found. Mandatory field.
29	Geographic Condition/Location	Yes	No	Text	The intent of this field is for the reader to get a mental picture of the location and track leading to the violation. Include a statement, such as the accompanying railroad representative supplied all information regarding milepost locations, track names, bridge numbers, or any other identifiable information of defect location. GPS identification, if available, would eliminate any conflict for a follow-up inspection. Conclude by introducing the F6180.96 that recommends a violation as exhibit A. Mandatory field.
30	Seriousness /Reasons for Violation	Yes	No	Text	Use this field to establish the reason for recommending a civil penalty. Begin with the type of inspection (program review, bridge inspection report audit), and describe the conditions and introduce photographs (where appropriate) of the defective condition. Mandatory field.
31	Prior Constructive Knowledge	Yes	No	Text	Use this field to show how the railroad or company should have known of the defect prior to the FRA inspection. Review previous railroad inspection records for a reasonable timeframe prior to your inspection for similar defects or failure to record defects. Consider the number and type of defects found during your inspection. Establish and state the inspection frequency for the bridge, and state only what is required. The text of the rule does not need to be included. Determine if this condition is something that could happen within a short timeframe, or one that develops over time (that previous railroad inspections failed to note). Mandatory field.

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Field #	F9180.111 Field	Editable	Auto in 96	Format	Instructions/Special Features
32	Other Items Found During Inspection (not recommended for violation)	Yes	No	Text	List other defects noted during your inspection that are not recommended for civil penalty. List the defects found in association with your inspection. Enter the additional inspection report as an exhibit.
33	Background/Special Circumstances	Yes	No	Text	Use this field to include other pertinent information, such as: 1) population of the area; 2) proximity to schools, airports, waterways, etc.; 3) specific information about hazardous material movement; 4) are hazardous materials transported over this section of railroad? If so, list the type of materials observed; 5) recent compliance; and 6) previous violations. Mandatory field.
34	List of Exhibits	Yes	No	Text	Leave this field blank.
35	Inspector Signature	No	No	n/a	Blank field for signature (no database link). The report should be signed electronically. Mandatory field.
36	Date Signed	Yes	Yes	Drop-down Date	Mandatory field.
37	FRA Inspector No. 2	Yes	Yes	Numeric	Import name from first ID number of accompanying inspector on F6180.96. Optional field.
38	Name (Railroad/Company Representative)	Yes	Yes	Text	RISPC populates with data from F6180.96. Optional field.
39	Title (Railroad/Company Representative)	No	Yes	Text	RISPC populates with data from F6180.96. Optional field.
40	Accompanied FRA During Inspection	Yes	No	Check Box (Yes/No)	Indicate if the railroad representative to whom No. 38 and 39 is referenced was the same person who was present during the inspection. Optional field.

CHAPTER 3 – Bridge Safety Standards

Introduction

This chapter provides additional guidance for FRA inspectors, including State inspectors participating in the Federal program, to facilitate the implementation of the BSS during inspection activities. This chapter is not to be construed as a modification, alteration, or revision of the published BSS found in [49 CFR Part 237](#).

Any legal proceeding instituted against a track owner must be based on the regulations found in Part 237. FRA inspectors should refer to this chapter as often as necessary to understand the intent of any particular rules, thereby assuring to the extent practicable, the nationally uniform application of these rules as intended by Congress in the Rail Safety Improvement Act of 2008 (RSIA), Public Law 110–432, 122 Stat. 4890 (49 U.S.C. 20103, note).

FRA inspectors must not, under any circumstances, adjust, correct, or repair bridges, or appurtenances; nor authorize, suggest, or recommend any movements over any bridge. Full responsibility for these matters rests with the track owner. The FRA inspector must immediately inform the track owner of any condition not in compliance with the BSS.

This chapter is based on the BSS published on July 15, 2010 (see [75 FR 41282](#)). The BSS prescribe minimum safety requirements for the management of railroad bridges that support one or more tracks. Track owners may adopt more stringent standards as long as they are in accordance with the BSS.

Appendix A of this Manual is the Supplemental Statement of Agency Policy on the Safety of Railroad Bridges, which contains non-regulatory items that are useful as information and guidance for track owners.

Appendix B of this manual contains the Schedule of Civil Penalties for Part 237.

Text in italic font in this chapter is regulatory language, whereas indented paragraphs provide field guidance for FRA inspectors. Indented guidance paragraphs are not to be construed as regulatory language in any manner.

Subpart A – General

§ 237.1 Application

(a) Except as provided in paragraphs (b) or (c) of this section, this part applies to all owners of railroad track with a gage of two feet or more and which is supported by a bridge.

Guidance. This rule applies to all owners of track carried on railroad bridges with certain exceptions as outlined or explained in the following subsections.

As delineated in FRA’s Statement of Agency Policy Concerning Enforcement of the Federal Railroad Safety Laws, FRA exercises jurisdiction over some tourist, scenic, and excursion railroad operations even if they are not conducted on the “general railroad system of transportation” (general system), which is defined as “the network of standard gage track over which goods may be transported throughout the nation.” (Part 209, Appendix A).

FRA notes that a “tourist railroad,” including scenic or excursion railroads, comes under the uniform FRA definition of the term “railroad,” as found at § 209.3, and within the meaning of the Federal railroad safety statutes, as found at 49 U.S.C. 20102(1)(A). Tourist railroads move passengers by the use of track and equipment that, taken together, would commonly be described as a railroad, and their operations pose a distinct risk to the safety of the public. FRA typically does not exercise jurisdiction over operations on track gage that is less than 24 inches, and as a matter of policy, FRA does not consider devices that run on rails in amusement parks to be railroads.

With respect to the BSS, FRA is exercising jurisdiction over all tourist and excursion operations conducted over railroad bridges supporting track with a gage of 2 feet or more, regardless of whether they are conducted on the general system or whether they are insular. This part applies to both insular and non-insular tourist railroads because the passengers on those railroads are entitled to the protection afforded by this rule.

(b) This part does not apply to bridges on track used exclusively for rapid transit operations in an urban area that are not connected with the general railroad system of transportation.

Guidance. This is in accordance with 49 U.S.C. 20102 and Part 209, Appendix A.

FRA will exercise limited jurisdiction over an urban rapid transit operation only to the extent necessary to ensure railroad bridge safety on the portion of the urban rapid transit system where general system operations occur. Consequently, if the general system portion of an urban rapid transit operation is over a railroad bridge, then Part 237 applies to that bridge.

(c) This part does not apply to bridges located within an installation which is not part of the general railroad system of transportation and over which trains are not operated by a railroad.

Guidance. “An installation which is not part of the general railroad system of transportation and over which trains are not operated by a railroad” refers to tracks located within an industrial operation where rolling equipment is moved only by and for the account of that particular industry. If a railroad as defined in § 209.3 operates over a bridge inside such an

installation, then this regulation applies to that bridge and to the owner of track on that bridge. A captive rail operation such as a mine to power plant rail line that is not part of the general system and not operated by a railroad but is run solely by the track owner's employees is not covered by Part 237.

Part 237 may apply to a bridge even if railroad employees do not operate a locomotive over that bridge. Merely moving rolling equipment over a bridge while under the control of railroad employees makes that bridge subject to these regulations. For example, in a coal unloading operation where the serving railroad shoves cars over a trestle leading to a rotary car dumper, at which point an indexing or mechanical car moving system takes over and moves the cars onto the car dumper, the approach trestle would be covered by this part, but the rotary car dumper would be exempt because the rolling stock was not being moved thereon by the railroad.

§ 237.3 Responsibility for compliance

(a) Except as provided in paragraph (b) of this section, an owner of track to which this part applies is responsible for compliance.

Guidance. The responsibility for the safety of trains on any track lies with the owner of that track. Therefore, the track owner is responsible for complying with the bridge safety standards promulgated in this part. The track owner may be a railroad, museum, public agency, or other private company. If a bridge carries tracks owned by two or more owners, then the track owners can choose to make an assignment of responsibility for compliance with this part.

Technically, this section requires all track owners to apply their respective BMPs and required inspections to jointly owned properties. This is not an efficient use of resources; therefore, it is anticipated that one party will assume responsibility. In cases where responsibility for compliance is not in dispute, FRA will accept actions indicative of acceptance of responsibility as governing. However, joint owners should spell out responsibility for compliance by filing documentation with the appropriate FRA region. Where the parties dispute who is responsible for compliance with this part, FRA may hold all parties liable.

The assignment process, delineated in paragraphs (b) through (d) of this section, is similar to the assignment process detailed in 49 CFR § 213.5. However, FRA will hold the track owner or the assignee, or both, responsible for compliance with this part and subject to penalties under § 237.7. FRA intends that the responsibility for compliance with this part will follow, as closely as practicable, the responsibility for compliance with the Federal Track Safety Standards (TSS), and that where such responsibility is already established, it would not be necessary for the track owner to file an additional assignment of responsibility. FRA will consider any previously established assignment of responsibility for compliance with the TSS to apply to compliance with the BSS until a properly filed assignment of responsibility under § 237.3(b) is made altering this linkage between the TSS and BSS.

This rule does not alter the financial responsibility of a highway agency that owns, inspects and maintains railroad bridges. The rule does, however, hold the track owner responsible to ensure that the inspections and maintenance are performed correctly by qualified and designated persons. The track owner would be permitted to accept work performed by a highway agency provided that it conforms to the requirements of this part. Where track is owned by a State or other public agency, unless a compliant assignment of responsibility is on file for either Part 213 or Part 237, the State or other public agency, as the track owner, would be required to adopt a BMP, and comply with the terms of their BMP, as well as all other requirements of Part 237.

(b) If an owner of track to which this part applies assigns responsibility for the bridges that carry the track to another person (by lease or otherwise), written notification of the assignment shall be provided to the appropriate FRA Regional Office at least 30 days in advance of the assignment. The notification may be made by any party to that assignment, but shall be in writing and include the following—

- (1) The name and address of the track owner;*
- (2) The name and address of the person to whom responsibility is assigned (assignee);*
- (3) A statement of the exact relationship between the track owner and the assignee;*
- (4) A precise identification of the track segment and the individual bridges in the assignment;*
- (5) A statement as to the competence and ability of the assignee to carry out the bridge safety duties of the track owner under this part; and*
- (6) A statement signed by the assignee acknowledging the assignment to him of responsibility for purposes of compliance with this part.*

Guidance. Section 237.3(b) gives a track owner the responsibility to notify FRA in writing through the appropriate regional office when the responsibility for compliance with this part is assigned. Notification must contain the specific information required in this paragraph and must be made 30 days before the assignment of the responsibility becomes effective. In any case of assignment of responsibility, the assignee must first accept the assignment before it can become effective. The written notification of assignment must include a statement signed by the assignee acknowledging the assignment. A notification that does not include an acknowledging statement would not comply with § 237.3(b)(6), and FRA would disregard the assignment.

(c) The Administrator may hold the track owner or the assignee, or both, responsible for compliance with this part and subject to penalties under § 237.7.

Guidance. This paragraph concerns situations where the track is not owned by the operating railroad through an arrangement such as a lease agreement. Typically, when recommending civil penalties, the operating railroad will be cited. However, it may be appropriate to recommend civil penalties against the operating railroad and the track owner when both parties contributed to the deficiency. Inspectors must determine the responsible party when recommending civil penalties for noncompliance and alert RCC when violation reports involve parties other than the track owner.

This paragraph also provides that the party responsible for compliance can be other than the actual owner of the track through assignment of responsibility or if the Surface

Transportation Board (formerly Interstate Commerce Commission) has issued a directed service order. FRA may hold responsible any party contracted by the track owner to ensure compliance with this part.

(d) A common carrier by railroad which is directed by the Surface Transportation Board to provide service over the track of another railroad under 49 U.S.C. 11123 is considered the owner of that track for the purposes of the application of this part during the period the directed service order remains in effect.

Guidance. On rare occasions, such as a cessation of service by a railroad, the Surface Transportation Board has directed a railroad other than the track owner to provide service. In such cases, the designated operator shall be considered as the owner for the purposes of compliance with the BSS.

(e) When any person, including a contractor for a railroad or track owner, performs any function required by this part, that person is required to perform that function in accordance with this part.

Guidance. As in Part 213, FRA intends that “person” means an entity of any type covered under 1 U.S.C. 1, including but not limited to the following: a railroad; a manager, supervisor, official, or other employee or agent of a railroad; any owner, manufacturer, lessor, or lessee of railroad equipment, track, or facilities; any independent contractor providing goods or services to a railroad; any employee of such owner, manufacturer, lessor, lessee, or independent contractor; and anyone held by FRA to be responsible for compliance with this part.

This paragraph specifies that both employees of railroads and track owners, and contractors to railroads and track owners, are subject to the requirements of the BSS when they perform functions required by the BSS. This includes a State agency which performs a function on a railroad bridge that is required by the BSS. Section 237.109 requires that the track owner keep the bridge inspection records, and must therefore obtain them from a State agency or any other party that performs bridge inspections in conformance with the requirements of these regulations.

(f) Where an owner of track to which this part applies has previously assigned responsibility for a segment of track to another person as prescribed in 49 CFR 213.5(c), additional notification to FRA is not required.

Guidance. FRA advises a track owner to resubmit a notification of assignment if the owner is uncertain whether an assignment has been made. Likewise, where it is not intended for responsibility for compliance with this part to be assigned to the same party assigned responsibility for the segment of track upon which bridges are located, then a new assignment should be made. Assignment does not relieve a track owner of compliance with Part 237, as § 237.3(c) states that FRA can always hold the track owner responsible for compliance with the BSS.

(g) FRA reserves the right to reject an assignment of responsibility under § 237.3(b) for cause shown.

Guidance. As stated in paragraph (c) of this section, FRA may hold the track owner or the assignee, or both, responsible for compliance with this part and subject to penalties under 49 CFR § 237.7. But, if FRA rejects an assignment of responsibility, FRA will not consider the rejected assignee responsible for compliance with Part 237 pursuant to paragraph (c) of this section.

§ 237.5 Definitions

Guidance. The definitions in this section are only intended to apply to Part 237, and not to alter the same terminology wherever used outside this part for other purposes.

For the purposes of this part—

Bridge modification means a change to the configuration of a railroad bridge that affects the load capacity of the bridge.

Bridge repair means remediation of damage or deterioration which has affected the structural integrity of a railroad bridge.

Guidance. This part requires that modifications and repairs to bridges be designed by railroad bridge engineers, and that the work be supervised by designated railroad bridge supervisors. These definitions clarify that minor modifications and repairs, such as replacing a wire rope handrail with one made of pipe or painting a bridge, do not need to be designed and supervised pursuant to this part. However, this does not exempt the track owner from properly supervising the personal safety of the individuals performing the work, because that issue is addressed in other rules.

Replacement of structural components in-kind often extends beyond the scope of minor modification or repair, and therefore design by a railroad bridge engineer is warranted. For instance, while it may be common practice to replace failed timber stringers with similarly sized timber, improper execution can result in reduced bridge load capacity. In such cases, input from a qualified and designated railroad bridge engineer is required, as is the supervision of such work by a designated railroad bridge supervisor.

Railroad bridge means any structure with a deck, regardless of length, which supports one or more railroad tracks, or any other undergrade structure with an individual span length of 10 feet or more located at such a depth that it is affected by live loads.

Guidance. A “railroad bridge” is any structure that spans an opening under the track, except for a small culvert, pipe, or other such structure where that structure is located so far below the track that it only carries dead load from soil pressure and is not subjected to measurable bending, tension, or compression stresses from passing trains. Unloading pits, car dumpers, track scales, turntables, transfer tables, and waterfront structures such as piers and wharves that fall within the definition of a railroad bridge are considered bridges for purposes of the BSS.

Additionally, culverts with a span of 10 feet or more located at such a depth that they are affected by live loads are subject to this regulation and must be included in the track owner’s

BMP. The determination of whether such a structure is affected by live loads is the responsibility of the railroad bridge engineer through the use of appropriate engineering methods and judgment.

A bridge deck includes open decks, ballasted decks, and solid decks. Essentially, a bridge deck is the component of the bridge on which the track is supported, and which is subject to bending stresses from trains moving over it.

Retaining walls and other roadbed structures are not included because they do not carry track on a span over a gap. FRA does not intend to relieve a railroad from taking any action necessary to protect the safety of trains in the case of any structure, including small culverts, retaining walls, tunnels, or overhead structures, by providing for their inspection and maintenance, but it exempts them from the specific requirements of the BSS. A structure in a locomotive or car maintenance facility that is used to support cars or locomotives for maintenance is not included in the specific requirements of this regulation.

Track owner means a person responsible for compliance in accordance with § 237.3.

