

*A REPORT BY THE NEW YORK STATE  
OFFICE OF THE STATE COMPTROLLER*

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**Alan G. Hevesi  
COMPTROLLER**



***METROPOLITAN TRANSPORTATION  
AUTHORITY LONG ISLAND RAIL ROAD AND  
METRO-NORTH RAILROAD***

***SAFETY OF GRADE-LEVEL RAILROAD  
CROSSINGS***

***2004-S-63***

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**DIVISION OF STATE SERVICES**

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**Alan G. Hevesi**  
**COMPTROLLER**

**Report 2004-S-63**

Mr. Peter Kalikow  
Chairman  
Metropolitan Transportation Authority  
347 Madison Avenue  
New York, NY 10017

Dear Mr. Kalikow:

The following is our audit report addressing the actions taken by the Metropolitan Transportation Authority regarding safety at grade-level railroad crossings of the Long Island Rail Road and Metro-North Railroad.

This audit was performed pursuant to the State Comptroller's authority as set forth in Article X, Section 5 of the State Constitution. Major contributors to this report are listed in Appendix A.

*Office of the State Comptroller*  
*Division of State Services*

June 14, 2006



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## **EXECUTIVE SUMMARY**

### **METROPOLITAN TRANSPORTATION AUTHORITY LONG ISLAND RAIL ROAD AND METRO-NORTH RAILROAD**

### **SAFETY OF GRADE-LEVEL RAILROAD CROSSINGS**

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#### **SCOPE OF AUDIT**

The Metropolitan Transportation Authority (MTA) provides public transportation in the New York City metropolitan area. The MTA has two commuter railroads: the Long Island Rail Road (LIRR), running between New York City and Long Island, and Metro-North Railroad (Metro-North), running between New York City and upstate New York and Connecticut. The LIRR has 293 grade-level crossings (where railroad tracks intersect a highway on the same level as the highway); Metro-North has 154. Generally, such crossings are equipped with warning devices (e.g., flashers and bells) and are blocked by gates when trains approach. In the three years ended December 31, 2004, a total of 37 accidents were reported at LIRR and Metro-North grade-level crossings. Fatalities (including three suicides) were incurred in 11 of these accidents.

We examined the actions taken by the MTA regarding safety at LIRR and Metro-North grade-level crossings for the period January 1, 2002 through April 30, 2005. The objectives of our performance audit were to determine whether (1) warning devices at the crossings met selected operating standards and were inspected as required, (2) programs educating the public about the dangers of grade-level railroad crossings were established and implemented, (3) accidents at the grade-level crossings were reported and investigated as required, and (4) a plan for eliminating grade-level crossings that were identified as hazardous was prepared and actions taken.

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#### **AUDIT OBSERVATIONS AND CONCLUSIONS**

We found that for both the LIRR and Metro-North, the warning devices (gates, flashing lights) performed in accordance with the selected operating standards which were either identical to, or more demanding than, the Federal Railroad Administration (FRA) standards. We concluded from our observations at 21 selected crossings that for certain items, such as time from lights start to flash to gates down, the warning devices at these crossings performed as required. (See pp. 13-15 and 33-36)

We also found that the intervals used by the LIRR and Metro-North to perform selected inspections met or exceeded the recommendations of the FRA. For 75 randomly selected LIRR and Metro-North grade-level crossings, we determined that, with only a few exceptions that pertained to the LIRR, both railroads retained documentation supporting that warning device inspections were performed at required intervals and that warning devices met their operating standards. (See pp. 13-17 and 32-36)

Despite these results, we found that pedestrians and motorists, including school buses and truck operators, often failed to heed warning devices and often committed other safety violations at the crossings. For example, they often went through the crossings when the crossing gates were coming down and the warning lights were flashing. In addition, vehicles sometimes stopped on the tracks when traffic ahead of them backed up.

