

New York State Office of the State Comptroller
Thomas P. DiNapoli

Division of State Government Accountability

Railroad Bridge Inspection Program

Department of Transportation



Report 2013-S-5

December 2013

Executive Summary

Purpose

To determine whether the Department of Transportation (Department) properly oversees railroads operating in the State to ensure they meet the bridge inspection requirements. This audit covers the period January 1, 2010 through June 30, 2013.

Background

The Railroad Bridge Inspection Program (Program) provides oversight of the inspection of railroad bridges in an effort to ensure public safety and decrease the risk of railroad bridge failures. Department regulations require railroad bridge inspections to be conducted in accordance with formal bridge management plans and inspection procedures. They also require each railroad to submit an annual certification that its bridges are safe for the load imposed, and to provide the Department with an up-to-date inventory of its bridges. Department data shows that 38 railroads own or have maintenance responsibility for almost 3,000 railroad bridges in the State.

Key Findings

- The Department does not sufficiently monitor whether the railroads comply with its bridge inspection and reporting requirements. For example, the bridge management plans on hand are an average of 10 years old and some may no longer be relevant. Also, the Department has incomplete information on the inventory of railroad bridges and their inspections.
- The Department also does not actively monitor the submission of inspection certifications. As a result, four of 114 certifications due during our audit period were not submitted, 43 were late and many were also incomplete.
- The Department did not monitor whether inspections were done on the 48 bridges it is responsible for. As a result, eight required inspections were not done between 2010 and 2012.
- The Department has not communicated with the Federal Railroad Administration (FRA), which has a similar bridge management program, to determine how these agencies can share information and otherwise reduce potential duplication of effort.

Key Recommendations

- Take steps to bring the Program into compliance by updating the bridge management plan information, bridge inventory, and bridge inspection data for each railroad.
- Periodically monitor the submission and accuracy of the railroad inspection certifications.
- Ensure each bridge for which the Department is responsible is inspected annually.
- Coordinate with the FRA to identify redundancies in Program activities or information. Evaluate opportunities to leverage the work of all parties to streamline operations through information sharing and coordinated monitoring.

Other Related Audits/Reports of Interest

[Department of Transportation: Status of Railroad Bridge Inspection Program \(99-S-12\)](#)

**State of New York
Office of the State Comptroller**

Division of State Government Accountability

December 9, 2013

Ms. Joan McDonald
Commissioner
Department of Transportation
50 Wolf Road
Albany, NY 12232

Dear Commissioner McDonald:

The Office of the State Comptroller is committed to helping State agencies, public authorities and local government agencies manage government resources efficiently and effectively and, by so doing, providing accountability for tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit entitled *Railroad Bridge Inspection Program*. This audit was performed according to the State Comptroller's authority under Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

*Office of the State Comptroller
Division of State Government Accountability*

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This report is also available on our website at: www.osc.state.ny.us

Background

In an effort to enhance public safety and decrease the risk of railroad bridge failures, State law was enacted in 1994 directing the Department of Transportation (Department) to establish and oversee a Railroad Bridge Inspection Program (Program). The Department issued regulations in 1999 which require each railroad to conduct annual bridge inspections in accordance with formal bridge management plans and inspection procedures developed under the guidance of a licensed professional engineer. The regulations require that the inspection procedures contain the qualifications of the individuals conducting the inspections and that they be submitted to the Department and updated as necessary. The regulations also require each railroad to submit an annual certification that its railroad bridges are safe for the load imposed, and to provide the Department with an inventory of its bridges which should be kept current.

Department data shows there are currently 38 railroads that own or have maintenance responsibility for almost 3,000 railroad bridges in New York State. The Department has inspection responsibility for 48 of these bridges. The Department's Bridge Safety and Assurance Division maintains the inventory of these bridges. Railroads also own more than 200 highway bridges in the State, which are subject to different inspection requirements and are not included in this audit.

The Department's Structures Evaluation Services Bureau (Bureau), part of the Office of Structures, is responsible for overseeing the Program. The Bureau consists of approximately 25 employees. The Federal Railroad Administration (FRA) also has a program of safety requirements for railroad bridges which requires bridge owners to implement bridge management programs and conduct annual inspections in accordance with federal regulations.

Audit Findings and Recommendations

The Department does not sufficiently monitor whether the railroads comply with its bridge inspection and reporting requirements. For example, the Department has not taken steps to ensure that it has up-to-date bridge management plans and complete and accurate bridge inventory and bridge inspection data for each railroad as required by law. Also, bridge certifications were not always submitted, and were often late or incomplete when they were. Additionally, there may be duplication between the Program and the FRA's railroad inspection program.