§ 237.7 Penalties

(a) Any person who violates any requirement of this part or causes the violation of any such requirement is subject to a civil penalty of at least \$853 and not more than \$27,904 per violation, except that: Penalties may be assessed against individuals only for willful violations, and, where a grossly negligent violation or a pattern of repeated violations has created an imminent hazard of death or injury to persons, or has caused death or injury, a penalty not to exceed \$111,616 per violation may be assessed. "Person" means an entity of any type covered under 1 U.S.C. 1, including but not limited to the following: A railroad; a manager, supervisor, official, or other employee or agent of a railroad; any owner, manufacturer, lessor, or lessee of railroad equipment, track, or facilities; any independent contractor providing goods or services to a railroad; any employee of such owner, manufacturer, lessor, lessee, or independent contractor; and anyone held by the Administrator of the Federal Railroad Administration to be responsible under § 237.3(d). Each day a violation continues shall constitute a separate offense. See Appendix B to this part for a statement of agency civil penalty policy.

Guidance. This provision conforms to provisions of the enabling legislation and agency policy. Consistent with FRA's Statement of Agency Policy Concerning Enforcement of the Federal Railroad Safety Laws, a penalty may be assessed against an individual only for a willful violation. The Administrator reserves the right to assess a penalty of up to \$111,616 for any violation where circumstances warrant. (See Part 209, Appendix A.) This section covers all subparts of Part 237. Note that while these maximum and minimum penalty amounts are what is currently in Part 209, Appendix A, an inflation adjustment may be made to raise the minimum penalty, the ordinary maximum penalty, and the aggravated maximum penalty.

(b) Any person who knowingly and willfully falsifies a record or report required by this part may be subject to criminal penalties under [49 U.S.C. 21311](#).

§ 237.9 Waivers

(a) Any person subject to a requirement of this part may petition the Administrator for a waiver of compliance with such requirement. The filing of such a petition does not affect that person's responsibility for compliance with that requirement while the petition is being considered.

Guidance. FRA inspectors have no authority under the BSS to grant waivers.

(b) Each petition for waiver must be filed in the manner and contain the information required by part 211 of this chapter.

Guidance. Any petition for a waiver must be filed by the track owner or designated operator with the Docket Clerk, Office of Chief Counsel, in Washington, DC. Refer to the FRA General Manual for complete information regarding waiver procedures. Title 49 CFR Part 211 prescribes rules of practice that apply to waiver proceedings. The processing of petitions for the waiver of safety rules is found at Part 211, Subpart C.

(c) If the Administrator finds that a waiver of compliance is in the public interest and is consistent with railroad safety, the Administrator may grant the waiver subject to any conditions the Administrator deems necessary. If a waiver is granted, the Administrator publishes a notice in the Federal Register containing the reasons for granting the waiver.

Guidance. FRA inspectors must be notified of any waivers in effect in their assigned territory.

Subpart B – Railroad Bridge Safety Assurance

Guidance. This subpart prescribes minimum requirements for persons responsible for railroad bridges to implement programs to assure the structural integrity of those bridges and to protect the safe operation of trains over those bridges. The responsibility for the safety of a railroad bridge rests with the owner of the track supported by that bridge, who in turn relies upon the work of the railroad bridge engineer who makes the critical decisions regarding the management and use of that bridge.

§ 237.31 Adoption of bridge management programs

Each track owner shall adopt a bridge safety management program to prevent the deterioration of railroad bridges by preserving their capability to safely carry the traffic to be operated over them, and reduce the risk of human casualties, environmental damage, and disruption to the Nation's railroad transportation system that would result from a catastrophic bridge failure, not later than the dates in the following schedule:

(a) March 14, 2011: Class I carriers;

(b) March 14, 2011: Owners of track segments which are part of the general railroad system of transportation and which carry more than ten scheduled passenger trains per week;

Guidance. For a track segment to be considered part of the general railroad system of transportation, it must be of standard (4 feet 8½ inches) gage.

(c) September 13, 2011: Class II carriers to which paragraph (b) of this section does not apply; and

(d) September 13, 2012: All other track owners subject to this part and not described [in] paragraphs (a) through (c) of this section.

Guidance. Any track owner subject to this part commencing operations on or after September 13, 2012, must adopt their BMP by the date those rail operations begin.

§ 237.33 Content of bridge management programs

Guidance. Certain primary elements of a BMP are enumerated in this section. Track owners and individuals responsible for the safety of railroad bridges are encouraged to adapt these elements to the needs of their areas of responsibility, and to adopt additional elements not inconsistent with the requirements of this part. The track owner should consider its BMP a policy to ensure bridge safety. As such, track owners may want to expand the document to include safety management for other structures such as culverts and tunnels.

In cases where the requirements specified in a track owner's BMP exceed the minimum regulatory requirements, FRA cannot cite either a defect or a violation against the company for failure to comply with its own BMP, to the extent that the company's requirements exceed those of the regulations. In such a case, the FRA inspector should write a comment to the company detailing such deficiencies. If, however, the company fails to meet the minimum regulatory requirements, then either a defect or a violation is appropriate.

Not all items required to be included in a track owner's BMP are listed in this section. Additional provisions required to be included in the BMP include scheduling of inspections (§ 237.101(a)), requirements for special inspection following a potentially compromising event (§ 237.101(c)), inspection procedures (§ 237.103(a)), prescription of procedures to protect operations following a potentially compromising event (§ 237.105(a)), underwater or scour inspection (§ 237.105(b)), minimum content of bridge inspection reports (§ 237.109(c)), record retention location (§ 237.109(d) and (e)), and internal audit provisions (§ 237.153(a)).

Each bridge management program adopted in compliance with this part shall include, as a minimum, the following:

(a) An accurate inventory of railroad bridges, which shall include a unique identifier for each bridge, its location, configuration, type of construction, number of spans, span lengths, and all other information necessary to provide for the management of bridge safety;

Guidance. Congress mandated that the new regulations require each track owner to “develop and maintain an accurate inventory of its railroad bridges, which shall identify the location of each bridge, its configuration, type of construction, number of spans, span lengths, and all other information necessary to provide for the safe management of the

bridges” (RSIA Section 417(b)(1)). This paragraph requires that such an inventory be maintained. An accurate inventory of any property to be managed is essential so that the responsible individuals may schedule and monitor inspection, maintenance, and repair of the property units.

The basis for the unique identifier used for each bridge should be specified in the BMP. Examples include using the division/subdivision or other line designation along with the milepost or bridge number. A track name or number may also be required in situations where individual bridges support multiple tracks at the same milepost location.

With regard to location, Appendix A provides non-regulatory guidance in [Guideline 14\(b\)\(2\)](#), suggesting that track owners provide “[t]he location of the bridge by nearest town or station, and geographic coordinates.” FRA prefers that the town/city/political subdivision and State be provided. Giving the location by railroad subdivision and milepost is permissible because that information is sufficient to locate the bridge in the field.

The configuration of the bridge refers to its physical layout. The inventory should reflect the order of the spans in the actual arrangement of the bridge, especially where different bridge types are involved.

Including the “feature crossed” in the inventory is encouraged but is not strictly required unless FRA deems it so under the blanket of “all other information necessary to provide for the management of bridge safety.” For bridges over streets or navigable waterways used by commercial maritime vessels, inclusion of the name of the feature crossed is necessary to provide for the management of bridge safety in the event of a vehicle or vessel collision.

Geographic (GPS) coordinates are not required but are encouraged, as they are useful in locating the correct bridge, especially following an adverse event such as a derailment or bridge strike.

The bridge inventory need not be complete in all of its details at the time of BMP adoption. It is reasonable to expect that an adopted program would specify the format for recording the inventory information, or “bridge list,” and that information be readily available from existing records, such as valuation maps, that could be used to initially populate the database. After that, additions and refinements to that information would be generated by normal inspection work.

The bridge inventory may be included as an appendix to the BMP or referenced as a separate, stand-alone document. In such a case, it is desirable for the actual BMP to contain a sample inventory page or otherwise define the format and content required in the full inventory.

(b) A record of the safe load capacity of each bridge;

Guidance. Congress mandated that the new regulations require that the track owner “maintain, and update as appropriate, a record of the safe capacity of each bridge which carries its track and, if available, maintain the original design documents of each bridge and a documentation of all repairs, modifications, and inspections of the bridge.” (RSIA Section 417(b)(3)). This paragraph thereby requires that a record of the safe load capacity of each

bridge be established. The safe load capacity would typically be the Normal Rating. The operation of excessively heavy loads over a bridge will considerably shorten a bridge's useful life and will reduce or even eliminate the margin of safety between structural integrity and catastrophic failure. It is essential that the track owner know that the loads permitted to be operated on a bridge are within the safe limits of the bridge. See § 237.71 for additional information.

(c) A provision to obtain and maintain the design documents of each bridge if available, and to document all repairs, modifications, and inspections of each bridge; and

Guidance. The track owner must obtain and maintain the design documents of each bridge, if available, and document all repairs, modifications, and inspections of each bridge. The determination of safe load capacity requires knowledge of the configuration of the bridge and the materials of which it is constructed. Although the configuration may be determined by actual measurements of all the components, that procedure can be tedious and expensive. Good documentation of the design and history of a bridge will facilitate more rapid and accurate determination of bridge capacity when such calculations are needed, as well as determination of the maintenance and service history of a bridge to detect and correct possible deterioration of its components. If the design documents for a bridge cannot be located, the track owner must measure and document the configuration of the bridge in sufficient detail to enable an accurate determination of the safe capacity of the bridge.

Pursuant to § 237.33(c), the program adopted by a track owner need only incorporate a provision to obtain and maintain the design documents of each bridge if available, and to document all repairs, modifications, and inspections of each bridge. There is no deadline for acquisition of these documents. FRA anticipates that the priorities for acquisition of archived bridge design documents would closely follow their usefulness in determining bridge capacities.

Records of individual designations as required by § 237.57, especially regarding railroad bridge engineers designing repairs or modifications, should be treated as permanent bridge records and retained with the rest of the design documents.

(d) A bridge inspection program covering as a minimum:

- (1) Inspection personnel safety considerations;*
- (2) Types of inspection including required detail;*
- (3) Definitions of defect levels along with associated condition codes if condition codes are used;*
- (4) The method of documenting inspections including standard forms or formats;*
- (5) Structure type and component nomenclature; and*
- (6) Numbering or identification protocol for substructure units, spans, and individual components.*

Guidance. Bridge inspection is essential to an effective BMP. In this paragraph, FRA requires that the track owner's BMP contain a bridge inspection program. Items (1) through (6) must be addressed in the program to a degree that promotes effective and efficient conduct of the inspection program.

Regarding Item (1), bridge inspection can present certain risks that are inherent in working at heights and around moving vehicles. A bridge inspection program must at least address the unique hazards associated with the inspection process. The track owner's program may either directly cover the safety issues unique to bridge inspection or refer to existing safety policies and procedures that cover the same topics. The safety aspects that FRA expects to see covered include Roadway Worker Protection; bridge worker safety and fall protection; use of ladders; working around highway traffic; traversing hazardous, sloping, or slippery ground or surfaces; and environmental issues such as poisonous vegetation, dangerous reptiles, stinging insects, and other hazardous wildlife likely to be encountered.

Regarding Item (2), a bridge inspection program must incorporate standards for the procedures and required details of any different types of inspection that are referenced in the program, such as annual inspections, post-event inspections, rating inspections, and intermediate periodic inspections. A large railroad might find it convenient to describe the standard procedures for various types of inspections in some detail, while a small railroad that normally conducts only annual inspections might describe only that procedure as well as post-event special inspections, and then issue instructions particularly applicable for other types of inspections that occur only infrequently.

Regarding Items (3) through (6), use of a standard method of describing the condition of components promotes effective and efficient communication between the inspector and those persons who review and evaluate a bridge using information from the inspection.

The "definition of defect levels" referred to in Item (3) requires a bridge inspection program using adjective descriptors (good, fair, poor, serious, critical, etc.) to describe in a quantitative manner the level of deterioration of a component or structural system that is associated with each descriptor. For example, if not defined, one inspector might classify 10 percent steel reduction in a critical area as fair, while another might classify the defect as critical. This can lead to wide variations between inspectors when assigning condition codes to identical conditions. The ultimate goal is for the content of an inspection report to convey to the railroad bridge engineer sufficient information for the engineer to make an informed decision as to the criticality of a deficiency. It is only acceptable for a bridge inspection program not to define defect levels when the program requires narrative descriptions of deficiencies. Such narrative descriptions must be quantitative, providing information such as percentage of section loss, widths and lengths of cracks, dimensions of spalls, etc., to provide the reviewing engineer sufficient detail to accurately interpret the conditions present at the bridge.

Various railroads use condition codes, priority codes, or a combination of the two. Typically, the difference between these two systems is that adjective-based condition codes describe to the railroad bridge engineer the extent or seriousness of a deficiency, while priority codes provide the railroad bridge inspector's opinion of how soon a deficiency must be remediated.

Item (4) requires that there be a method to document bridge inspections. The minimum information to be included is specified in § 237.109. Often, the method of documentation is a paper form but may be an electronic file. The BMP must specify whether paper forms or electronic files are the official inspection records for the track owner. The BMP must contain

a copy of standard paper form(s) or electronic format(s) for documenting the bridge inspections.

Subpart C – Qualifications and Designations of Responsible Persons

Guidance. This subpart establishes minimum standards for the qualifications and designations of persons who perform safety-critical functions that affect the integrity and safety of railroad bridges. Many aspects of railroad bridge work differ from other fields of engineering, inspection, and maintenance. It is essential that the individuals who are responsible for these safety-critical functions be qualified by education, training, and experience to perform them correctly.

§ 237.51 Railroad bridge engineers

- (a) *A railroad bridge engineer shall be a person who is determined by the track owner to be competent to perform the following functions as they apply to the particular engineering work to be performed:*
- (1) *Determine the forces and stresses in railroad bridges and bridge components;*
 - (2) *Prescribe safe loading conditions for railroad bridges;*
 - (3) *Prescribe inspection and maintenance procedures for railroad bridges; and*
 - (4) *Design repairs and modifications to railroad bridges.*

Guidance. This section sets forth the minimum standards that a railroad bridge engineer (RBE) must meet. Congress directed FRA to “ensure that an engineer who is competent in the field of railroad bridge engineering – (A) is responsible for the development of all inspection procedures; (B) reviews all inspection reports; and (C) determines whether bridges are being inspected according to the applicable procedures and frequency, and reviews any items noted by an inspector as exceptions” (RSIA Section 417(b)(7)). Railroad bridge engineering is based on the same principles of engineering as all other structural engineering work, but the application of many of those principles is unique to this particular field. The live loads carried on railroad bridges are generally much higher than the loads on highway bridges or other transportation structures. Overall configuration and details of construction of railroad bridges differ greatly from other classes of structures, to the extent that dealing with these features requires some experience with them as well as an understanding of the fundamentals of engineering.

FRA understands that not all RBEs will be faced with all aspects of railroad bridge engineering. For example, an engineer engaged to prescribe safe loads for short steel spans and timber trestles on a particular railroad might never have to perform a detailed analysis of a large truss bridge. The basic premise is that the engineer must be competent to perform the functions that are encompassed by that individual’s employment. The determination of qualifications by the track owner includes employment of the engineer by the track owner and designation of the engineer to exercise the authority called for in this part. An RBE need not be an actual employee of the track owner, and could be a consultant or independent contractor engaged to provide this service.

The determination of the competence of an RBE is the responsibility of the track owner. FRA does not intend to engage in qualifying individuals to perform those functions. That determination will have to be made by the track owner after reviewing the engineer's qualifications and experience in the light of the qualification requirements of this part. Track owners should be extremely diligent when determining the competency of an RBE as this is a safety-critical function. The engineer's employer or the engineer's client has always had the prerogative and responsibility to determine the qualifications of that individual, and FRA does not intend to alter that relationship.

- (b) *The educational qualifications of a railroad bridge engineer shall include either:*
- (1) *A degree in engineering granted by a school of engineering with at least one program accredited by ABET, Inc. or its successor organization as a professional engineering curriculum, or a degree from a program accredited as a professional engineering curriculum by a foreign organization recognized by ABET, Inc. or its successor; or*
 - (2) *Current registration as a professional engineer.*

Guidance. FRA did not intend to exclude engineers who received their education in other Nations from being recognized as RBEs. To fulfill the educational requirements of this section, an RBE can also have received a degree from a program accredited as a professional engineering curriculum by a foreign organization recognized by ABET, Inc., or its successor. An RBE can also be considered to have fulfilled the educational requirements of this section if he or she is currently registered as a professional engineer. FRA notes that State law governing the professional practice of engineering requires that professional engineers limit the subject of their practice to areas in which they are competent.