In a total of 20 hours of observation at 10 LIRR grade-level crossings, we identified a total of 203 safety violations (See pp. 19-21). In a total of 22 hours of observation at 11 Metro-North grade-level crossings, we identified a total of 91 safety violations committed by motorists. While the violations were not as frequent as the violations we observed at LIRR crossings (perhaps because traffic was generally heavier at the LIRR crossings), the violations were frequent enough and serious enough to cause concern. (See pp. 37-40) (The Internet version of this final report, available at <http://www.osc.state.ny.us>, contains links to view examples of the grade crossing violations cited on pages 19-21 and pages 37-39 of this report.)

While each railroad has developed a safety awareness program to educate the public about the dangers of grade-level railroad crossings, these programs focus on schoolchildren. The LIRR and Metro-North should continue those efforts, but they should also develop strategies to educate more adults, particularly motorists, of the dangers of grade level crossings (See pp. 17-19 and 36-37). For example, we recommend that the railroads, in coordination with the MTA Police Department, reach out to school bus operators and trucking companies. In addition, the MTA Police Department should request that local law enforcement agencies increase their presence at high volume grade crossings during peak rush hour periods to improve enforcement. (See pp. 47-48)

We also found that Metro-North did not follow proper procedures when it removed and deactivated certain crossings on the little-used Beacon line (See pp. 34-35); the LIRR had not posted safety signs at any of its 293 grade-level crossings, contrary to federal regulations (See pp. 21-22); improvements were needed in both railroads' administration of accident investigations (See pp. 22-26 and 40-42); and the LIRR had eliminated only one of the 23 hazardous grade crossings identified 12 years earlier in a strategic plan. (See pp. 26-27)

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## **COMMENTS OF MTA OFFICIALS**

**D**raft copies of this report were provided to MTA officials for their review and comments. Their comments were considered in preparing this final report, and are included as Appendix B.



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# INTRODUCTION

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## Background

The Metropolitan Transportation Authority (MTA) was established in 1965 under Section 1263 of the New York State Public Authorities Law. It is a public benefit corporation and a component unit of the State of New York. The mission of the MTA is to operate, develop and improve public transportation in the New York City metropolitan area.

The MTA has two commuter railroads: the Long Island Rail Road (LIRR), which provides service between New York City and Long Island, and Metro-North Railroad (Metro-North), which provides service between New York City and Dutchess, Orange, Putnam, Rockland and Westchester Counties in New York State, and Fairfield and New Haven Counties in Connecticut. According to the MTA's annual report for the year 2003, the LIRR is the busiest commuter railroad in the United States, with 80.9 million passengers and annual revenues of \$393.3 million. The LIRR has 11 branch lines and 124 passenger stations including three terminals in New York City. Metro-North is the nation's third-largest commuter railroad with 72.5 million passengers and annual revenues of \$378.3 million. Metro-North has 6 branch lines and 88 passenger stations.

When railroad tracks intersect a road or a highway on the same level as the road or highway, the crossing is considered a grade-level crossing. To alert motorists and pedestrians to approaching trains at these crossings, warning devices such as flashers and bells may be installed and the crossings may be blocked by gates.

The LIRR has a total of 293 grade level crossings, and Metro-North has a total of 154 such crossings. All these crossings are equipped with warning devices and are located on both public and private property. The two railroads also have a combined total of 98 pedestrian crossings, closed crossings and private crossings. Pedestrian crossings are for pedestrian traffic only and often have gate(s) and flashers. Closed crossings are closed to vehicular traffic because the tracks are either

barricaded or separated from the road. Private crossings are located on private property and have no warning devices.

Railroads are responsible for determining whether warning devices are needed at a grade-level crossing, and if so, which particular devices are to be installed. The Federal Railroad Administration (FRA) promulgates operating standards and inspection requirements for these devices. The devices are also subject to regulations promulgated by the Federal Highway Administration and the New York State Department of Transportation (DOT).

FRA defines grade-level crossing accidents as any collision, derailment, fire, explosion, act of God, or other event involving the operation of on-track equipment whether standing or moving. In accordance with FRA requirements, railroads must report to the FRA all accidents occurring at grade-level crossings. Both the LIRR and Metro-North have procedures for reporting and investigating such accidents. In the three years ended December 31, 2004, a total of 26 crossing accidents were reported by the LIRR and 11 crossing accidents were reported by Metro-North. Fatalities were incurred in 11 of these accidents (including three suicides).