Railroad Bridge Management Plans

The bridge management plans, which describe the railroads' policies and procedures for conducting inspections, appear outdated and may no longer be relevant in some cases. Our review found the plans on file with the Department range from 1 to 25 years old, with an average age of 10 years. Eight of the 38 plans (21 percent) were not dated, so the Department was unable to determine how current they were. In addition, the Department does not have any procedures to periodically follow up with the railroads to request current plans.

Four railroads did not submit actual bridge management plans, but rather just correspondence stating they follow the Department's requirements without sufficient details or documentation specifying how they do so. Of the remaining 34 plans on file, the majority were missing key pieces of required information. For example, 31 (91 percent) did not list the Supervising Engineer under whom the plans were developed, and 30 (88 percent) did not list the name of the individual conducting the inspections. Therefore, the Department has less assurance that the annual inspection certifications each railroad is required to submit are valid, are prepared by a qualified individual, and collectively cover all the bridges in the State.

We found the Department's lack of oversight allowed one small scenic railroad, the Cooperstown and Charlotte Valley Railroad, to go almost 17 years without a bridge management plan in place from the time it was acquired in 1996 until 2013. We reviewed Department records related to this railroad and found:

- The railroad has yet to have its bridge load ratings calculated, despite submitting certifications in two of the three years of our scope period stating that its bridges were all inspected and are all safe for the loading imposed.
- The railroad did not complete its inspections in the third year, reportedly because of a lack of funding.
- Even when this railroad did its inspections, the work was performed by an individual who is not a licensed engineer, which is in direct conflict with regulatory requirements. The Department was unaware of this deficiency, even though the name of the individual was listed as both the inspector and supervisor in the 2013 plan submitted by the railroad.

Railroad Bridge Inventory Database

The Department does not have a complete inventory of all railroad bridges in the State including all data elements required by State regulations. Although the Department implemented its Bridge Inventory and Inspection Database (Database) for the railroad bridge inventory, it abandoned use of the Database shortly after its creation, opting instead to use a hardcopy paper process to oversee the Program for the last 10 years. As a result, many required components of the inventory that would be essential for proper oversight of the Program are inaccurate or incomplete in the Database. For the 2,946 railroad bridges listed in the Database's total inventory, our review showed over 90 percent do not include the date of the last general inspection or the date of the last load rating calculation, and over 80 percent do not have a bridge identification number.

In addition, our visits to four railroads also showed that the Database was missing at least 103 bridges and contained 23 other structures miscoded as bridges.

More importantly, our tests of the paper records that were supposed to supplant the system showed they also do not contain all of the information the inventory is supposed to have. For example, of the 38 railroads' files reviewed, none contained information on the bridge condition at the time of the last inspection and only one railroad had listed the maximum load rating for each of its lines.

Department officials told us that the railroad bridges that go over highways (about 50 percent of all rail bridges) are already included in its current highway bridge inventory system. They said they plan to add all the highway and rail bridges to a new bridge inventory system being implemented, the Bridge Data Information System (BDIS), instead of updating the rail bridge Database.

Certifications and Railroad Bridge Inspections

The Department does not monitor whether railroads submit inspection certifications on time and whether they are complete. As a result, we identified four instances (three in 2011 and one in 2013) where railroads did not inspect their bridges and therefore did not submit certifications. Even when certifications were filed, they were often late. Our review showed more than half of the 110 certifications received by the Department during our audit period were not submitted on time, or their timeliness could not be determined because they were not dated. Of the 93 that were dated, 46 percent (43) were received late. Additionally, most of the certifications were incomplete. For example:

- 63 (57 percent) did not contain the bridges' most recent general inspection date; and
- none listed diving inspection dates on over-water bridges for which they were required.

Furthermore, we also noted that the Department does not enforce the requirement that railroads include the line segment capacity map with the annual certification.

Even for the 48 bridges that the Department itself is required to inspect, there is not always

assurance the inspections have been done. Of these 48 bridges, we found seven were not inspected during 2010 and one was not inspected during 2012.

Program Communication and Coordination

In general, the Department places little emphasis on the Program and devotes minimal resources to it. The Program is largely administered by just one employee who refers issues that arise to management for review. Without adequate oversight, the Department has less assurance it will detect non-compliance by railroads and take corrective action timely.

The Bureau does not routinely make site visits to the railroads and spends little time communicating with the railroads. During our site visits, railroad personnel stated that they rarely heard from the Department regarding the Program. Within the Department, the units that handle various areas relating to the railroads do not communicate adequately. In particular, officials within the Freight and Passenger Rail Bureau do not have a formal way of communicating bridge inventory changes or other relevant information to the Bureau.

The FRA also oversees railroad bridge inspections and requires railroads to provide it with bridge inspection data. Department officials told us that the FRA requirements are more stringent and there is likely some duplication of effort between the two programs. However, the Department has not taken any steps to communicate or share information with the FRA and does not have a clear idea of FRA program specifics such as monitoring activities or data systems.