FRA believes that the critical nature of railroad bridge engineering work called for in this rule requires persons to meet a minimal educational or experience standard that is common to the engineering profession and that is necessary for an individual who will perform the functions of an engineer as called for in this rule.

- (c) *Nothing in this part affects the States' authority to regulate the professional practice of engineering.*

Guidance. Recognition by FRA as an RBE would not enable a person to provide professional engineering services in violation of a State law or regulation. FRA does not intend to preempt or interfere with any State laws regarding the professional practice of engineering. For example, a person registered as a professional engineer in Maryland could not work as a professional engineer in Virginia under this regulation if such work violated Virginia law regarding the practice of engineering.

§ 237.53 Railroad bridge inspectors

A railroad bridge inspector shall be a person who is determined by the track owner to be technically competent to view, measure, report and record the condition of a railroad bridge and its individual components which that person is designated to inspect. An inspector shall be

designated to authorize or restrict the operation of railroad traffic over a bridge according to its immediate condition or state of repair.

Guidance. This section represents minimum standards that a railroad bridge inspector (RBI) must meet. Effective inspection of bridges is essential to preserving their integrity and serviceability. Track owners should be extremely diligent when determining the competency of an RBI as this is a safety-critical function. RBIs must be able to understand and carry out the inspection procedures, including accessing inspection points on a bridge, measuring components and any changes, describing conditions found in a standard, unambiguous manner, and detecting the development of conditions that are critical to the safety of the bridge. It is essential that an RBI who detects a potential hazard to the safe operation of trains be authorized by the track owner to place appropriate restrictions on the operation of railroad traffic, pending review as necessary by an RBE. An individual who is not competent in railroad bridge work cannot overrule a determination made by a designated RBI, RBE, or railroad bridge supervisor (RBS).

§ 237.55 Railroad bridge supervisors

A railroad bridge supervisor shall be a person, regardless of position title, who is determined by the track owner to be technically competent to supervise the construction, modification or repair of a railroad bridge in conformance with common or particular specifications, plans and instructions applicable to the work to be performed, and to authorize or restrict the operation of railroad traffic over a bridge according to its immediate condition or state of repair.

Guidance. This section represents minimum standards that an RBS must meet. Individuals who supervise and take responsibility for construction, repair, and modification of railroad bridges must be competent to ensure that the work is performed in accordance with valid standards and any particular specifications, plans, and instructions applicable to the work to be performed. Track owners should be extremely diligent when determining the competency of an RBS as this is a safety-critical function. An RBS must be authorized by the track owner to approve or restrict the movement of railroad traffic over a bridge according to its current condition or state of repair. This provision applies to any such individual, regardless of job title, who directly oversees such work and approves or restricts the movement of railroad traffic during the progress of the work.

§ 237.57 Designation of individuals

Each track owner shall designate those individuals qualified as railroad bridge engineers, railroad bridge inspectors and railroad bridge supervisors. Each individual designation shall include the basis for the designation in effect and shall be recorded.

Guidance. In the RSIA, Congress mandated that the bridge regulations designate qualified bridge inspectors or maintenance personnel to authorize the operation of trains on bridges following repairs, damage, or indications of potential structural problems (RSIA Section 417(b)(8)). In this section, FRA requires that each track owner designate certain individuals as qualified RBEs, RBIs, or RBSs, and provide a recorded basis for each designation in effect. The track owner must record designations of individuals, whether employees,

consultants, or contractors. If a consultant or contractor has several individuals performing the described functions, then one or more individuals should be designated as being responsible to the track owner for the work performed under that engagement, with the others working under the responsible charge of that individual.

Designation must be made by name, not by craft or position title. Although the non-regulatory language contained in Appendix A, Guideline Paragraph 14(a), states that “[t]he designations may be made by position or by individual,” FRA requires that proper names be used in the records of designations, as stated in regulatory text.

Where design plans and specifications are prepared by a consultant RBE, it is permissible for the track owner’s BMP to specify that the record of designation is the signature and seal of the responsible professional engineer affixed to the design documents, and the basis for the designation is licensure as a professional engineer.

Records of designations must be retained for as long as they are needed to demonstrate compliance with this section. In the case of bridge inspection records, this would be for as long as the inspection record exists. The record of designation for the RBI that conducted the inspection must be maintained for as long as the report remains in the track owners’ records. Additionally, the records of designation for the RBS and/or RBE who reviewed the report must be maintained for a similar period. For example, if the track owner chooses to purge bridge inspection records after the minimum 2-year retention, the records of designation pertaining thereto may also be destroyed. However, if the track owner decides to keep the inspection reports for 10 years, the designation records must also be retained for 10 years.

For engineering designs completed relative to construction, repair, or modification, where the actual work is performed on or after September 13, 2010, the required designation record retention period would be for the life of the bridge.

For bridge work such as construction, repairs, or modifications that is required to be designed by an RBE per § 237.131, the designation records should be treated like a permanent bridge record and retained until the bridge no longer exists, as required by § 237.33(c). The record of designation documentation could be kept in the bridge file or retained in some other manner. While not required, it is good practice for the track owner’s BMP to specify the location and manner in which designation records are filed.

Subpart D – Capacity of Bridges

Guidance. This subpart prescribes minimum standards to be incorporated in railroad BMPs to prevent the operation of equipment that could damage a bridge by exceeding safe stress levels in bridge components or by extending beyond the horizontal or vertical clearance limits of the bridge. Protection of bridges and bridge components from overstress is essential to the continued integrity and serviceability of the bridge. It is also essential that equipment or loads that exceed the clearance limits of a bridge not be operated due to the potential for severe damage to the bridge.

§ 237.71 Determination of bridge load capacities

(a) Each track owner shall determine the load capacity of each of its railroad bridges. The load capacity need not be the ultimate or maximum load capacity, but must be a safe load capacity.

Guidance. Each track owner must determine the load capacity of each of its railroad bridges. The safe load capacity would typically be the Normal Rating and include an evaluation of the substructure as well as the superstructure. It is essential that the track owner know that loads operated over a bridge do not exceed the safe capacity of that bridge. However, once it is determined that a bridge has adequate capacity to carry the loads being operated, the regulation does not require that the track owner precisely calculate the additional capacity of that bridge, although that could be useful from a planning or economic standpoint.

(b) The load capacity of each bridge shall be documented in the track owner's bridge management program, together with the method by which the capacity was determined.

Guidance. This paragraph requires that the load capacity of each bridge be documented in the track owner's BMP, together with the method by which the capacity was determined. Once the load capacity is determined, the value must be recorded for it to be useful. The record of safe load capacity should include, at a minimum, the safe load capacity for the superstructure and the substructure (or for the bridge as a whole), the name of the RBE determining the capacity, the date of determination, the method used and the basis of the determination. The basis is the information on the bridge used in the determination, such as design drawings, field measurements, etc., as explained further in §237.71(d).

(c) The determination of load capacity shall be made by a railroad bridge engineer using appropriate engineering methods and standards that are particularly applicable to railroad bridges.

Guidance. In the RSIA, Congress mandated that a professional engineer competent in the field of railroad bridge engineering, or a qualified person under the supervision of the track owner, determine bridge capacity (RSIA Section 417(b)(2)). Load capacity determination in most instances requires the education, experience, and training of an engineer who is familiar with railroad bridges and the standard practices unique to that class of structure.

The present standard references for railroad bridge design and analysis are found in the American Railway Engineering and Maintenance-of-Way Association's (AREMA) Manual for Railway Engineering. The chapters in the manual dealing with timber, concrete and steel structures, and seismic design are under continuous review by committees consisting of leading engineers in the railroad bridge profession, including FRA representatives. Although bridges exist that were designed using different or earlier references, they can still be evaluated by use of the AREMA Manual.

There is a clear distinction between what some consider a "condition rating" ascribed to a bridge by an RBI, and a "capacity rating," which is determined by a qualified railroad bridge

engineer. The term “rating” in the context of this rule refers only to a capacity rating. This rule does not address a condition rating to be applied to a bridge.

(d) Bridge load capacity may be determined from existing design and modification records of a bridge, provided that the bridge substantially conforms to its recorded configuration. Otherwise, the load capacity of a bridge shall be determined by measurement and calculation of the properties of its individual components, or other methods as determined by a railroad bridge engineer.

Guidance. This paragraph permits bridge load capacity to be determined from existing design and modification records of a bridge, provided that the bridge substantially conforms to its records configuration. Where deterioration or section loss exists, the effects of such must be taken into account. Determination of bridge load capacity requires information on the configuration of the bridge and the dimensions and material of its component parts. If the bridge is found to conform to the drawings of its original design and modifications, those drawings may serve as the basis for any rating calculation that might be performed; thereby, simplifying the process. Lacking that prior information, it is necessary that the configuration, dimensions, condition, and properties of the bridge and its components be determined by on-site measurement of the bridge as it currently exists.

While the primary focus for determination of bridge load carrying capacity is usually on the superstructure, the bridge substructure must also be taken into account. The capacity of exposed pile bents or viaduct towers may be calculated based on expected load distribution to the piles or columns. Other substructure types, such as mass concrete or masonry abutments and piers, may need to be considered as outlined below.

A rigorous, exact method of rating is not practicable with several types of bridges, including some massive concrete or masonry structures and many timber trestles. The RBE will necessarily use judgment in determining the loads that should be permitted to operate over these bridges, and ensure that adequate inspections are performed so that any developing deterioration or signs of overload are detected before they progress to become a serious problem.

FRA recognizes that the evaluation of timber trestles is not an exact science. Although theoretical values of safe forces and stresses can be placed on individual timber components, the actual nature of wood varies widely, even within the same species. FRA also recognizes that many older concrete and masonry structures are not documented. Especially in the case of reinforced concrete, the configuration of reinforcing steel greatly affects the calculated capacity of the bridge. The analysis of brick and stone arches is possible, but the unknown variables can produce widely differing results. In the railroad bridge engineering profession, the practice has been to observe these structures for any obvious signs of distress and to rate them based on their condition at the time of inspection. FRA will accept the reasonable application of present methods for evaluating and managing these structures.

The terms “normal rating” and “maximum rating” found in the AREMA Manual for Railway Engineering are often used when describing bridge ratings. There may be instances where the calculated Normal Rating for a concrete structure is not adequate for the equipment that

is being operated, and has been operated for decades without incident or signs of structural distress. In such a case, it is up to the RBE to determine the safe load capacity of the bridge. Assuming that the rating requirements found in the AREMA Manual are being followed, the RBE is permitted to determine a safe load capacity greater than a Normal Rating so long as it is understood that operating loads producing stresses greater than a Normal Rating will likely shorten the useful life of the bridge. If the loads being permitted produce stresses greater than the calculated Maximum Rating for the bridge, the RBE will be hard-pressed to justify the safe load capacity determination. It may be necessary to take core samples to demonstrate that the strength of the concrete is greater than the design strength and then recalculate the AREMA ratings using revised material strengths. Alternatively, the RBE might choose to exercise engineering judgment, as permitted by § 237.71(d), where it states “[o]therwise, the load capacity of a bridge shall be determined by measurement and calculation of the properties of its individual components, **or other methods as determined by a railroad bridge engineer**” (emphasis added). This language was included in the regulations to permit an RBE to rate a bridge by “observation,” recognizing the fact that many masonry or concrete structures lack as-built drawings that actually reflect the as-built configuration.

A bridge inspector or supervisor who is not an engineer can certainly determine by observation and measurement whether the condition and configuration of a bridge corresponds with its state when it was rated by an engineer for capacity. However, if the bridge displays a condition or deterioration that materially affects its capacity, as by increasing the stress intensity in one or more components of the bridge, accurate determination of the revised capacity requires the experience, education, and training of a competent RBE. In the same manner, the determination of the capacity of an existing bridge requires that the engineer must consider all available information related to the configuration and condition of the bridge, including all available design and modification documents and current reports of inspections.

(e) If a track owner has a group of bridges for which the load capacity has not already been determined, the owner shall schedule the evaluation of those bridges according to their relative priority, as established by a railroad bridge engineer. The initial determination of load capacity shall be completed not later than five years following the required date for adoption of the track owner’s bridge management program in conformance with § 237.31.

Guidance. In this paragraph, FRA requires a track owner to schedule the evaluation of bridges for which the load capacity has not already been determined. This section provides for a phase-in period for determination of bridge capacities to allow a reasonable time period for track owners to accomplish this work. It is intended that the unrated bridges be given relative priority for rating, based on the judgment of an RBE. This prioritization can be accomplished either by observation or by evaluation of certain critical members of a bridge, as determined by the engineer using professional judgment.

The deadlines for the initial determination of load capacity were as follows:

- March 14, 2016: Class I carriers.

- March 14, 2016: Owners of track segments that are part of the general railroad system of transportation and that carry more than 10 scheduled passenger trains per week.
- September 13, 2016: Class II carriers to which § 237.31(b) does not apply.
- September 13, 2017: All other track owners subject to this part and not described in paragraphs (a) through (c) of § 237.31.

As of September 13, 2017, all track owners previously subject to Part 237 must have their bridge safe load capacities determined. For track owners to which Part 237 becomes applicable on or after September 13, 2017, a complete BMP, including determination of all bridge load capacities, must be adopted by the time railroad operations commence. There will be no 5-year period following the date of BMP adoption during which to rate their bridges.

(f) Where a bridge inspection reveals that, in the determination of the railroad bridge engineer, the condition of a bridge or a bridge component might adversely affect the ability of the bridge to carry the traffic being operated, a new capacity shall be determined.

Guidance. A new capacity must be determined by an RBE when a bridge inspection record reveals that the condition of a bridge or a bridge component might adversely affect the load capacity of the bridge. Accurate determination of current bridge capacity depends on accurate information about the current configuration and condition of the bridge. It is the responsibility of the RBE to determine if a change in condition or configuration calls for a revised rating calculation.

(g) Bridge load capacity may be expressed in terms of numerical values related to a standard system of bridge loads, but shall in any case be stated in terms of weight and length of individual or combined cars and locomotives, for the use of transportation personnel.

Guidance. Engineers use standard definitions of loading combinations for design and rating of bridges. Common among these standard definitions is a series of proportional loads known as the Cooper System. The capacity of a bridge and its components can be described in terms of a Cooper Rating, and the effect of rail equipment on a bridge can also be related to a Cooper System value.

Proper application of this system requires a full understanding of its use and limitations. However, the results of its application can be translated into terms of equipment weights and configurations that can be effectively applied by persons who manage regular transportation operations of the railroad. This enables them to determine if a given locomotive, car, or combination can be operated on a bridge with no further consideration, or if the equipment must be evaluated by an RBE as an exceptional movement.

(h) Bridge load capacity may be expressed in terms of both normal and maximum load conditions. Operation of equipment that produces forces greater than the normal capacity shall be subject to any restrictions or conditions that may be prescribed by a railroad bridge engineer.

Guidance. Normal bridge ratings generally define the loads that can be operated on a bridge for an indefinite period without damaging the bridge. In some cases, (mostly involving steel or iron bridges) a higher rating, up to a maximum rating, can be given to the bridge to permit the operation of heavier loads on an infrequent basis. These heavier loads should not, in themselves, damage the bridge, but the cumulative effect of the higher resulting stresses in bridge members could cause their eventual deterioration and reduce their useful life.

Operation of equipment that produces forces greater than the normal capacity must be subject to any restrictions or conditions that may be prescribed by an RBE. An RBE can often prescribe compensating conditions that will permit the movement of equipment that is heavier than normal. Examples include speed restrictions to reduce the impact factor of the rolling load, the insertion of lighter-weight spacer cars between the heavier cars in a train, restricting operations to only one track at a time, or the installation of temporary bents or other supports under specific points on the bridge.

§ 237.73 Protection of bridges from over-weight and over-dimension loads

(a) Each track owner shall issue instructions to the personnel who are responsible for the configuration and operation of trains over its bridges to prevent the operation of cars, locomotives and other equipment that would exceed the capacity or dimensions of its bridges.

Guidance. Bridges can be seriously damaged by the operation of loads that exceed their capacity. Movement of equipment that exceeds the clear space on a bridge is an obvious safety hazard. In this section, FRA addresses Congress' mandate in the RSIA that the track owner "develop, maintain, and enforce a written procedure that will ensure that its bridges are not loaded beyond their capacities" (RSIA Section 417(b)(4)).

Transportation personnel of a railroad are ultimately responsible for the movement of trains, cars, and locomotives. It is essential that they know and follow any restrictions that are placed on those movements. Until such time as the initial determination of load capacity has been made in accordance with § 237.71, FRA expects the track owner to have some reasonable basis for the weight limits being permitted on its bridges. Old timetables or other legacy documents should be researched to establish this reasonable basis for use in issuing weight instructions during that period prior to the RBE determining a safe load capacity through calculation or other acceptable methods.