Both the LIRR and Metro-North have rules and regulations governing the conduct of vehicles and pedestrians at grade-level railroad crossings. These rules and regulations are enforced by the MTA Police Department, which may issue court summonses to violators. The conduct of vehicles and pedestrians at these railroad crossings is also subject to State and local laws. Both the LIRR and Metro-North have public outreach programs that are intended to educate the public about the inherent dangers of grade-level railroad crossings and the need to exercise caution at the crossings.

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## ***Audit Scope, Objectives and Methodology***

**W**e examined the actions taken by the MTA regarding safety at LIRR and Metro-North grade-level railroad crossings for the period January 1, 2002 through April 30, 2005. The objectives of our performance audit were to determine whether (1) warning devices at the crossings met selected operating standards and were inspected as required, (2) programs educating the public about the grade-level railroad crossings were established and implemented, (3) accidents at the

crossings were reported and investigated as required, and (4) a plan for eliminating crossings that were identified as hazardous was developed and actions taken.

To accomplish our objectives, we interviewed LIRR, Metro-North and MTA Police Department officials. We also reviewed and analyzed records and reports pertaining to LIRR and Metro-North railroad crossings. We performed detailed reviews and analyses of records and reports relating to warning device inspections, public outreach activities, enforcement activities and grade-level railroad crossing accidents. We also reviewed pertinent laws, policies and procedures.

In addition, we randomly selected 10 LIRR and 11 Metro-North grade-level railroad crossings and videotaped the performance of the warning devices at those crossings. Our videotapes also showed motorists, cyclists and pedestrians traveling through the crossings, and we determined whether they complied with the laws, rules and regulations governing their actions at railroad crossings. We videotaped each crossing for a total of two hours, generally between 6:00 a.m. and 10:00 a.m. or between 4:00 p.m. and 8:00 p.m.

We conducted our audit in accordance with generally accepted government auditing standards. Such standards require that we plan and perform our audit to adequately assess those procedures and operations included within the audit scope. Further, these standards require that we understand the LIRR's, Metro-North's and the MTA Police Department's internal control structures and compliance with those laws, rules and regulations relevant to the procedures and operations are included in our audit scope. An audit includes examining, on a test basis, evidence supporting transactions recorded in the accounting and operating records and applying such other auditing procedures as we consider necessary in the circumstances. An audit also includes assessing the estimates, judgments and decisions made by management. We believe our audit provides a reasonable basis for our findings, conclusions and recommendations.

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, several of which are performed by the Division of State Services. 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 management functions do not affect our ability to conduct independent audits of program performance.

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### ***Response of MTA Officials***

**D**raft copies of this report were provided to MTA officials for their review and comments. Officials agreed with certain of our findings, conclusions and recommendations and disagreed with others. Where appropriate, we made changes to our audit report to reflect the response of MTA officials. In other instances, we provided “Auditor’s Comments” in our report to present rejoinders to the MTA’s response. Within the report, we also parenthetically summarize the position of MTA officials with respect to each recommendation. The MTA response is included, without attachments, as Appendix B. Attachments may be viewed by contacting the Office of the State Comptroller at the State Audit Bureau, 110 State Street, Albany NY 12236.

Within 90 days after final release of this report, as required by Section 170 of the Executive Law, the Chairman of the Metropolitan Transportation Authority 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 recommendations were not implemented, the reasons therefor.

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# LONG ISLAND RAIL ROAD

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We examined whether warning devices at selected LIRR grade-level railroad crossings met certain operating standards and were inspected at the required intervals. We found the warning devices performed in accordance with the selected operating standards and generally were inspected at the required intervals. We also found the LIRR has an active outreach program for educating school children about the dangers of railroad crossings, and made limited progress in its efforts to eliminate crossings that were identified as hazardous.

Our observations at ten selected LIRR grade-level railroad crossings revealed that motorists and pedestrians often committed safety violations at the crossings. For example, they often went through the crossings when the crossing gates were coming down and the warning lights were flashing. In addition, vehicles sometimes stopped on the tracks when traffic ahead of them backed up. In a total of 20 hours of observation, we identified a total of 203 safety violations. We also observed that public safety might be improved at two of the crossings if traffic signals were added or moved.