In light of the Department's Program responsibilities, limited resources, and the potential for duplication with the FRA program, the Department should investigate ways to coordinate efforts with the FRA. For example, the Department may be able to coordinate with the FRA on collecting information from the railroads to eliminate redundant reporting requirements. Likewise, the Department may be able to perform testing of certain railroad information on a sample basis and share the results with the FRA. By doing so, the Department may be able to leverage FRA efforts and information to improve its Program's effectiveness with minimal resources, or to reduce its need to perform certain functions without assuming an increase in risk.

Recommendations

1. Take steps to bring the Program into compliance by updating the bridge management plan information, bridge inventory, and bridge inspection data for each railroad operating in the State.
2. Evaluate options for maintaining a bridge database, such as adding the remaining bridges to BDIS or obtaining bridge inventory data from the FRA. Implement the optimal method that meets Program requirements.
3. Periodically monitor the submission, completeness and accuracy of railroad inspection certifications.

4. Ensure each bridge for which the Department is responsible is inspected annually.
5. Improve communications, both internally and with the railroads, to ensure that timely, accurate and complete information is available to all stakeholders to improve Program operations.
6. Coordinate with the FRA to identify redundancies in Program activities or information. Evaluate opportunities to leverage the work of all parties to streamline operations through information sharing and coordinated monitoring.

Audit Scope and Methodology

The objective of our audit was to determine if the Department properly oversees railroads operating in the State to ensure they meet the bridge inspection requirements. The audit covers the period January 1, 2010 through June 30, 2013.

To accomplish our audit objective, and determine whether associated internal controls are adequate, we interviewed State and railroad officials, as well as reviewed relevant laws, regulations, policies and procedures. We also reviewed all certifications, bridge management plans and related documentation filed during our scope period and used computer assisted audit techniques to analyze the Database. We also visited four judgmentally selected railroads responsible for 252 bridges to review records and compare them to the Department's Database.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions and public authorities, some of whom have minority voting rights. These duties may be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our opinion, these functions do not affect our ability to conduct independent audits of program performance.

Authority

This audit was done according to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

Reporting Requirements

A draft copy of this report was provided to Department officials for their review and comment. Their comments were considered in preparing this final report and are attached in their entirety to the end of this report.

Within 90 days after final release of this report, as required by Section 170 of the Executive Law, the Commissioner of the Department of Transportation shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where the recommendations were not implemented, the reasons why.

Contributors to This Report

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Vision

A team of accountability experts respected for providing information that decision makers value.

Mission

To improve government operations by conducting independent audits, reviews and evaluations of New York State and New York City taxpayer financed programs.

Agency Comments



STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
ALBANY, N.Y. 12232

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JOAN McDONALD
COMMISSIONER

ANDREW M. CUOMO
GOVERNOR

November 4, 2013

John Buyce, CPA, CIA, CGFM
Office of the State Comptroller
Division of State Government Accountability
110 State Street, 11th Floor
Albany, New York 12236-0001

RE: OSC Draft Report – *Railroad Bridge
Inspection Program (2013-S-5)*

Dear Mr. Buyce:

The New York State Department of Transportation (NYSDOT) appreciates the opportunity to respond to the subject report.

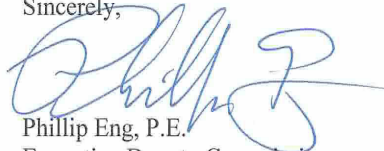
The report focuses primarily on the State's railroad bridge inspection regulations. However, the Federal Railroad Administration's (FRA) Final Rule, adopted on September 13, 2010, established new, more stringent, bridge safety regulations (49 CFR Part 237), which clearly established that the railroads are ultimately responsible for inspecting their own bridges and puts in place enforcement mechanisms for noncompliance. Earlier this year, the FRA issued compliance guidance for use in implementing the new bridge safety standards. NYSDOT is studying whether these regulations preempt State laws and regulations governing the same subject matter.

NYSDOT's commitment to bridge safety is unparalleled, regardless of ownership or mode of travel. In order to ensure that Railroad Bridge Owners are adhering to the FRA Regulations, NYSDOT continued and plans to continue the existing certification program that requires Railroad Bridge Owners to certify annually to NYSDOT that all inspections were completed on time and that each bridge in their inventory is safe for the loading imposed. In addition, NYSDOT is developing an enterprise asset management system that will incorporate the Railroad Bridge Inspection and Inventory Database. This new system will allow NYSDOT to more effectively continue our role of ensuring the safety of bridges within the railroad bridge inspection programs statewide.

Mr. John Buyce
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Should you need further information, please contact Richard Marchione, Deputy Chief Engineer (Structures) at (518) 457-6827.

Sincerely,

A handwritten signature in blue ink, appearing to read "Phillip Eng", with a stylized flourish extending to the right.

Phillip Eng, P.E.
Executive Deputy Commissioner