(b) The instructions regarding weight shall be expressed in terms of maximum equipment weights, and either minimum equipment lengths or axle spacing.

Guidance. Transportation personnel have information on the weights and configuration of cars and locomotives, and they must be able to relate that information to any restrictions placed on the movement of that equipment. Prior to the promulgation of the BSS, many railroads issued instructions regarding weight in terms of maximum car weight only. This paragraph requires that in addition to the maximum weight, the instructions must include either the minimum equipment lengths or the minimum axle spacing. This requirement applies to locomotives as well as railroad cars.

(c) The instructions regarding dimensions shall be expressed in terms of feet and inches of cross section and equipment length, in conformance with common railroad industry practice for reporting dimensions of exceptional equipment in interchange in which height above top-of-rail is shown for each cross-section measurement, followed by the width of the car of the shipment at that height.

Guidance. In the industry, a standard format exists for the exchange of information on dimensions of railroad equipment. Use of the industry practice is necessary to avoid error and confusion. It is permissible to issue dimension instructions using the Association of American Railroads Clearance Plates, as these define the limiting dimensions for a given plate.

(d) The instructions may apply to individual structures, or to a defined line segment or group(s) of line segments where the published capacities and dimensions are within the limits of all structures on the subject line segments.

Guidance. Railroads commonly issue instructions related to equipment weights and dimensions to be effective on-line segments of various lengths. It is not necessary that transportation personnel be advised of the capacity of every bridge as long as each bridge in the line segment has the capacity to safely carry the loads permitted on that line.

Subpart E – Bridge Inspection

Guidance. This subpart establishes minimum standards to be incorporated into railroad BMPs to provide for an effective program of bridge inspections.

Bridge inspection is a vital component in any BMP. A bridge with undetected or unreported damage or deterioration can present a serious hazard to the safe operation of trains. Bridge inspection and evaluation is a multi-tiered process, unlike many other types of inspection on a railroad. While track, equipment, and signal inspectors usually can compare measurements against common standards to determine whether the inspected feature complies with the standards, this is not the case with most bridges. The evaluation of a bridge requires the application of engineering principles by a competent person, who is usually not present during the inspection. It is therefore necessary that an inspection report show any conditions on the bridge that might lead to a reduction in capacity, initiation of repair work, or a more detailed inspection to further characterize the condition.

§ 237.101 Scheduling of bridge inspections

(a) Each bridge management program shall include a provision for scheduling an inspection for each bridge in railroad service at least once in each calendar year, with not more than 540 days between any successive inspections.

Guidance. In this paragraph, FRA establishes regulations to address Congress' mandate that the track owner "conduct regular comprehensive inspections of each bridge, at least once every year, and maintain records of those inspections that include the date on which the inspection was performed, the precise identification of the bridge inspected, the items

inspected, an accurate description of the condition of those items, and a narrative of any inspection item that is found by the inspector to be a potential problem” (RSIA Section 417(b)(5)). Annual inspection of bridges has been an industry practice for more than a century, and has proven to be an effective tool of bridge management. Even where a bridge sees very low levels of railroad traffic, the potential still exists for damage from external sources or natural deterioration. This paragraph calls for one inspection per calendar year, with no more than 540 calendar days between the dates of completion of successive inspections. For example, if a bridge is inspected on January 3, 2018, it becomes overdue for inspection on June 27, 2019, 541 days later. If it is inspected on December 18, 2017, it becomes overdue on January 1, 2019, since it was not inspected in calendar year 2018.

All inspections performed on or after the required date of BMP adoption must comply with the requirements and procedures spelled out in the track owner’s BMP.

The BSS do not prescribe an inspection procedure—that decision is left to the RBE. It is quite likely that the RBE might prescribe varying levels of detail for inspections performed at different periods, depending on the configuration and condition of the bridge.

(b) A bridge shall be inspected more frequently than provided for in the bridge management program when a railroad bridge engineer determines that such inspection frequency is necessary considering conditions noted on prior inspections, the type and configuration of the bridge, and the weight and frequency of traffic carried on the bridge.

Guidance. This paragraph requires that a bridge must be inspected more frequently than the period referenced in paragraph (a), above, when an RBE determines that such inspection frequency is necessary. The responsibility for adequate inspection remains with the track owner, with the conditions prescribed by an RBE. The inspection regimen for every bridge must be determined from its condition, configuration, environment, and traffic levels.

(c) Each bridge management program shall define requirements for the special inspection of a bridge to be performed whenever the bridge is involved in an event which might have compromised the integrity of the bridge, including but not limited to a flood, fire, earthquake, derailment or vehicular or vessel impact.

Guidance. It is essential that railroad traffic be protected from possible bridge failure resulting from damage from an event caused by natural or non-railroad agents. The track owner must have in place a means to receive notice of such an event, including weather and earthquakes, and a procedure to conduct an inspection following such an event.

(d) Any railroad bridge that has not been in railroad service and has not been inspected in accordance with this section within the previous 540 days shall be inspected and the inspection report reviewed by a railroad bridge engineer prior to the resumption of railroad service.

Guidance. The inspection frequency requirements of this section do not apply to bridges that are not in railroad service. Clearly the operation of a revenue train constitutes “railroad service”; however, FRA also considers test trains and deadhead equipment moves to be included. During the restoration of a track supported by bridges that have been out of service and not inspected within the previous 540 days, the operation of work trains, including

similar equipment capable of moving rail cars, may be done at the discretion of the RBE. It is not the intent that an inspection must be performed and documented in accordance with the track owner's adopted BMP, but rather that the RBE is responsible for determining that the bridges are safe for the passage of the work trains. Operation of hi-rail or on-track maintenance-of-way equipment for the purpose of clearing sufficient trees and brush necessary to access and assess the track and bridges is permitted for a reasonable, short period of time, after which the RBE must perform a bridge evaluation sufficient to ensure continued bridge safety during the restoration.

FRA notes that although inspections are not required on out-of-service railroad bridges, State law regarding responsibility for damage to outside parties that might be caused by the condition of the bridge is not affected. If a bridge not in service has been inspected within the 540-day period, the track owner may accept that inspection and begin railroad service, subject to any determination in that regard by an RBE. If a bridge not in service has **not** been inspected within the previous 540 days, an inspection equivalent to the "annual" inspection must be performed and the inspection report reviewed by an RBE before railroad service may resume.

It is common practice for railroads to store surplus rail cars on unused tracks for an extended period of time. Where cars have been stored, access to inspect or otherwise evaluate the condition of the out-of-service bridges may not be practicable. In such a case, FRA will allow the track owner to remove the stored cars from the affected bridges as long as engines or locomotives do not traverse the out-of-service bridges. Before any further rail equipment may move across the out-of-service bridges, they must be inspected and the reports reviewed by an RBE.

§ 237.103 Bridge inspection procedures

- (a) Each bridge management program shall specify the procedure to be used for inspection of individual bridges or classes and types of bridges.*
- (b) The bridge inspection procedures shall be as specified by a railroad bridge engineer who is designated as responsible for the conduct and review of the inspections. The inspection procedures shall incorporate the methods, means of access, and level of detail to be recorded for the various components of that bridge or class of bridges.*
- (c) The bridge inspection procedures shall ensure that the level of detail and the inspection procedures are appropriate to: the configuration of the bridge; conditions found during previous inspections; the nature of the railroad traffic moved over the bridge (including equipment weights, train frequency and length, levels of passenger and hazardous materials traffic); and vulnerability of the bridge to damage.*
- (d) The bridge inspection procedures shall be designed to detect, report and protect deterioration and deficiencies before they present a hazard to safe train operation.*

Guidance. In this section, FRA requires that each BMP specify the procedure to be used for inspection of individual bridges or classes and types of bridges. The bridge inspection

procedures must be as specified by an RBE who is designated as responsible for the conduct and review of the inspections. *See* RSIA Section 417(b)(7)(A). In the RSIA, Congress also mandated that the bridge safety regulations must “ensure that the level of detail and the inspection procedures are appropriate to the configuration of the bridge, conditions found during the previous inspections, and the nature of the railroad traffic moved over the bridge, including car weights, train frequency and lengths, levels of passenger and hazardous materials traffic, and vulnerability of the bridge to damage.” Accordingly, FRA requires that the bridge inspection procedures must ensure that the level of detail and the inspection procedures are appropriate to the configuration of the bridge. Additionally, the bridge inspection procedures must be designed to detect, report, and protect deterioration and deficiencies before they present a hazard to safe train operation. The responsibility for adequate inspection remains with the track owner, with the conditions to be documented and the procedures to be followed as prescribed by an RBE. The inspection regimen for every bridge should be determined from its condition, configuration, environment, and traffic levels. The instructions for bridge inspection may be either general, as by bridge type or line segment, or specific, as needed by particular considerations for an individual bridge.

The RBE specifying bridge inspection procedures can be either an employee of or a consultant to the track owner. The RBE is not required to be on site, or even on the property, during an inspection. A primary purpose of the audit procedure called out in § 237.153 is to permit the RBE to review and monitor the effectiveness of the bridge inspection program that has been conducted under his or her overall charge.

In instances where a bridge is shared and supports both railroad and highway loads, the track owner is responsible for the inspection of all members or components that fall within the track-supporting load path. In the case of members or components that support both railroad and highway loads, the evaluation of conditions and load capacity must consider the combined effect of stresses caused by both sources.

In specifying the bridge inspection procedures, it is permissible for a track owner to adopt specific chapters or sections of the AREMA Bridge Inspection Handbook by reference; however, each RBI must have ready access to a copy of the handbook and be cognizant of its contents.

§ 237.105 Special Inspections

(a) Each bridge management program shall prescribe a procedure for protection of train operations and for inspection of any bridge that might have been damaged by a natural or accidental event, including but not limited to a flood, fire, earthquake, derailment or vehicular or vessel impact.

Guidance. In this paragraph, FRA requires that each BMP prescribe a procedure for protection of train operations and for inspection of any bridge that might have been damaged by a natural or accidental event, including flood, fire, earthquake, derailment, or vehicular or vessel impact. It is essential that railroad traffic be protected from possible bridge failure caused by damage from an event caused by natural or non-railroad agents. The track owner should have in place a means to receive notice of such an event, including weather conditions

and earthquakes, and a procedure to conduct an inspection following such an event. For these procedures to effectively protect train operations, instructions detailing the required responses, including any restrictions, should be issued to those transportation personnel responsible for dispatching and operation of trains. All special inspections performed by a designated RBI must be documented as required by § 237.109(a). During or following natural events that encompass a widespread area such as flooding or an earthquake, it is typical for track inspectors to patrol their territory looking out for signs of damage or instability. Bridge observations made during these patrols serve as triage but do not need to be documented as bridge inspections. Where questionable conditions are noted, a designated RBI must be dispatched to perform a documented inspection.

Because natural or accidental events cannot be predicted, and a designated RBI may not be readily available, it is acceptable for a person who is not a designated RBI to respond to the scene and relay information to the designated RBI by telephone, two-way radio, or other means of communication. If the first responder on site can convey to the RBI an accurate description of the bridge condition, the RBI may authorize railroad operations to resume with or without restrictions, as appropriate. Should the RBI be unable to make that decision due to some level of structural damage described by the first responder, the RBI may consult with a designated RBE. If the RBE is satisfied with his understanding of the damage, the RBE may authorize resumption of train operations, with or without restrictions, and does not have to go back to the RBI for that authorization. However, the RBI must file an inspection report documenting the circumstances and their determination. The procedure should specify that when the RBI does not respond immediately, the RBI must perform a follow-up inspection and file a report accordingly. This report should include an indication that the inspection was made in response to an emergency event that happened on a previous date.

There may also be instances where the first responder must communicate directly with, and receive guidance from, the RBE. This action is acceptable in the case of an emergency inspection since the RBE is ultimately responsible for determining the safe loading conditions for railroad bridges and providing guidance to the RBI. This situation highlights one reason why a track owner would be well served to designate an individual not just as an RBE, but also as an RBI, and possibly an RBS, provided the individual is qualified to perform these functions. The track owner's BMP should specify the procedure by which a non-RBI first responder can be used to respond to an emergency event and then communicate with an RBI or RBE.

(b) Each bridge management program shall provide for the detection of scour or deterioration of bridge components that are submerged, or that are subject to water flow.

Guidance. In this paragraph, FRA requires that each BMP provide for the detection of scour or deterioration of bridge components that are submerged or subject to water flow.

The BMP must specify procedures for detecting scour problems at bridges where the RBE determines such procedures to be necessary. Bridges founded on shallow footings, highly erodible soils or located in areas subject to flash flooding should be included. These locations may or may not be underwater all year long. One example procedure, in the case of

locations with little or no water normally present, is taking measurements of channel cross sections during regular inspections.

The condition of bridge components located underwater is usually not evident from above. Means to determine their condition might be as simple as using measuring rods from the surface, or might call for either periodic or special diving inspections. Advanced technology might also provide devices that can be used to determine underwater conditions. This rule does not prescribe a particular frequency for underwater inspections; that decision is left to the RBE, to be based on the particular conditions at each bridge. The BMP must include an indication of bridges requiring underwater inspection along with the specified frequency of inspection.

§ 237.107 Conduct of bridge inspections

Bridge inspections shall be conducted under the direct supervision of a designated railroad bridge inspector, who shall be responsible for the accuracy of the results and the conformity of the inspection to the bridge management program.

Guidance. In this section, FRA requires that bridge inspections be conducted under the direct supervision of a designated RBI, who must be responsible for the accuracy of the results and the conformity of the inspection to the BMP. Bridge inspections can often require more than one person for safety and efficiency. This provision permits others to assist the designated inspector, who remains responsible for the results of the inspection.

Direct supervision does not absolutely require the designated RBI to be on site. The intent is that the RBI be on site during an inspection; however, FRA interprets “direct supervision” to allow for limited exceptions to the RBI being on site, such as responding to an accidental or natural event when a designated RBI is not reasonably available. As an example, it is permissible for the railroad to dispatch a roadmaster to a bridge strike to inspect the track structure and relay pertinent information to the designated RBI concerning the condition of the bridge, including any damage. Based on the information provided during some form of two-way communication, the RBI could make a decision concerning the operation of trains. The RBI remains responsible for the decision, and is still required to promptly follow up with an on-site inspection. If use of this limited exception becomes common practice as a matter of convenience, rather than there being a bona fide excess delay in having an RBI respond, FRA will consider such abuse unacceptable.

§ 237.109 Bridge inspection records

(a) Each track owner to which this part applies shall keep a record of each inspection required to be performed on those bridges under this part.

Guidance. In this section, FRA requires that each track owner to which this part applies keep a record of each inspection required to be performed under this part. A bridge inspection has little value unless it is recorded and reported to the individuals responsible for the ultimate determination of the safety of the bridge. Bridge inspectors may use a variety of methods to record their findings as they move about the bridge. These may include

notebooks, voice recordings, having another individual transcribe notes, and photographs. These notes and other items are usually compiled into a prescribed report format at the end of the day or at the conclusion of the inspection.

Since FRA cannot be present onsite at each bridge inspection, the agency must see a record that shows that the inspection was performed, when and by whom it was performed, and the conditions found in the inspection.

(b) Each record of an inspection under the bridge management program prescribed in this part shall be prepared from notes taken on the day(s) the inspection is made, supplemented with sketches and photographs as needed. Such record will be dated with the date(s) the physical inspection takes place and the date the record is created, and it will be signed or otherwise certified by the person making the inspection.

Guidance. Inspection of a large or complex bridge may take more than 1 day. This paragraph requires that the bridge inspection record include a notation of all dates during which the inspection was conducted. Indicating just the beginning and ending dates or just the ending date is not acceptable. If the record documents inspection work performed on more than 1 day, each individual date must be shown. It is acceptable for the multiple dates to be shown in a notation rather than in the report header when the format of the inspection record does not allow multiple dates in the header. The method by which multiple inspection dates are to be documented must be specified in the owner's BMP.

In many instances, inspection records are not filled out on the day of the inspection, but are created back in an office several days or weeks following the completion of the physical inspection. This practice necessitates the requirement that the inspection record must reflect both the date(s) of inspection as well as the date that the inspection record is completed and signed.

There is no requirement that the designated RBI personally fill out a paper report form or input an electronic record. Using another individual to perform these tasks is permissible, and may be desirable, so long as the designated RBI responsible for conducting the inspection reviews and signs or certifies the report. Ultimately, the designated RBI is responsible for the accuracy of the report and ensuring that it adequately describes the condition of the bridge.