In addition, contrary to federal regulations, the LIRR has not posted emergency notification signs at any of its 293 grade-level crossings. Such signs are required to be visible to anyone stalled or disabled on the tracks, and to give a telephone number to call in the event of an emergency. We also found the LIRR can coordinate more effectively with local municipalities when problems are identified with warning signs maintained by the municipalities. We further determined that improvements are needed in the LIRR's administration of accident investigations. Finally, while the LIRR's safety awareness program reaches many school children on Long Island, the LIRR needs to develop a strategy for educating more adults, particularly motorists, of the dangers of grade-level crossings.

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## *Performance of Warning Devices*

Railroad crossing warning devices such as gates and flashers are required to meet operating standards set by the

FRA. For example, flashing lights should begin to flash as soon as a train is detected and the crossing gates should start to lower no less than three seconds after the lights begin to flash. The gates should be in a fully horizontal position at least five seconds before a train arrives at the crossing. The train itself should arrive at the crossing at least 20 seconds after the lights started flashing.

The LIRR has established its own operating standards for these devices. We examined these standards and found that they are either identical to, or more demanding than, the FRA standards. For example, according to LIRR standards, crossing gates should be in a fully horizontal position at least ten seconds before a train arrives at a crossing (more demanding than the FRA standard of five seconds), and should return to their original position no more than 12 seconds after the train leaves the crossing (identical to the FRA standard of 12 seconds).

To determine whether the warning devices at the LIRR’s grade-level railroad crossings met these operating standards, we selected 10 of the LIRR’s 293 crossings and videotaped the performance of the warning devices at those crossings. We videotaped each crossing for a total of two hours, generally between 6:00 a.m. and 10:00 a.m. or 4:00 p.m. and 8:00 p.m. During each two-hour period, at least three trains went through the crossings. We timed the performance of the warning devices on the videotapes and compared the videotaped performances to the following FRA and LIRR operating standards:

<b>Operating Standard</b>	<b>FRA</b>	<b>LIRR</b>
Light flashes	At least 35, but no more than 65, flashes per minute	At least 40, but no more than 65, flashes per minute
Gates start down	Not fewer than 3 seconds after train is detected	3 to 5 seconds after train is detected
Gates are horizontal	At least 5 seconds before train enters crossing	10 to 12 seconds before train enters crossing
Warning time	At least 20 seconds between detection and arrival of train	27 to 33 seconds between detection and arrival of train
Gates are back up	No more than 12 seconds after train leaves crossing	No more than 12 seconds after train leaves crossing

We found that the warning devices at all ten crossings met these operating standards.

However, when we videotaped one of the crossings (Crossing #9), we noted that, in one instance, the crossing gates were activated when there was no train. In this instance, the gates were lowered for approximately two minutes and then went back up. LIRR officials told us that electrical problems can cause crossing gates to be activated when there is no train. They said that, when this happens, a central alarm will be sounded if the gates are falsely activated for more than eight minutes. When the alarm is sounded, LIRR officials assess the situation and determine whether personnel need to be dispatched to fix the problem and maintain public safety at the crossing.

We question whether an eight-minute interval is appropriate in such circumstances. Based on the volume of traffic that we observed at this crossing, malfunctioning crossing gates could lead to unsafe conditions if corrective actions are not initiated promptly. We asked LIRR officials if there was a documented basis for the eight-minute interval, but they had no documentation justifying the length of the interval. We recommend the alarm interval be based on documented criteria such as railroad industry practices or traffic engineering studies.

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### ***Inspection of Warning Devices***

According to FRA regulations, the warning devices at railroad crossings should be inspected at certain intervals to ensure that they are in good working order. Certain types of inspections should be performed monthly, while other types of inspections should be performed quarterly or annually. For example, in a monthly inspection, the power, backup power, flashers, gates and electric signs are to be tested to ensure that they are operating in accordance with FRA standards. In a quarterly inspection, the grounds, batteries, switches, relays and gate pins/bolts are to be tested to ensure that they are working and are not in danger of breaking. In an annual inspection, the train detection system is to be tested. The FRA requires that warning device inspections be documented on a prescribed inspection form, which must be retained on file for at least one year. In practice, the LIRR was retaining inspection documentation for three years at the time of our audit.

The LIRR has established its own procedures for inspecting warning devices. We examined these procedures and found that they are more demanding than the FRA procedures,

because they are stricter in their definitions of the inspection intervals (e.g., the LIRR procedures require monthly inspections to be performed every 30 days, while the FRA regulations require that monthly inspections be performed in consecutive months). The LIRR Signal Maintenance Division performs the inspections.

To determine whether the inspections were performed at the intervals required by FRA procedures, we randomly selected 50 of the LIRR's 293 grade-level crossings and examined the inspection forms on file for these crossings for the 31-month period January 1, 2002 through July 31, 2004. At the time of our test, in accordance with LIRR inspection documentation retention practices, a total of 2,100 inspection forms should have been on file. We found that all but seven of these forms were on file. The seven missing forms related to three monthly and four quarterly inspections at 4 of the 50 crossings. We therefore conclude that with minimal exceptions documentation supports that warning device inspections were performed at the intervals required by FRA procedures.

Some of the warning signs at the LIRR's grade level crossings (e.g., "Do Not Stop On Tracks" signs) are located on property that is owned by the local municipality. These signs are posted and maintained by the local municipalities. During the inspection of the warning devices at a crossing, a LIRR inspector may notice that one of these signs needs to be replaced or fixed (e.g., the sign may have been knocked down or defaced). In such instances, the inspector is supposed to note the problem in an area of the inspection form that is reserved for such matters.

We found that such problems are noted on the LIRR's inspection forms, and a certain individual (the Compliance Manager) is responsible for notifying the municipalities about the need for corrective action. However, the inspection forms are not filed with the Compliance Manager until a month after the inspection is performed. As a result, corrective actions are routinely delayed for at least one month. We further determined that the LIRR does not follow up with the municipalities to verify that corrective actions were taken. We recommend that the LIRR notify municipalities about the need for corrective action as soon as an inspection is completed and follow up with the municipalities to verify that corrective action was taken.

In addition, to provide assurance warning devices are actually inspected as indicated by the completed inspection forms, we recommend that selected inspections be corroborated by a LIRR unit other than the Signal Maintenance Division.

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## ***Public Outreach Activities***

The LIRR attempts to educate the public about the dangers of railroad crossings and the need to exercise caution at the crossings. The LIRR's primary public outreach program is the T.R.A.C.K.S. (Together Railroads and Communities Keeping Safe) program. In addition, in conjunction with National Operation LifeSaver, Inc., an organization that promotes railroad crossing safety nationally, the LIRR promotes National Operation LifeSaver Day, which highlights the need for safety at railroad crossings.

The T.R.A.C.K.S. program is offered to students in primary and secondary schools, driver education students in particular, professional drivers (e.g. FedEx and UPS), and civic groups. School audiences are considered especially important, because LIRR officials believe that multiple exposures to the program at school will reinforce a child's concept of crossing safety. LIRR officials contact private and public schools located close to the railroad crossings and ask if the program can be presented at those schools. During the presentations, the LIRR training specialist distributes materials such as coloring books to students in primary grades, book covers and rulers to children in grades 3 through 12, and driver education booklets to students enrolled in driver education programs.

According to records maintained by the LIRR, between January 2002 and October 2004, the T.R.A.C.K.S. program was presented a total of 1,191 times to a total of 280,983 attendees at schools and civic groups (e.g., health fairs, social clubs, and BINGO) The location of each presentation is recorded, as is the number of attendees at that presentation.

We reviewed these records and determined that 1,093 of the 1,191 presentations (92 percent) were made to students ranging from pre-kindergarten age to driver education age. These 205,960 students accounted for about 73 percent of the total 280,983 program attendees during this period. The remaining 98 presentations were made to 75,023 adults primarily at health

fairs. Thus, the T.R.A.C.K.S. program was generally targeted at children rather than adults.