(c) Each bridge management program shall specify that every bridge inspection report shall include, as a minimum, the following information:

- (1) A precise identification of the bridge inspected;*
- (2) The date on which the physical inspection was completed;*
- (3) The identification and written or electronic signature of the inspector;*
- (4) The type of inspection performed, in conformance with the definitions of inspection types in the bridge management program;*
- (5) An indication on the report as to whether any item noted thereon requires expedited or critical review by a railroad bridge engineer, and any restrictions placed at the time of the inspection;*

- (6) *The condition of components inspected, which may be in a condition reporting format prescribed in the bridge management program, together with any narrative descriptions necessary for the correct interpretation of the report; and*
- (7) *When an inspection does not encompass the entire bridge, the portions of the bridge which were inspected shall be identified in the report.*

Guidance. In paragraph (c), FRA delineates the minimum elements that must be addressed and reported in any bridge inspection. Any additional information required by the RBE should be specified in the BMP.

Section 237.109(c)(1) requires each report to include a precise identification of the bridge inspected; this identification must be the same as the unique bridge identification used in the bridge inventory.

Section 237.109(c)(4) requires each report to indicate the type of inspection performed using one of the inspection types that must be defined in the BMP. Example inspection types may include annual, periodic, interim, rating, detailed, special, emergency, post-event, etc. The method used to indicate the type of inspection could be a check box, in writing, by using a different identified report format for each type of inspection, or other means defined in the BMP.

Section 237.109(c)(5) requires “[a]n indication on the report as to whether any item noted thereon requires expedited or critical review by a railroad bridge engineer, and any restrictions placed at the time of the inspection.”

The report needs to have a means of flagging the report for expedited or critical review. Lack of such indication is understood to mean no expedited or critical review is recommended. The track owner could, for example, set up the report with a yes or no check box to indicate that an expedited or critical review is recommended so that an inspector’s oversight does not result in a seriously deficient condition being overlooked. For electronic recordkeeping, the system used must provide a method for the RBI to flag a record for expedited or critical review so that the inspection record goes to the top of the pile and potentially follows a parallel path around the normal review and approval path. The BMP must specify the manner in which reports or records will be flagged for expedited or critical review.

The same conditions would apply to notations concerning restrictions placed at the time of inspection. The lack of a restriction notation would be taken to mean no restrictions were placed. The BMP must specify the procedure to be used for recording restrictions placed at the time of the inspection.

Section 237.109(c)(6) requires that the report show “[t]he condition of components inspected....” FRA expects the inspection record to be a condition report where the current state of all components or classes of components is recorded, not an exception report where only the condition of deficient components is recorded and all others are assumed to be in a like-new condition and functioning as intended. Unless a condition assessment is assigned to a component or class of components, there is no indication that these items were even inspected. Taken to the extreme, a bridge that is in like-new condition might show just the

header information, the date of the inspection, the date of report creation, and the inspector's identification. A report containing only these pieces of information would be defective.

Where a structural element is typically hidden from view, such as abutment footings or piles beneath a pier, the condition is normally evaluated by observing the behavior and condition of structural elements that are supported by the hidden element. In such a case, no sign of distress may be inferred to mean that nothing is wrong. If an element is hidden but should not be, such as bridge seats buried in ballast, then the report should indicate that the element could not be inspected and the reason.

The regulation does not specify how the track owner must format the inspection report, only that it be able to capture "[t]he condition of components inspected, which may be in a condition reporting format prescribed in the BMP, together with any narrative descriptions necessary for the correct interpretation of the report." The key here is that there is **sufficient** "narrative description necessary for the correct interpretation of the report." Where the reporting format does not divide members into discrete elements, adequate narrative is essential, especially for elements that are in less than good condition. The level of detail provided must be sufficient for the RBE to evaluate the severity of conditions, considering the combined effects of multiple deficient conditions, to determine both localized and overall structural integrity.

Neither does the regulation define what constitutes a component. In the case of a riveted deck plate girder span with an open deck, one bridge inspection program might attempt to define the components to be the deck, superstructure, and substructure. FRA believes that the deck, superstructure, and substructure are not components but rather groups of components and would find this inadequate. Alternatively, a second program could break down these global systems further to include ties, tie spacers, hook bolts, girders, cross bracing, lateral bracing systems, abutments, piers, backwalls, and bridge seats. A third program might break the girders down into even smaller elements such as top flange, bottom flange, flange angles, web, intermediate stiffeners, bearing stiffeners, sole plates, and anchor bolts. FRA expects, at a minimum, conditions to be assessed for all steel superstructure components at the level of stringers, floor beams, floor system bracing, multi-beams, and girders. For trusses, FRA expects that the truss be divided at a minimum into inspection units consisting of upper chords, web members (hangers, diagonals, and posts), lower chords, bearings, lateral bracing, sway bracing, and portals.

FRA would prefer that a report indicate the conditions of the individual elements making up a primary load-carrying member; however, as long as sufficient narrative, sketches, or photographs are supplied with the report to enable the reviewer to evaluate the severity and extent of deficient conditions, compliance with the regulations would be achieved. FRA would not expect a narrative for a member or component categorized as being in excellent or good condition. However, once the condition drops to fair or worse, an indication of the reason for that assessment is warranted and expected. If the track owner's BMP and associated bridge inspection program do not require such explanation, then the program is defective.

In reviewing the adequacy of a bridge inspection report, the FRA inspector must compare a

report prepared in conformance with the track owner's BMP to the actual conditions found in the field, and then evaluate whether the report conveys sufficient, accurate information to the RBE to make an informed decision on the state of the bridge.

(d) An initial report of each bridge inspection shall be placed in the location designated in the bridge management program within 30 calendar days of the completion of the inspection unless the complete inspection report is filed first. The initial report shall include the information required by paragraphs (c)(1) through (c)(5) of this section.

Guidance. In this paragraph, FRA requires that an initial report of each bridge inspection be placed in the location designated by the BMP within 30 calendar days of the completion of the field portion of the inspection. If the complete report as described in § 237.109(e) is filed within 30 days of the completion of the inspection, an initial report is not required. The initial report must include the information delineated in paragraphs (c)(1) through (c)(5). The actual conduct of the inspection must be reported and recorded, showing that the bridge was actually inspected on a certain date, the type of inspection performed, by whom it was performed, and whether any critical conditions were detected. Inspection and reporting procedures vary widely among different railroads and circumstances. In many cases, especially on larger railroads, an inspector would prepare the report before leaving the bridge. The reports might be forwarded by mail, by electronic means, or by hand delivery. They might be forwarded daily or weekly, or even less frequently. In other circumstances, a consulting engineer might be engaged by a small railroad to inspect all the bridges on all or part of the line, and the final report might be prepared by the engineering firm after all the inspections are completed. Similarly, a large railroad might begin a comprehensive inspection and evaluation of a large structure that will take several months to complete.

FRA recognizes the wide range of time periods required for these various inspections and reporting procedures, so this provision was developed as a means for the track owner to monitor inspection progress, bridge by bridge, with a simple line item showing:

1. Identification of the bridge inspected.
2. Date of completion of the inspection.
3. Identification of the inspector.
4. Type of inspection performed.
5. Indication on the report as to whether any item noted thereon requires expedited or critical review by an RBE, and any restrictions placed at the time of the inspection.

These five items can usually be listed on a single line of a report. The initial report might include all the bridges inspected by one individual in 1–2 weeks. FRA does not anticipate that the initial or summary report include all the data called for in the BMP, together with any narrative descriptions necessary for the correct interpretation of the report. This information would be included in the complete inspection report.

FRA views the initial report as a management tool in the bridge program audit to show whether bridge inspections are being performed at or near their scheduled frequency, with ample time to permit adjustments as necessary in the inspection program.

An effective BMP requires that the person in charge of the program have reasonably current information on the progress of the vital function of bridge inspection.

(e) A complete report of each bridge inspection, including as a minimum the information required in paragraphs (c)(1) through (c)(6) of this section, shall be placed in the location designated in the bridge management program within 120 calendar days of the completion of the inspection.

Guidance. In this paragraph, FRA requires that a complete report of each bridge inspection must be placed in the location designated in the BMP within 120 days of the completion of the field portion of the inspection. A bridge inspection is not complete until the report of the inspection is filed and available to the people who are responsible for the management of the bridges inspected. This time period does not include the time used by a consultant or in-house engineering group to complete an analysis of the results of the inspection, and it is not expected that the analysis must be completed within that time period. In cases where a detailed analysis is required, FRA intends that the inspection report on which the analysis is based would be separated from the analysis itself and filed within the required timeframe.

FRA understands the circumstances in which a consultant is engaged to conduct detailed bridge inspections and evaluations. Some of those evaluations include a considerable amount of engineering work that is performed in an office rather than in the field, and several months are often used in preparing the complete report. The extension of the time period for filing the report is intended to allow the most efficient use of inspection and engineering resources, while still providing effective input for management by the bridge owner and FRA monitoring.

(f) Each bridge inspection program shall specify the retention period and location for bridge inspection records. The retention period shall be no less than two years following the completion of the inspection. Records of underwater inspections shall be retained until the completion and review of the next underwater inspection of the bridge.

Guidance. This paragraph requires that each bridge inspection program specify the retention period and location for bridge inspection records. The retention period must be at least 2 years from the completion of the physical inspection. A comparison of successive reports can reveal any accelerating rates of deterioration or degradation of bridge components. Additionally, an audit or review of the effectiveness of a bridge inspection program requires comparison of previous inspection reports with the actual condition of a bridge included in the audit. The practice of comparing previous inspection reports with actual bridge conditions has been followed by FRA for more than a decade when evaluating railroad BMPs. It is a valuable factor in determining the effectiveness of a railroad's program.

For purposes of enforcement, an FRA inspector cannot look back any further than the

regulations require, even if the track owner's BMP specifies a longer retention period. In a case where bridge inspection records have been retained for at least 2 years but less than required by the BMP, the inspector must indicate in a comment to the railroad that it has failed to comply with its own BMP.

(g) If a bridge inspector, supervisor, or engineer discovers a deficient condition on a bridge that affects the immediate safety of train operations, that person shall report the condition as promptly as possible to the person who controls the operation of trains on the bridge in order to protect the safety of train operations.

Guidance. Once it is determined that a condition affects the immediate safety of train operations, the first notification made must be to the person who controls the operation of trains. Requiring the party who discovered the deficient condition to make the first notification to anyone else is unacceptable. This reporting process should be specified in the BMP.

§ 237.111 Review of bridge inspection reports

Bridge inspection reports shall be reviewed by railroad bridge supervisors and railroad bridge engineers to:

- (a) Determine whether inspections have been performed in accordance with the prescribed schedule and specified procedures;*
- (b) Evaluate whether any items on the report represent a present or potential hazard to safety;*
- (c) Prescribe any modifications to the inspection procedures or frequency for that particular bridge;*
- (d) Schedule any repairs or modifications to the bridge required to maintain its structural integrity; and*
- (e) Determine the need for further higher-level review.*

Guidance. The RSIA requires an engineer who is competent in the field of railroad bridge engineering to review all inspection reports and determine whether bridges are being inspected according to the applicable procedures and frequencies, and review any items noted by an inspector as exceptions (RSIA Section 417(b)(7)). In this section, FRA requires responsible supervisors and RBEs to review bridge inspection reports. Bridge inspection is usually a multi-tiered procedure. The RBI reports on the conditions noted in the inspection, but an RBE will necessarily evaluate those noted conditions and determine what, if any, further action is required.

The regulation does not require that an RBE review every inspection report so long as the responsible management personnel keep track of the conduct of inspections to see that they are performed in accordance with the schedule and other requirements of this rule and the track owner's program. It should be a simple matter for the inspector to indicate on a report whether the report would require higher-level or engineering review. The engineering staff would review the reports that indicate problems or issues for them to resolve. Section 237.153, *Audits of inspections*, includes a provision for sampling of routine inspection reports to ensure that the RBIs are properly identifying reports that require review.

Regardless of whether a report is “flagged” for higher-level or engineering review, all reports must be reviewed by at least a responsible supervisor or manager. While there is no specific regulatory requirement that a track owner document the fact that individual reports have been reviewed, failing to do so will likely impede the audit process.

The addition of the signature or initials of the individual who is reviewing an inspection report should not be viewed as changing the report, nor should any annotations made by the reviewer as long as it is apparent that someone other than the RBI made the addition and that individual is identified.

Subpart F – Repair and Modification of Bridges

Guidance. This subpart establishes minimum standards to be incorporated in railroad BMPs to provide for adequate design and effective supervision of those bridge modifications and repairs, which will materially modify the capacity of the bridge or the stresses in any primary load-carrying component of the bridge. This subpart provides requirements for correct design and adequate supervision of repair and modification of bridges where the work could materially affect the capacity of the bridge, or its continued integrity. FRA does not intend that minor repairs that do not affect the capacity of the bridge must be designed by an engineer; however, the supervision of that work should be performed by a person who is competent to ensure that the work does not inadvertently compromise the integrity of the bridge.

§ 237.131 Design

Each repair or modification which materially modifies the capacity of a bridge or the stresses in any primary load-carrying component of a bridge shall be designed by a railroad bridge engineer. The design shall specify the manner in which railroad traffic or other live loads may be permitted on the bridge while it is being modified or repaired. Designs and procedures for repair or modification of bridges of a common configuration, such as timber trestles, or instructions for in-kind replacement of bridge components, may be issued as a common standard. Where the common standard addresses procedures and methods that could materially modify the capacity of a bridge or the stresses in any primary load-carrying component of a bridge, the standard shall be designed and issued by a qualified railroad bridge engineer.

Guidance. Design of entire railroad bridges, modifications, and repairs that materially modify the capacity of the bridge or the stresses in any primary load-carrying component of the bridge require the intelligent application of the principles of engineering, and can be performed only by an engineer with training and experience in the field of railroad bridges. Railroads have typically issued standard instructions for the performance of common maintenance repairs, such as replacement or upgrading of components of timber trestles. This section specifically permits such a practice; however, any instruction or procedure that carries the potential to impair the ability of a bridge to carry rail equipment while being performed must be issued by a qualified RBE. For example, a standard procedure used for the in-kind replacement of steel floor system primary members would need to specify the number of rivets or bolts that could be removed from a connection and still safely carry trains, or else clearly prohibit the operation of any trains while certain portions of the work

are in progress. For purposes of this part, a primary load-carrying component is a railroad bridge component, the failure of which would immediately compromise the structural integrity of the bridge.

In general terms, the regulation requires the design of repairs or modifications that affect the safe load capacity of a bridge to be done by an RBE. The regulations are silent about the design of a new railroad bridge. Track owners should be encouraged to include language in their BMPs indicating what design specification will be used for new bridges, as well as repairs or modifications to existing structures. The AREMA Manual for Railway Engineering would be an appropriate design standard, and [Guideline 5](#), Specifications for design and rating of railroad bridges, Part 237, Appendix A, can be used as the guiding principle. However, the American Association of State Highway and Transportation Officials bridge code, or any building code, would not be appropriate design standards.

§ 237.133 Supervision of repairs and modifications

Each repair or modification pursuant to this part shall be performed under the immediate supervision of a railroad bridge supervisor as defined in § 237.55 of this part who is designated and authorized by the track owner to supervise the particular work to be performed. The railroad bridge supervisor shall ensure that railroad traffic or other live loads permitted on the bridge under repair or modification are in conformity with the specifications in the design.

Guidance. This section requires that each repair or modification pursuant to this part shall be performed under the immediate supervision of an RBS as defined in § 237.55 of this part who is designated and authorized by the track owner to supervise the particular work to be performed. Modifications and repairs that materially modify the capacity of the bridge or the stresses in any primary load-carrying component of the bridge must be performed according to the specific or general specifications and instructions issued by an RBE. The term “immediate supervision” means that the RBS is on site to ensure the repairs or modifications are performed in accordance with the specifications and instructions. Particularly when trains are permitted to pass over a bridge that is being repaired or modified, the supervisor at the bridge must be able to make the necessary determination to either permit, restrict, or halt train operations depending on the state of the bridge. As this part does not specify the employment relationship between the track owner and the bridge supervisor, the track owner may designate a contractor or a consultant as the RBS. It is necessary, however, that a qualified individual be responsible for the proper and safe performance of work on a bridge, and that the individual be authorized to perform the actions necessary to fulfill that responsibility. FRA intends that the requirement for an RBS to supervise repairs or modifications would be limited to work performed at the actual construction site and would not extend to the manufacture of prefabricated components at a steel fabricator’s or precast concrete supplier’s facility. In these cases, it is expected that the purchase order or contract requires the supplier to provide components manufactured or fabricated in accordance with the track owner’s plans and specifications, and for the supplier to have adequate quality assurance or quality control procedures in place.