We believe the LIRR should continue to encourage the T.R.A.C.K.S. program for school children. However, as is noted in the section of this report entitled *Safety Violations Observed at Crossings*, adults were responsible for most of the safety violations that we observed at LIRR crossings, and these violations were both frequent and serious. Also, of the 1,191 presentations of T.R.A.C.K.S., only seven were provided to professional drivers. We therefore recommend that the LIRR develop a strategy for exposing more adults to programs such as T.R.A.C.K.S. For example, the LIRR could make public service announcements on radio and television, and make appearances on local news media.

We also determined that certain improvements could be made in the LIRR's administration of the T.R.A.C.K.S. program. For example, we contacted ten of the schools where presentations were made to verify the reported attendance. Seven of the ten schools confirmed the attendance reported by the LIRR. However, three of the schools indicated that the reported attendance was overstated, as follows:

- At Corpus Christi Elementary School, on June 2, 2004, the LIRR reported that two different presentations were made to 275 students each, for a total attendance of 550. However, the school's total enrollment at that time was only 366 students.
- At Mills Pond Elementary School, on March 4, 2004, the LIRR reported that two different presentations were made to 300 students each, for a total attendance of 600. However, the school's total enrollment at that time was only 341 students.
- At Brookside Elementary School, on May 7, 2004, the LIRR reported that two different presentations were made to 175 students each, for a total attendance of 350. However, the school's total enrollment at that time was only 233 students.

We recommend that steps be taken to ensure that attendance at T.R.A.C.K.S. programs is reported accurately. We also note that schools sometimes decline the LIRR's offer to present the

T.R.A.C.K.S. program to their students. We recommend the LIRR maintain a record of the reasons given by these schools and review these reasons to determine whether any changes could be made (e.g., the timing of the offer) that would get the schools to accept the program. We further note that the LIRR does not develop an annual plan, with performance measures, for its outreach activities. We recommend that such a plan be developed.

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### ***Safety Violations Observed at Crossings***

According to Part 1097.14 of the LIRR's rules and regulations, only LIRR employees performing their duties may traverse a LIRR railroad crossing when the crossing gate is going down or coming up, or when an approaching train is plainly visible. All other persons must not traverse a crossing in these circumstances. In addition, school bus drivers are required by State law to come to a full stop before crossing railroad tracks.

When we videotaped the performance of the warning devices at ten selected grade level crossings, our videotapes showed motorists, cyclists and pedestrians going through the crossings. We observed their actions to determine whether they complied with LIRR rules and regulations and with other relevant State and local laws.

We found that motorists, cyclists and pedestrians often violated LIRR rules and regulations, as they often went through the crossings when the crossing gates were in the process of going down or coming up, and sometimes walked through the crossings when the gates were already down. We also observed that motorists (including school bus drivers) made illegal turns or went through red traffic lights in order to avoid having to wait at crossings where warning lights had begun to flash. Finally, we saw nine school buses that did not come to a full stop before crossing railroad tracks.

As is summarized in the following table, in a total of 20 hours of observation, we identified a total of 203 crossing or traffic violations. The violations were widespread, as they occurred at eight of the ten crossings.

Crossing	Crossed While Gates Were Going Down or Were Already Down		Crossed While Gates Were Going Up		Illegal Turns	Ignored Traffic Lights	Did Not Stop at Crossing	Totals
	Cars or Trucks	Cyclists or Pedestrians	Cars or Trucks	Cyclists or Pedestrians	Cars or School Buses	Cars or School Buses	School Buses	
Crossing #1	0	0	0	0	0	0	0	0
Crossing #2	13	4	18	0	0	0	2	37
Crossing #3	3	1	11	2	0	0	0	17
Crossing #4	8	1	12	0	0	0	1	22
Crossing #5	5	0	1	0	0	0	1	7
Crossing #6	0	0	0	0	0	0	0	0
Crossing #7	6	3	11	0	2	0	0	22
Crossing #8	13	5	8	10	6	0	2	44
Crossing #9	2	4	1	0	0	8	0	15
Crossing #10	32	2	2	0	0	0	3	39
<b>Totals</b>	<b>82</b>	<b>20</b>	<b>64</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>203</b>

Some of the violations were particularly unsafe, as is shown in the following examples:

Video 1

- At Crossing #2, a tanker truck and a tractor trailer crossed the tracks while the warning lights were flashing and the crossing gates were coming down.