Subpart G – Documentation, Records, and Audits of Bridge Management Programs

Guidance. Documentation is essential to any effective management program. In Subpart G, FRA establishes minimum standards to be incorporated in railroad BMPs to provide for verification of the effectiveness of the program and the accuracy of the information developed thereby by the track owner, and by FRA to evaluate compliance with this regulation.

§ 237.151 Audits; general

Each program adopted to comply with this part shall include provisions for auditing the effectiveness of the several provisions of that program, including the validity of bridge inspection reports and bridge inventory data, and the correct application of movement restrictions to railroad equipment of exceptional weight or configuration.

Guidance. Effective management of a safety-critical program requires an adequate level of review to ensure that the requisite work is being performed correctly. The audit provisions should identify the entity that is going to perform the audit and the frequency of the audit and list the specific items that will be audited. The specific items that should be audited include the validity of bridge inspection reports and bridge inventory data, compliance with BMP requirements governing inspection frequency and scheduling, performance and documentation of special inspections following a natural or accidental event, competency of individuals designated as RBE, RBI, or RBS, adequacy and completeness of bridge inspection record review, the correct application of movement restrictions intended to protect bridges from over-weight or over-dimension equipment, and the overall effectiveness of the BMP itself.

The regulation does not specify who should conduct the internal audit, but general audit principles would not permit the auditor and/or the person being audited to be the same individual employee or consulting firm. Since the track owner is ultimately responsible for the integrity of the program, the track owner or its organization should at least be represented on the audit even if the representative is not a designated RBE or RBI.

A track owner that performs its own bridge management functions, such as inspections, may audit its own program. The only caveat is that an individual should not audit his or her own work. Of course, that person could participate in the audit process as the person being audited.

§ 237.153 Audits of inspections

(a) Each bridge management program shall incorporate provisions for an internal audit to determine whether the inspection provisions of the program are being followed, and whether the program itself is effectively providing for the continued safety of the subject bridges.

(b) The inspection audit shall include an evaluation of a representative sampling of bridge inspection reports at the bridges noted on the reports to determine whether the reports accurately describe the condition of the bridge.

Guidance. FRA has found one of the most important indicators of the effectiveness of a program is a comparison of recent bridge inspection reports against actual conditions found at the subject bridges. This is fundamental to an effective audit of a BMP. Therefore, each BMP must incorporate provisions for an internal audit to determine whether the inspection provisions of the program are being followed, and whether the program itself is effectively providing for the continued safety of the subject bridges. Additionally, the inspection audit must include an evaluation of a representative sampling of bridge inspection reports at the bridges noted on the reports to determine whether the reports accurately describe the condition of the bridge.

§ 237.155 Documents and records

Each track owner required to implement a bridge management program and keep records under this part shall make those program documents and records available for inspection and reproduction by the Federal Railroad Administration.

Guidance. In this section, FRA requires each track owner required to implement a BMP and keep records under this part to make those program documents and records available for FRA inspection and reproduction. This section addresses the RSIA mandate to establish a program to periodically review bridge inspection and maintenance data from railroad carrier bridge inspectors and FRA bridge experts (RSIA Section 417(d)). FRA will require access to the vital documents and records of the various BMPs to enable it to carry out its enforcement responsibilities.

(a) Electronic recordkeeping; general. For purposes of compliance with the recordkeeping requirements of this part, a track owner may create and maintain any of the records required by this part through electronic transmission, storage, and retrieval provided that all of the following conditions are met:

- (1) The system used to generate the electronic record meets all requirements of this subpart;*
- (2) The electronically generated record contains the information required by this part;*
- (3) The track owner monitors its electronic records database through sufficient number of monitoring indicators to ensure a high degree of accuracy of these records;*
- (4) The track owner shall train its employees who use the system on the proper use of the electronic recordkeeping system; and*
- (5) The track owner maintains an information technology security program adequate to ensure the integrity of the system, including the prevention of unauthorized access to the program logic or individual records.*

(b) System security. The integrity of the bridge inspection records must be protected by a security system that incorporates a user identity and password, or a comparable method, to establish appropriate levels of program and record data access meeting all of the following standards:

- (1) No two individuals have the same electronic identity;*
- (2) A record cannot be deleted or altered by any individual after the record is certified by the employee who created the record;*
- (3) Any amendment to a record is either—*

- (i) Electronically stored apart from the record that it amends; or*
- (ii) Electronically attached to the record as information without changing the original record;*
- (4) Each amendment to a record uniquely identifies the person making the amendment; and*
- (5) The electronic system provides for the maintenance of inspection records as originally submitted without corruption or loss of data.*

Guidance. In these paragraphs, FRA establishes minimum standards for electronic recordkeeping that a track owner may elect to use to comply with the recordkeeping provisions of this part. FRA recognizes the growing prevalence of electronic records, and acknowledges the unique challenges that electronic transmission, storage, and retrieval of records can present. In these paragraphs, to allow for future advances in technology, FRA is establishing electronic record storage provisions that are technology-neutral.

For purposes of complying with the recordkeeping requirements of this part, a track owner may create and maintain any of the required records through electronic transmission, storage, and retrieval, provided that certain conditions are met. Not only must the system used to generate the electronic records meet all of the requirements of this subpart and the records contain all of the information required by this subpart, but the track owner must also: (1) monitor the electronic database through a sufficient number of monitoring indicators to ensure a high degree of the accuracy of the records; (2) train the employees who use the system on the proper use of the system; and (3) maintain an information technology security program adequate to ensure the integrity of the system, including the prevention of unauthorized access to the program logic or individual records.

Additionally, as specified in the BSS, the integrity of the bridge inspection records must be protected by a security system that incorporates user identity and password, or a comparable method, to establish appropriate levels of program and inspection record data access meeting all of the following standards: (1) no two individuals can have the same electronic identity; (2) a bridge inspection record cannot be deleted or altered by any individual after the record is certified by the employee who created the record; (3) any amendment to the record must either be electronically stored apart from the record it amends, or electronically attached to the record as information without changing the original record; (4) each amendment to a record must uniquely identify the person making the amendment; and (5) the electronic system must provide for the maintenance of inspection records as originally submitted without corruption or loss of data.

There must be a record of each inspection made and it must be retrievable. Subsequent inspections cannot alter the previous record to the extent that a reviewer is unable to determine the content of the earlier record.

Appendix A – Supplemental Statement of Agency Policy on the Safety of Railroad Bridges

A Statement of Agency Policy on the Safety of Railroad Bridges was originally published by FRA in 2000 as Appendix C of the Federal Track Safety Standards, 49 CFR Part 213. With the

promulgation of 49 CFR Part 237, Bridge Safety Standards, many of the non-regulatory provisions in that Policy Statement have been incorporated into the bridge safety standards in this part.

However, FRA has determined that other non-regulatory items are still useful as information and guidance for track owners. Those provisions of the Policy Statement are therefore retained and placed in this Appendix in lieu of their former location in the Track Safety Standards.

Guidance. This appendix is included in this manual as information only. This statement of agency policy is non-regulatory. **In any instance where information contained here conflicts with regulatory requirements, the regulatory language must prevail.**

GENERAL

- 1. The structural integrity of bridges that carry railroad tracks is important to the safety of railroad employees and to the public. The responsibility for the safety of railroad bridges is specified in [§ 237.3](#), “Responsibility for compliance.”*
- 2. The capacity of a bridge to safely support its traffic can be determined only by intelligent application of engineering principles and the law[s] of physics. Track owners should use those principles to assess the integrity of railroad bridges.*
- 3. The long-term ability of a structure to perform its function is an economic issue beyond the intent of this policy. In assessing a bridge’s structural condition, FRA focuses on the present safety of the structure, rather than its appearance or long-term usefulness.*
- 4. FRA inspectors conduct regular evaluations of railroad bridge inspection and management practices. The objective of these evaluations is to document the practices of the evaluated railroad, to disclose any program weaknesses that could affect the safety of the public or railroad employees, and to assure compliance with the terms of this regulation. If the evaluation discloses problems, FRA seeks a cooperative resolution. If safety is jeopardized by a track owner’s failure to resolve a bridge problem, FRA will use appropriate measures, including assessing civil penalties and issuance of emergency orders, to protect the safety of railroad employees and the public.*
- 5. This policy statement addresses the integrity of bridges that carry railroad tracks. It does not address the integrity of other types of structures on railroad property (i.e., tunnels, highway bridges over railroads, or other structures on or over the right-of-way).*
- 6. The guidelines published in this statement are advisory. They do not have the force of regulations or orders, which FRA may enforce using civil penalties or other means. The guidelines supplement the requirements of part 237 and are retained for information and guidance.*

GUIDELINES

- 1. Responsibility for safety of railroad bridges.*
 - (a) The responsibility for the safety of railroad bridges is specified in [§ 237.3](#).*
 - (b) The track owner should maintain current information regarding loads that may be*

operated over the bridge, either from its own engineering evaluations or as provided by a competent engineer representing the track owner. Information on permissible loads may be communicated by the track owner either in terms of specific car and locomotive configurations and weights, or as values representing a standard railroad bridge rating reference system. The most common standard bridge rating reference system incorporated in the Manual for Railway Engineering of the American Railway Engineering and Maintenance of Way Association is the dimensional and proportional load configuration devised by Theodore Cooper. Other reference systems may be used where convenient, provided their effects can be defined in terms of shear, bending and pier reactions as necessary for a comprehensive evaluation and statement of the capacity of a bridge.

(c) The owner of the track on a bridge should advise other railroads operating on that track of the maximum loads permitted on the bridge stated in terms of car and locomotive configurations and weights. No railroad should operate a load which exceeds those limits without specific authority from, and in accordance with restrictions placed by, the track owner.

2. Capacity of railroad bridges.

(a) The safe capacity of bridges should be determined pursuant to [§ 237.71](#).

(b) Proper analysis of a bridge requires knowledge of the actual dimensions, materials and properties of the structural members of the bridge, their condition, and the stresses imposed in those members by the service loads.

(c) The factors which were used for the design of a bridge can generally be used to determine and rate the load capacity of a bridge provided:

(i) The condition of the bridge has not changed significantly; and

(ii) The stresses resulting from the service loads can be correlated to the stresses for which the bridge was designed or rated.

3. Railroad bridge loads.

(a) Control of loads is governed by [§ 237.73](#).

(b) Authority for exceptions. Equipment exceeding the nominal weight restriction on a bridge should be operated only under conditions determined by a competent railroad bridge engineer who has properly analyzed the stresses resulting from the proposed loads and has determined that the proposed operation can be conducted safely without damaging the bridge.

(c) Operating conditions. Operating conditions for exceptional loads may include speed restrictions, restriction of traffic from adjacent multiple tracks, and weight limitations on adjacent cars in the same train.

4. Railroad bridge records.

(a) The organization responsible for the safety of a bridge should keep design, construction, maintenance and repair records readily accessible to permit the determination of safe loads. Having design or rating drawings and calculations that conform to the actual structure greatly simplifies the process of making accurate determinations of safe bridge loads. This provision is governed by [§ 237.33](#).

(b) Organizations acquiring railroad property should obtain original or usable copies of all

bridge records and drawings, and protect or maintain knowledge of the location of the original records.

5. Specifications for design and rating of railroad bridges.

(a) The recommended specifications for the design and rating of bridges are those found in the Manual for Railway Engineering published by the American Railway Engineering and Maintenance of Way Association. These specifications incorporate recognized principles of structural design and analysis to provide for the safe and economic utilization of railroad bridges during their expected useful lives. These specifications are continually reviewed and revised by committees of competent engineers. Other specifications for design and rating, however, have been successfully used by some railroads and may continue to be suitable.

(b) A bridge can be rated for capacity according to current specifications regardless of the specification to which it was originally designed.

6. Periodic inspections of railroad bridges.

(a) Periodic bridge inspections by competent inspectors are necessary to determine whether a structure conforms to its design or rating condition and, if not, the degree of nonconformity. See [§ 237.101](#). Section 237.101(a) calls for every railroad bridge to be inspected at least once in each calendar year. Deterioration or damage may occur during the course of a year regardless of the level of traffic that passes over a bridge. Inspections at more frequent intervals may be required by the nature or condition of a structure or intensive traffic levels.

7. Underwater inspections of railroad bridges.

(a) Inspections of bridges should include measuring and recording the condition of substructure support at locations subject to erosion from moving water.

(b) Stream beds often are not visible to the inspector. Indirect measurements by sounding, probing, or any other appropriate means are necessary in these cases. A series of records of these readings will provide the best information in the event unexpected changes suddenly occur. Where such indirect measurements do not provide the necessary assurance of foundation integrity, diving inspections should be performed as prescribed by a competent engineer.

8. Seismic considerations.

(a) Owners of bridges should be aware of the risks posed by earthquakes in the areas in which their bridges are located. Precautions should be taken to protect the safety of trains and the public following an earthquake.

(b) Contingency plans for seismic events should be prepared in advance, taking into account the potential for seismic activity in an area.

(c) The predicted attenuation of ground motion varies considerably within the United States. Local ground motion attenuation values and the magnitude of an earthquake both influence the extent of the area affected by an earthquake. Regions with low frequency of seismic events produce less data from which to predict attenuation factors. That uncertainty should be considered when designating the area in which precautions should be taken following the first notice of an earthquake. In fact, earthquakes in such regions might propagate their effects over much wider areas than earthquakes of the same magnitude occurring in regions with frequent seismic activity.

9. Special inspections of railroad bridges.

Requirements for special inspections of railroad bridges are found in [§ 237.105](#).

10. Railroad bridge inspection records.

(a) The requirements for recording and reporting bridge inspections are found in [§ 237.109](#).

(b) Information from bridge inspection reports should be incorporated into a bridge management program to ensure that exceptions on the reports are corrected or accounted for. A series of inspection reports prepared over time should be maintained so as to provide a valuable record of trends and rates of degradation of bridge components. The reports should be structured to promote comprehensive inspections and effective communication between an inspector and an engineer who performs an analysis of a bridge.

(c) An inspection report should be comprehensible to a competent person without interpretation by the reporting inspector.

11. Railroad bridge inspectors and engineers.

(a) Bridge inspections should be performed by technicians whose training and experience enable them to detect and record indications of distress on a bridge. Inspectors should provide accurate measurements and other information about the condition of the bridge in enough detail so that an engineer can make a proper evaluation of the safety of the bridge. Qualifications of personnel are addressed in [Subpart C to Part 237](#).

(b) Accurate information about the condition of a bridge should be evaluated by an engineer who is competent to determine the capacity of the bridge. The inspector and the evaluator often are not the same individual; therefore, the quality of the bridge evaluation depends on the quality of the communication between them. Review of inspection reports is addressed in [§ 237.111](#).

12. Scheduling inspections.

(a) A bridge management program should include a means to ensure that each bridge under the program is inspected at the frequency prescribed for that bridge by a competent engineer. Scheduling of bridge inspections is addressed in [§ 237.101](#).

(b) Bridge inspections should be scheduled from an accurate bridge inventory list that includes the due date of the next inspection.

13. Special considerations for railroad bridges.

Railroad bridges differ from other types of bridges in the types of loads they carry, in their modes of failure and indications of distress, and in their construction details and components. Proper inspection and analysis of railroad bridges require familiarity with the loads, details and indications of distress that are unique to this class of structure. Particular care should be taken that modifications to railroad bridges, including retrofits for protection against the effects of earthquakes, are suitable for the structure to which they are to be applied. Modifications should not adversely affect the serviceability of neither the bridge nor its accessibility for periodic or special inspection.

14. Railroad implementation of bridge safety programs.

FRA recommends that each track owner or other entity which is responsible for the integrity

of bridges which support its track should comply with the intent of this regulation by adopting and implementing an effective and comprehensive program to ensure the safety of its bridges. The bridge safety program should incorporate the following essential elements, applied according to the configuration of the railroad and its bridges. The basis of the program should be in one comprehensive and coherent document which is available to all railroad personnel and other persons who are responsible for the application of any portion of the program. The program should include:

(a) Clearly defined roles and responsibilities of all persons who are designated or authorized to make determinations regarding the integrity of the track owner's bridges. The designations may be made by position or by individual;

Guidance. Designations must be made by individual. Designation by position is not permitted as this is in direct conflict with § 237.57.