Video 2

- At Crossing #7, motorists and a pedestrian started to cross the tracks while the gates were still in the process of going up. The gates suddenly reversed direction and started going back down while the motorists and the pedestrian were still on the tracks. A second pedestrian then crossed into the space between the two gates.

Video 3

- At Crossing #10, a truck stopped on the tracks for 23 seconds because traffic was backed up ahead of the truck. As it happened, no train approached the crossing, but the truck would have been in danger if a train had approached at this time. In such circumstances, a motorist should stop before reaching the tracks and wait for the traffic up ahead to clear.

Video 4

- At Crossing #2, a school bus went through the crossing without slowing down or stopping.

Video 5

- At Crossing #7, a pedestrian walked along the tracks while the crossing gates were down, just 12 seconds before the train passed. Traffic was blocked by the gates on both

sides of the tracks, and the pedestrian was using the tracks as a walkway to cross the busy street. We observed pedestrians doing the same thing at other crossings.

Video 6

- At Crossing #8, a woman pushing a baby carriage was about to cross the tracks when the gates were already down, but stopped when our auditor signaled her to stop.

We made a DVD of some of these observations and showed it to LIRR officials on January 13, 2005. LIRR officials told us that they were aware these types of violations can occur at crossings despite their efforts to stop them.

Because of the serious and widespread nature of these safety violations, we conclude that additional actions need to be taken by LIRR officials to protect public safety at railroad crossings. While the warning devices at these crossings performed as they should, too often pedestrians and motorists at the crossings did not heed to the warning devices.

We further observed potential public safety risks at two of the crossings as follows:

- There is no traffic signal at Crossing #7. In order to get to the LIRR train station near that crossing, pedestrians may have to cross a busy street. Some pedestrians therefore walk along the tracks while the crossing gates are down, using the tracks as a walkway to cross the busy street.
- At Crossing #8, there is a traffic signal just after the crossing. Motorists are at risk of being trapped on the tracks when traffic backs up at the light.

We recommend LIRR officials further assess these risks and determine whether corrective actions are needed.

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## ***Emergency Notification Signs***

According to Federal Highway Administration (FHA) regulations (Part 8, Traffic Controls for Highway-Rail Grade Level Crossings), an emergency notification sign should be posted at all highway-rail grade level crossings. The sign should be visible to anyone stalled or disabled on the tracks, and should give a telephone number to call in the event of an

emergency. This requirement has been in effect for several years.

However, we found that emergency notification signs were not posted at any of the LIRR's 293 grade-level crossings. We determined that LIRR officials discussed the need for the signs to be posted, but LIRR officials and MTA Police Department officials were unable to agree on the phone number that would be placed on the sign. In the absence of the signs, motorists have generally been calling 911 to report grade-level crossing malfunctions or other dangerous conditions. The information is then forwarded to the LIRR. However, direct calls to the LIRR would be quicker and less likely to result in incomplete or inaccurate communication.

In response to our audit findings, LIRR officials informed us that a decision has been made about the phone number to be placed on the sign. They said the signs would be posted at all crossings. A LIRR information leaflet "Keeping Track" dated February 2006, announcing the installation of new safety signs with an emergency number if a car becomes disabled at a rail crossing, or a crossing gate malfunctions was distributed to the ridership.

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### ***Accident Reporting, Investigation and Documentation***

According to LIRR records, in the three years ended December 31, 2004, a total of 26 accidents occurred at the LIRR's grade-level crossings, and fatalities (including three suicides) were incurred in nine of these accidents, as follows:

<b>Year</b>	<b>Accidents Occurring at Crossings</b>	<b>Accidents Involving Fatalities</b>
<b>2002</b>	9	2
<b>2003</b>	7	3
<b>2004</b>	10	4
<b>Total</b>	26	9

According to LIRR records, 6 of the 26 accidents were suicides or attempted suicides, 17 of the 20 remaining accidents were caused by motorist or pedestrian safety violations, and 3 of these were attributed to the LIRR. For example, in one of the three accidents a car was hit by a train at a crossing while the crossing gates were malfunctioning (LIRR personnel were at the

crossing at the time of the accident to direct traffic, but did not stop the car).