(b) Provisions for a complete inventory of bridges that carry the owner's track, to include the following information on each bridge:

- (1) A unique identifier, such as milepost location and a subdivision code;*
- (2) The location of the bridge by nearest town or station, and geographic coordinates;*
- (3) The name of the geographic features crossed by the bridge;*
- (4) The number of tracks on the bridge;*
- (5) The number of spans in the bridge;*
- (6) The lengths of the spans;*
- (7) Types of construction of:*
 - (i) Substructure;*
 - (ii) Superstructure; and*
 - (iii) Deck;*
- (8) Overall length of the bridge;*
- (9) Dates of:*
 - (i) Construction;*
 - (ii) Major renovation; and*
 - (iii) Strengthening; and*
- (10) Identification of entities responsible for maintenance of the bridge or its different components.*

(c) Known capacity of its bridges as determined by rating by competent railroad bridge engineer or by design documents;

(d) Procedures for the control of movement of high, wide or heavy loads exceeding the nominal capacity of bridges;

(e) Instructions for the maintenance of permanent records of design, construction, modification, and repair;

(f) Railroad-specific procedures and standards for design and rating of bridges;

(g) Detailed bridge inspection policy, including:

(1) Inspector qualifications; including:

(i) Bridge experience or appropriate educational training;

(ii) Training on bridge inspection procedures; and

(iii) Training on Railroad Workplace Safety; and

(2) Type and frequency of inspection; including:

- (i) Periodic (at least annually);*
- (ii) Underwater;*
- (iii) Special;*
- (iv) Seismic; and*
- (v) cursory inspections of overhead bridges that are not the responsibility of the railroad;*
- (3) Inspection schedule for each bridge;*
- (4) Documentation of inspections; including:*
 - (i) Date;*
 - (ii) Name of inspector;*
 - (iii) Reporting Format; and*
 - (iv) Coherence of information;*
- (5) Inspection Report Review Process;*
- (6) Record retention; and*
- (7) Tracking of critical deficiencies to resolution; and*
- (h) Provide for the protection of train operations following an inspection, noting a critical deficiency, repair, modification or adverse event and should include:*
 - (1) A listing of qualifications of personnel permitted to authorize train operations following an adverse event; and*
 - (2) Detailed internal program audit procedures to ensure compliance with the provisions of the program.*

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Appendix B – Schedule of Civil Penalties

Defect Description (sorted by paragraph)	Code (unsorted)	Violation	Willful Violation
Subpart B – Railroad Bridge Safety Assurance			
237.31 Adoption of bridge management program			
		\$9,500	\$17,000
237.33 Content of bridge management program			
(a) Inventory of railroad bridges		2,500	5,000
(b) Record of safe load capacity		5,500	10,000
(c) Provision to obtain and maintain:			
(i) Design documents		5,500	10,000
(ii) Documentation of repairs and modifications		2,500	5,000
(iii) Inspection reports		2,500	5,000
(d) Bridge inspection program content		2,500	5,000
Subpart C – Qualifications and Designations of Responsible Persons			
237.51 Railroad bridge engineers			
(a) Competency		5,500	10,000
(b) Educational qualification		2,500	5,000
237.53 Railroad bridge inspectors			
		5,500	10,000
237.55 Railroad bridge supervisors			
		5,500	10,000
237.57 Designation of individuals			

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		2,500	5,000
Subpart D – Capacity of Bridges			
237.71 Determination of bridge load capacities			
(a) Safe load capacity		5,500	10,000
(b) Load capacity documented		5,500	10,000
(c) Load capacity determined by a railroad bridge engineer		5,500	10,000
(d) Method of load capacity determination		2,500	5,000
(e) Prioritization of load capacity determination		2,500	5,000
(f) New load capacity determined due to change in condition		2,500	5,000
(g) Load capacity stated in terms of weight and length of equipment		2,500	5,000
(h) Restriction on operations by railroad bridge engineer		5,500	10,000
237.73 Protection of bridges from over-weight and over-dimension equipment			
(a) Instructions issued		5,500	10,000
(b) Weight instructions		2,500	5,000
(c) Dimensional instructions		2,500	5,000
(d) Incorrect instructions issued		2,500	5,000
Subpart E – Bridge Inspection			
237.101 Scheduling of bridge inspections			
(a) Scheduling			
(i) Failure to inspect		9,500	17,000
(ii) Inspection within calendar year		2,500	5,000
(iii) Inspection frequency exceeding 540 days		2,500	5,000
(b) Increased inspection frequency		5,500	10,000
(c) Special inspections		2,500	5,000

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(d) Resumption of railroad operations prior to inspection and review		9,500	17,000
237.103 Bridge inspection procedures			
		2,500	5,000
237.105 Special inspections			
(a) Procedures to protect train operations and requiring special inspections		2,500	5,000
(b) Provision for the detection of scour or underwater deterioration		2,500	5,000
237.107 Conduct of bridge inspections			
		5,500	10,000
237.109 Bridge inspection records			
(a) Record of inspection		2,500	5,000
(b) Inspection record			
(i) Certification and date		2,500	5,000
(ii) Falsification			17,000
(c) Inspection record information		2,500	5,000
(d) Initial report within 30 days		2,500	5,000
(e) Final inspection report within 120 calendar days		2,500	5,000
(f) Retention		2,500	5,000
(g) Prompt reporting of dangerous conditions		5,500	10,000
237.111 Review of bridge inspection reports			
(a) Review by railroad bridge engineers and supervisors		2,500	5,000
(b) Appropriate action concerning present or potential safety hazards		5,500	10,000
(c) Modification of inspection frequency or procedures		2,500	5,000
(d) Scheduling remedial action		2,500	5,000
(e) Higher-level review		2,500	5,000

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Subpart F – Repair and Modification of Bridges			
237.131 Design			
		5,500	10,000
237.133 Supervision of repairs and modifications			
		5,500	10,000
Subpart G – Documentation, Records, and Audits of Bridge Management Programs			
237.151 Audits; general			
		2,500	5,000
237.153 Audits of inspections			
		2,500	5,000
237.155 Documents and records			
(a) Electronic recordkeeping, general		2,500	5,000
(b) System security		2,500	5,000

CHAPTER 4 – Exceptions to the Standards

Introduction

Part 237 contains the minimum requirements for railroad bridge inspection and safety management. Railroads must comply with many separate requirements contained in the BSS. If a railroad fails to meet these requirements and train operations continue without appropriate mitigation, enforcement action should be taken.

Every situation involves many factors. As such, each bridge specialist must exercise professional judgment, guided by the enforcement discretion criteria set forth in Part 209, Appendix A (Statement of Agency Policy Concerning Enforcement of the Federal Railroad Safety Laws), when deciding whether to recommend legal action for noncompliance with the BSS. Among those criteria are “the inherent seriousness of the condition or action,” the “kind and degree of potential safety hazard the condition or action poses in light of the immediate factual situation,” “the general level of current compliance,” and the “recent history of compliance.” This chapter will assist the bridge specialist in making enforcement determinations by providing guidelines for assessing the seriousness of any defect in the specific context of the BSS and the conditions observed during a particular inspection. This promotes FRA’s policy of focused enforcement (i.e., the use of FRA’s limited enforcement resources to attack the most serious and persistent compliance problems).

FRA’s primary goal is “to promote safety in every area of railroad operations and reduce railroad-related accidents and incidents.” (*See* 49 U.S.C. § 20101.) It may be necessary to improve compliance to reduce the risk of accidents in a particular situation; this should be a primary factor in determining enforcement action, such as the imposition of civil penalties.

A bridge specialist can initiate enforcement action of various types (used individually or in combination). The enforcement tools available (in order of increasing severity) are:

1. Defect report (Form FRA F6180.96)
2. Violation report recommending a civil penalty (Form FRA F6180.111)
3. Compliance order recommendation
4. Emergency order recommendation

Each bridge specialist must remember that the purpose of the safety laws, the BSS, and enforcement activity is to reduce train accidents, casualties, and property damage resulting from deficient bridge safety management practices and undetected or unprotected defective conditions in railroad bridges. Whereas adherence to each requirement of the BSS will help lessen the risk of bridge-caused accidents, the bridge specialist must be able to distinguish the varying levels of safety risk presented by violations of different standards. Each condition identified in the BSS has a different effect on the effectiveness of a track owner’s BMP and practices and, accordingly, different conditions have widely varying effects on the immediate hazard to train operations. For example, in most cases, an undetected or unrecorded fracture in a bridge member or connection

presents a greater immediate hazard to trains than failing to include the date an inspection report was prepared.

When determining which of the four enforcement actions to pursue, a bridge specialist must consider the risk of an accident presented by the defect itself. In addition, the bridge specialist must consider the possible consequences of an accident caused by the condition, whether the railroad representative knew the defective condition existed, and the railroad's BSS compliance history. Train speed at the particular location, type of traffic handled on the line (hazardous materials, passengers), population proximity, and terrain all can influence the consequences of an accident.

Defect Reports

All enforcement activity begins with an inspection, during which the bridge specialist must **record all occurrences of regulatory noncompliance as defects** on a Form FRA F6180.96. (See Chapter 2 of this manual for instructions). Defect reporting constitutes the most frequently used enforcement action and may lay the groundwork for more severe enforcement action, if necessary. Exercise care to conduct a thorough inspection, recording the location, type, and extent of each defect discovered. While defect reporting is usually sufficient to achieve compliance, the bridge specialist must remember that every defect report may become part of a violation report if defects remain. It is imperative that these reports are legible, accurate, and complete. The description and location of each defect should be concise enough that persons not present during the inspection could locate the defects. Sound performance during inspections and reporting ensures sound legal action in the future, if needed.

Violation Reports

A defect is a condition not in compliance with the BSS. Defects noted on inspection reports serve as notification to the railroad of FRA's awareness of the defect's existence. Defects may also serve as evidence of the railroad's knowledge of the defect (see the discussion below of the Knowledge Standard). An FRA bridge specialist may choose to also recommend a civil penalty (violation) for a defect, and so note the decision on the inspection form. A violation serves two purposes: 1) It notifies the railroad that FRA has concluded a condition does not comply with the BSS; and 2) it notifies the railroad that the bridge specialist has reviewed the circumstances associated with the condition of noncompliance and recommends a civil penalty.

Once the bridge specialist has determined that a civil penalty should be recommended, all facets of the conditions and circumstances must be carefully considered to make a judgment as to the degree of the violation. Any person who violates, or causes the violation of, any requirement of Part 237 is subject to a civil penalty of at least \$853, and up to \$27,904—the ordinary maximum (maximum penalty for any ordinary violation under Federal railroad safety laws)—per violation. *See* 49 CFR § 237.7(a). The aggravated maximum penalty for violations of railroad safety laws “when a grossly negligent violation or a pattern of repeated violations has caused an imminent hazard of death or injury to individuals or has caused death or injury” is soon to be adjusted to \$111,616. The bridge specialist must present the facts of the situation in the narrative report and a recommendation for prosecution must leave no doubt as to the degree of seriousness of the violation.

The bridge specialist should be familiar with the penalty amount normally assessed for a particular violation under the penalty schedule for Part 237 (See Chapter 3, Appendix B – Schedule of Civil Penalties). If the circumstances seem to warrant a higher penalty and/or the assessment of penalties for multiple days that a violation continued, the bridge specialist must discuss these factors with the Chief Engineer–Structures. If both agree that the extraordinary penalties are appropriate, they must prepare a cover memorandum for the Chief Engineer–Structures to send to RCC. The memorandum must explain the factors that warrant higher-than-normal penalties and/or an assessment for multiple days, note what the amount of the recommended assessment would be, and explain why such an extraordinary assessment is needed in this situation. This memorandum must provide the information and justification required by the “Enhanced Penalties” memo dated August 31, 2016 (See General Manual, Appendix D).

Knowledge Standard

In submitting a violation report recommending the issuance of a civil penalty, the bridge specialist must fully support the conclusion that the track owner had actual or constructive knowledge of the defect at a time when operations occurred over the track, including bridges. One way to establish actual knowledge is for the bridge specialist to record and notify the track owner when the defect is found, then re-inspect later to see if the track owner has taken appropriate remedial action. If the track owner has not taken appropriate action, the bridge specialist should cite the track owner for a violation of the BSS. In demonstrating actual knowledge, the violation report must clearly trace each defect to a specific item in an FRA inspection report and/or in railroad inspection records. Additionally, a citizen complaint or concern directed to a railroad would fulfill the knowledge standard.

In some situations, the defect has not been noted on a previous FRA inspection report or the railroad’s own inspection records. Citing such a defect as a violation requires that the bridge specialist demonstrate the track owner’s constructive knowledge. Establishing constructive knowledge of a defect requires proof that the track owner would have known of the defect if the owner had conducted its previous inspection with reasonable care. The track owner’s duty to inspect and manage its bridges gives it notice of any defect that such a required inspection would reveal, whether or not the railroad detected it. With demonstrated constructive knowledge and a civil penalty recommended, the bridge specialist should attach a copy of the railroad’s last required report of inspection. The bridge specialist must explain why the defect is of such a nature that it would have had to exist at the time of the last inspection.

Criteria Affecting the Seriousness of a Noncomplying Condition

A noncomplying condition under one set of circumstances may warrant a defect, while the same condition under a different set of circumstances may warrant a violation. The enforcement discretion considerations in Part 209, Appendix A, require the bridge specialist to consider the inherent seriousness of the condition. For example, in the BSS context, does the nature of this particular defect substantially increase the risk of an accident? Application of these criteria requires that the bridge specialist be generally familiar with the key components of the BSS regulation and critical aspects of bridge safety management. Among these critical aspects are comprehensive bridge inspections with accurate documentation, protection from overweight or

over-dimension loads, and taking appropriate protective measures once a deficient bridge condition becomes known.

In addition to the inherent hazard posed by the defect, the enforcement discretion considerations also require the bridge specialist to consider factors present in the immediate factual situation that may exacerbate or lessen the risk of serious consequences should an accident occur due to the inherent hazard posed by the defect. The bridge specialist must also consider the track owner's compliance history as a whole or in a particular territory; repeated noncompliance generally warrants enforcement action more than a rare noncomplying condition. Some examples of criteria for consideration when making a decision whether or not to recommend a civil penalty include:

- Passenger trains operating on railroad's tracks
- Hazardous materials (hazmat) transported on railroad's tracks
- Critical energy routes
- Population density (urban or residential areas) near railroad's track network
- Speed authorized for trains on tracks
- Annual tonnage traveling over railroad's tracks
- Proximity to schools and highway-rail grade crossings
- Compliance history of a railroad
- Accident history of a railroad
- Potential for negative environmental impact near a railroad's track system
- Operational size of a railroad
- Strategic Rail Corridor Network (STRACNET) Route within a railroad's track system

A violation report should stress the importance of the violation in light of the immediate circumstances, as well as the inherent hazard posed by the condition.

As discussed above, each bridge specialist must exercise good professional judgment and weigh the enforcement discretion criteria when deciding whether to recommend a violation. The bridge specialist's exercise of discretion is subject to supervisory review. Moreover, as an Agency, FRA has the duty to guide the exercise of that discretion to ensure properly focused enforcement on important compliance problems.

In determining which instances of noncompliance merit penalty recommendations, the bridge specialist considers (Part 209, Appendix A):

1. The inherent seriousness of the condition or action.
2. The kind and degree of potential safety hazard the condition or action poses in light of the immediate factual situation.
3. Any actual harm to persons or property already caused by the condition or action.

4. The offending person's (i.e., a railroad or an individual) general level of current compliance as revealed by the inspection as a whole.
5. The person's recent history of compliance with the relevant set of regulations, especially at the specific location or division of the railroad involved.
6. Whether a remedy other than a civil penalty (ranging from a warning on up to an emergency order) is more appropriate under all of the facts.
7. Other factors that the immediate circumstances make relevant.

Certain circumstances concerning the BSS most likely warrant recommendation for civil penalty. These criteria (listed below) are a general application of the enforcement discretion applied to common factual patterns involving critical aspects of bridge safety management, extremely persistent noncompliance, and/or willful noncompliance. Although it is not possible to list all circumstances that most likely warrant a civil penalty, these conditions should result in a violation unless the bridge specialist determines special circumstances are present that indicate otherwise. Such special circumstances may include immediate and comprehensive remedial action or factors that lessen the severity of the defects (e.g., dramatic reductions in traffic volume or changes in the railroad's management). Unless the bridge specialist and Chief Engineer–Structures agree that circumstances dictate otherwise, a civil penalty is recommended for the following situations:

- Follow-up inspections disclose that unsatisfactory remedial action (or no action) was taken for conditions of noncompliance previously noted during bridge safety oversight inspections.
- Systemic defects (should have been known to the track owner) are part of a pattern of repeated, similar substandard conditions as a whole or on a particular territory.
- Failing to adopt a BMP once knowledge of the requirement has been established.
- Failing to ensure that repairs or modifications are properly supervised by a designated railroad bridge supervisor.
- Failing to determine safe bridge load capacity.
- Failing to inspect one or more bridges after considering whether the defect is isolated or demonstrates a pattern of noncompliance.
- A pattern of inaccurate bridge inspection reports.
- Failing to take appropriate corrective action following the identification of a seriously deficient bridge condition.

The list above does not constitute an all-inclusive list of items that should result in a violation. However, if bridge specialists consistently address these situations through enforcement action, FRA will effectively focus enforcement where it counts the most. This will be an important catalyst in helping the industry reduce bridge-caused accidents. If a bridge specialist believes a civil penalty should not be recommended for any situation described above, the specialist must discuss the special circumstances with the Chief Engineer–Structures. This review is necessary to achieve a reasonably uniform and consistent enforcement policy. Refer to Chapter 2 of this

manual for instructions on preparing a violation report (Form FRA F6180.111).

A regular cycle of inspection, notification by Form FRA F 6180.96, and re-inspection, is the best and most desirable means of promoting compliance and acquiring evidence of deliberate noncompliance. Make sure to cite the same defects in the original report and the report recommending a civil penalty. The original report must be included as background information supporting the material forwarded for legal action. In addition, individually reference each item number in the original report.

Complaint and Accident Investigations

If allegations of noncompliance with FRA's BSS are substantiated during a complaint investigation, and if consideration of the criteria discussed above indicates that it is the appropriate course, a violation report should be submitted.

During an accident investigation in which bridge safety management practices not in compliance with FRA's BSS are determined to be a causal factor and the knowledge standard can be satisfied, a violation report must be submitted. In such a situation, explain the causal relationship in detail, and a cover memorandum noting the causal relationship and recommended aggravated penalties must be submitted to the Office of Chief Counsel (RCC) with the violation report.

Compliance Orders and Compliance Agreements

General Instructions

Under 49 U.S.C. 20111, FRA has the authority to issue compliance orders when the agency has reason to believe that the respondent is engaging in a continuing pattern of conduct that involves violations of the BSS. Procedures for issuing a compliance order are found in Part 209, Subpart C.

A compliance order normally will require remedial actions necessary to assure compliance with the regulations, and may impose restrictions until compliance is achieved. A compliance order involving the BSS may include a requirement that the track owner perform inspections, undertake engineering evaluations, or make specified repairs by a specific deadline. The compliance order does not necessarily remove bridges from service. If the railroad does not comply with the terms of the order, FRA may seek penalties for violation of the order or seek enforcement of the order in Federal court.

Procedures

If, during a bridge safety oversight inspection, a bridge specialist determines that a railroad is engaging in a continuing pattern of conduct that involves repeated violations of the BSS, the Chief Engineer—Structures, must be notified. General guidelines for determining this continuing conduct or pattern are as follows:

- A number of inspections have been made.

- These inspections continue to reveal defects and repeated noncompliance.
- The track owner refuses to bring their BMP and bridge safety management practices into compliance with the standards.
- The bridge specialist has made every attempt to have the track owner take remedial action through actions such as:
 - Repeated inspections.
 - Submission of violation reports.
 - Meetings with carrier officials explaining the seriousness of the existing conditions.

If it is determined by the Chief Engineer–Structures after discussion with the bridge specialist that there is a pattern of repeated noncompliance and conditions present a threat to safety, consideration should be given to recommending the issuance of a compliance order. The Deputy Associate Administrator for Railroad Safety (RRS-2) and the Assistant Chief Counsel for Safety (RCC-10) must be notified and consulted at this time. The recommendation containing the information noted below under “documentation” must be forwarded to both offices.

Documentation

Complete documentation must be developed and included with the recommendation of the Chief Engineer–Structures. This documentation must include the following:

- Location of all defects, including measurements, where required. This is to be recorded on Form FRA F6180.96.
- Copies of Form FRA F6180.96 for relevant previous inspections at this location.
- Copies of all relevant violation reports concerning the area in question.
- List of all bridge-caused accidents, reportable and non-reportable, that occurred during the previous 12 months.
- Copies of railroad inspection reports for the previous 24 months.
- A written narrative must be prepared detailing all relevant facts, including, but not limited to, the following:
 - Amount and type of rail traffic.
 - Proximity of tracks to homes, schools, stores, etc.
 - The railroad’s inspection and maintenance programs and procedures.
 - The seriousness of the defects.
 - The basis for the determination that a pattern of noncompliance exists.
 - Details of each meeting held with railroad officials including dates, names, and titles of those in attendance and items discussed.

Based on the information submitted, the Office of Railroad Safety and RCC will decide

whether to recommend to the Administrator that a compliance order proceeding be initiated. With the Administrator's approval, RCC would then issue a notice of investigation based on the documentation submitted. If the railroad requests a hearing, FRA's hearing officer would preside over a trial-type hearing where FRA would have the burden of proving its factual allegations and the reasonableness of the remedial action sought. The hearing officer's decision could be appealed to the Administrator, and the Administrator's decision could be challenged in court. At any time during this process, FRA and the railroad could agree to a consent order and present it to the Administrator for signature. A consent order would impose requirements on the railroad and preclude further litigation of the issues.

In recent years, FRA has developed a simpler way of using the compliance order authority. Under a **compliance agreement**, the railroad agrees to take certain remedial actions; should those actions not occur to FRA's satisfaction, the railroad agrees not to oppose issuance of a compliance order or an emergency order imposing those conditions. Whereas the preparatory work necessary for a compliance agreement is substantially the same as for a compliance order (outlined above), the agreement presents FRA and the railroad with certain advantages. FRA can obtain remedial action quickly and informally, and if the terms of the agreement are not met, FRA can issue a compliance order or an emergency order without the time, expense, and litigation risk of a formal proceeding. Therefore, the railroad achieves improved compliance without being subject to an actual order unless it fails to meet its obligations under the agreement. In some agreements, FRA waives its right to pursue civil penalties for specified violations if the railroad meets all conditions of the agreement. In other agreements, the railroad will pay civil penalties on certain extremely serious violations that FRA may find while the agreement is in effect. If a compliance problem appears to be an appropriate situation for such an agreement, regional managers should contact RRS-10 and RCC-10.

Emergency Orders

Under 49 U.S.C. 20104, FRA has authority to take special remedial action to handle emergency situations. If, through testing, inspection, investigation, or research, FRA decides that "an unsafe condition or practice, or a combination of unsafe conditions and practices, causes an emergency situation involving a hazard of death or personal injury," FRA may immediately issue an emergency order. The order may impose restrictions or prohibitions necessary to bring about the abatement of the emergency situation. The authority to issue such an order rests with the FRA Administrator.

Unlike a compliance order, FRA may issue an emergency order without first providing the opportunity for a hearing. Accordingly, FRA has used the authority sparingly, and issued only 31 orders from 1970 through 2017, of which 3 pertained to railroad bridges. Although the statute does not define the emergency situation that must be present for FRA to issue such an order, FRA believes it refers to conditions and/or practices that present an imminent hazard of death or injury. The authority can be used to address conditions that are not in compliance with FRA's rules and conditions that are not addressed by those rules.

General Procedures

A bridge specialist who discovers or is informed of conditions that may constitute an emergency

situation must immediately contact the Chief Engineer–Structures. During an inspection, if an apparent emergency situation is brought to the bridge specialist’s attention, the bridge specialist must immediately inspect the alleged condition or practice to determine whether an emergency situation exists. If, during an inspection, the bridge specialist discovers an emergency situation, or determines after an inspection that an emergency situation exists, then the bridge specialist must immediately follow the procedures outlined in this chapter. If the bridge specialist has any doubt as to whether a condition or practice constitutes an emergency, the bridge specialist must consult the Chief Engineer–Structures.

- The Chief Engineer–Structures must immediately ascertain if there is a reasonable basis for the allegation and alert FRA headquarters to the situation.
- The Chief Engineer–Structures must make a preliminary determination as to whether further inspection is necessary.
- If the allegation of an emergency situation appears to have merit, the Chief Engineer–Structures must contact the track owner immediately, ascertain as many pertinent details as possible concerning the situation, and attempt to obtain immediate voluntary abatement prior to the inspection. The Chief Engineer–Structures should ascertain and evaluate the steps, if any, that the track owner indicates should be used to abate the danger. An investigation must then be conducted in accordance with the procedures outlined in this chapter.

Technical Considerations

After the determination to investigate has been made, the inspection should be thoroughly planned to the extent time permits. The Chief Engineer–Structures and bridge specialist should review the known facts and decide what technical equipment and personnel may be necessary to conduct the inspection.

Scheduling

Any allegation of an emergency situation received by a regional office or FRA headquarters, whether written or oral, must be handled as a high priority. Other commitments, weekends, holidays, leave, and other considerations must not interfere with the expeditious and thorough handling of these cases.

If it is determined that an inspection should be made, it must be scheduled and conducted at the earliest possible time. Except in extraordinary circumstances, the inspection should be conducted within 24 hours of the receipt and preliminary evaluation of the alleged emergency situation.

Inspection

In an inspection conducted because of an allegation of an emergency situation, the alleged situation must be inspected first.

Any additional inspection activity should take place only after resolution of the emergency situation. After the emergency situation has been resolved, a complete inspection of the facility may be conducted.

Voluntary Corrective Action

As soon as it is concluded that conditions exist that constitute an emergency situation, the bridge specialist must attempt to have the situation immediately corrected through voluntary corrective action by the railroad. The track owner or a representative of the owner must be promptly advised that such a situation exists.

The track owner is ultimately responsible for determining the manner in which they will correct the dangerous condition. Before leaving the premises, FRA personnel must determine that the emergency situation has been resolved and will not recur. The track owner has resolved an emergency situation if they eliminate exposure to the situation, or eliminate the condition or practice that resulted in the situation.

If corrective action is taken voluntarily, the bridge specialist must make the appropriate notation on the Form FRA F6180.96.

Refusal to Correct

If conditions that are of a serious nature are not corrected, the bridge specialist must immediately notify the Chief Engineer–Structures. Depending on the degree of urgency, the Chief Engineer–Structures will decide whether to proceed directly to recommend to FRA headquarters that an emergency order be issued. Regardless of the route chosen, the bridge specialist must issue Form FRA F6180.96.

The bridge specialist has no authority to order the closing down of an operation or to direct employees to leave an area in the case of imminent danger. His or her only authority is to inform the Chief Engineer–Structures of the conditions observed and provide the basis on which the Chief Engineer–Structures can make a recommendation to the FRA Administrator through the Associate Administrator for Railroad Safety/Chief Safety Officer.

Information Needed to Support Issuance of an Emergency Order

The Chief Engineer–Structures considers the bridge specialist's report and any material submitted by the railroad in developing a recommendation to the FRA Administrator. If the Chief Engineer–Structures decides that emergency action is necessary, the recommendation must be supported by ample documentation of the imminent safety hazard and previous attempts to address related safety issues on the particular railroad. Time permitting, the supporting documentation should include all of the following information.

General information required:

- Form FRA F6180.96 for the infrastructure recommended for the emergency order, showing each defect found during the inspection. (Repetitive entries may be summarized

if a significant number of specific conditions are itemized and portray an accurate view of overall conditions.)

- Previous inspection reports served on the carrier for the particular territory, including returned reports (if any) showing corrective action.
- Relevant violation reports filed with the Office of Chief Counsel (by report number and date of transmittal, and including FRA case number if known) and waiver investigation reports, if any.
- Description of method of operation.
- Operating speeds—both temporary and permanent, bridge weight and dimension capacity (copies of timetable, special instructions, slow orders).

Facts demonstrating that the defect poses an imminent hazard of death or injury to persons:

- Narrative report of discussions with railroad representatives in chronological sequence, providing dates, locations, names, and titles.
- Number of trains (passenger, through freight, local, by category) and annual tonnage.
- Motive power employed on line, maximum train lengths, and railroad-imposed limitations on axle loads or particular equipment.

Hazardous materials information:

- Volume of hazardous material traffic over the line, based on review of waybills or consists for a period of 2 to 4 weeks prior to the date of the investigation.
- Type of hazardous material traffic (illustrative listing of recent hazardous material data identifying number of cars carrying explosives, poison gas, flammable gas, chlorine, anhydrous ammonia, etc.).
- Hazardous material violation history on line as related to derailment risks (train placement, etc.).

Demographic information:

- Towns and cities along the line by name, referenced by railroad milepost and approximate population.
- Illustrative description of the area (including homes, schools, businesses, hospitals, etc.), indicating proximity to rights-of-way, railroad mileposts, and estimated number of persons affected. Include major highway-rail grade crossings and railroad bridges over public streets. Provide photographs showing track in foreground and areas potentially at risk in background and street maps, if readily available.

Topographic information:

- General description of curves and grades. (Provide track charts, if available).
- Railroad bridges and sharp drop-offs adjacent to rights-of-way. (Include photographs, as

appropriate).

- Clearances with reference to other active track and structures along rights-of-way. (Include photographs, as appropriate).

Accident history:

- Rail equipment accident/incident reports for the past 24 months, regardless of railroad-identified cause.
- FRA accident investigation reports, if any.
- Internal railroad reports of accidents not reported to FRA.

Special factors:

- Abandonment plans and status, if applicable.
- State agency interest in rail service continuation, if applicable.
- Planned rehabilitation efforts, if any.
- Involvement of State in inspections and investigations, if any.
- Press reports, complaints from public officials and/or union officers, etc.
- Economic impact of proposed order (only readily available information).
- List of major industries on line (with indication of hazardous material traffic, if known), obtained from the railroad, and the likely effect that order will have on their business.

Railroad response:

Current information on planned remedial action, adequacy of response, projected completion dates, resources actually committed, progress of work to date of recommendation.

FRA actions needed to support issuance of an emergency order:

- Bridge specialist notifies railroad representative of deficient conditions. (Note: The Chief Engineer–Structures can choose to bypass this step and instead simply inform the railroad that he or she intends to recommend issuance of an emergency order based on the inspection results). The Chief Engineer–Structures assigns responsibilities to complete field investigation.
- Chief Engineer–Structures alerts Assistant Chief Counsel for Safety.
- Railroad Safety Information Management Division (RRS-22) assists in the development of accident history information.
- RCC and Office of Technical Oversight, Bridge and Structures Division, work together to draft emergency order.
- Administrator issues order.

Wherever an emergency order has been issued by FRA, the bridge specialist must arrange to immediately make a follow-up investigation to determine if the track owner is complying with

the terms of the order. The Chief Engineer–Structures arranges follow-up inspections, as requested by the railroad, to determine whether conditions for lifting the order have been fully met on all, or a portion, of the infrastructure affected.

Where follow-up inspections indicate that relief from the order is fully or partially warranted, the Chief Engineer–Structures notifies RRS-10 and RCC-10. Those offices draft Federal Register notices necessary to grant relief from the order.

These procedures are intended to provide general guidance. Additional information may be required in some instances. If there is any delay in the development of any elements pertaining to an emergency order, such as typing field reports, the Office of Technical Oversight, Bridge and Structures Division, should be consulted.

Violation of FRA Emergency Order

When a bridge specialist’s investigation, inspection, or surveillance activity discloses that a railroad has violated a provision of an FRA emergency order, the bridge specialist must immediately report the circumstances of the violation to the Chief Engineer–Structures. The Chief Engineer–Structures must promptly transmit this information to the Associate Administrator for Railroad Safety/Chief Safety Officer and RCC for advice as to what action should be taken and what information will be required to support that action.

An emergency order violation report must be made in memorandum form. The subject at the heading of the memorandum should read, “Violation Report Concerning Emergency Order No. (fill in number of order) Issued Against (fill in name of railroad).” The first paragraph of the memorandum report should refer to the order involved, and provide a brief summary relative to the circumstances and evidence to support the violation report in accordance with the advice and instructions provided by RCC.

Enforcement of the Safety Laws and Regulations Against Individuals

For further discussion of individual liability, in addition to this chapter, bridge specialists should reference the General Manual, Chapter 3, for guidance.

Under 49 U.S.C. 21311, substantial criminal penalties may apply to individuals or companies who “knowingly and willfully” falsify records or reports required to be kept or submitted under the railroad safety laws. The BSS contains specific recordkeeping requirements (e.g., § 237.109) and a specific reference to the criminal provision (§ 237.7(b)). The “knowingly and willfully” standard essentially requires that the Government be able to demonstrate that the person knew what they were doing was wrong and did it anyway with criminal intent. The Government would need to be able to prove all elements of its case beyond a reasonable doubt. Because of the high standard for knowledge and difficult burden of proof in such cases, these are not easy to prosecute. Moreover, failure to record bridge defects on a railroad’s inspection records is most often the result of incompetence, negligence, or haste, rather than willful conduct. Nevertheless, if a bridge specialist has reason to believe that a railroad might purposely be falsifying its inspection records, the bridge specialist should contact DOT’s Office of Inspector General.