Railroads are required by the FRA to report all accidents occurring at grade-level crossings. To determine whether the LIRR reported these 26 accidents to the FRA, we reviewed the FRA website. We found that all 26 accidents were reported to the FRA.

Train accidents occurring at LIRR grade-level crossings are to be investigated by the LIRR Safety Department and other affected LIRR units. The investigations should be performed in accordance with the LIRR's accident investigation procedures. To determine whether the 26 accidents were investigated in accordance with these procedures, we reviewed the Safety Department's files for the accidents. We found that investigations were performed for all 26 accidents. However, we were unable to determine whether the investigations were performed in accordance with all LIRR procedures, because required documentation was often missing from the files.

According to the LIRR's accident investigation procedures, certain documentation is to be maintained in each accident file (e.g., a copy of the police report, photographs of the accident site, the field notes prepared by the Safety Department investigator, and several other documents). However, most of the files were missing more than one of the required documents, and some files were missing several of the required documents. In addition, while 15 of the 26 investigations were considered open at the time of our review, the documents missing from these open investigation files generally related to procedures that should have been completed early in the investigation process (such as obtaining a copy of the police report or taking photographs of the accident site) and thus should have been completed at the time of our review.

The following examples show the extent of the missing documentation:

- Six files had no copy of the police report.
- Eleven files had no photographs of the accident site.
- Seventeen files had no statements from witnesses and/or train crews.

We also found that some of the documents in the accident files were not completed as required. For example, the coversheet for an accident file is supposed to show when various investigative procedures were completed. In addition, the Safety Officer performing the procedures is supposed to sign the coversheet. However, six coversheets did not show when the investigative procedures were performed, and three coversheets were not signed by a Safety Officer.

If required documents are missing from the accident files or these documents are incomplete, there is less assurance the related investigations were performed in a thorough manner. We recommend that significant improvements be made in the LIRR's maintenance of accident files.

(In response to our draft report, LIRR officials stated that the checklist was only a guide and that checklist items are to be included when available. They also stated that the audit's observation that cases were reported accurately to the FRA indicates that claim reporting was complete.)

Auditor's Comments: This response is not consistent with the LIRR's "Safety Operations Procedures - Accident and Incident Investigations." The Procedures state that to help augment the documentation process, a document checklist will be attached to the cover of each case and the Reporting System Safety Officer will ensure all items have been received and will attest to the same by signing off on the checklist.

Various LIRR units may be involved in the investigation of an accident. However, the LIRR's accident investigation procedures do not designate any one unit as being responsible for the overall coordination of the investigations. In the absence of such a designation, investigations are less likely to be coordinated in an effective manner and records are less likely to be well organized and readily accessible. We recommend that one unit be responsible for the overall coordination of accident investigations.

Accident investigations should be completed as expeditiously as possible. To provide assurance investigations are not being delayed unnecessarily, management should establish expected timeframes for the investigations and monitor their progress against these timeframes. If an investigation is taking longer than expected to complete, management should follow up to

identify the reasons for the delay and determine whether any actions can be taken to expedite completion. However, we found that the LIRR does not establish expected timeframes for accident investigations and thus cannot formally monitor their progress against such timeframes. As a result, the investigations may not be completed as expeditiously as possible.

We note that 15 of the 26 accident investigations that we reviewed were considered by the LIRR to be open, even though 10 of these 15 investigations related to accidents that occurred in 2002 or 2003. According to LIRR officials, the cases were still open because the Safety Department was waiting for information from other LIRR departments, such as estimates of the costs incurred by the LIRR in the accidents. We question the need to wait so long for this information. We were unable to determine how long it usually takes the LIRR to complete accident investigations, because the completion date was not documented on completed investigations.

We recommend that the LIRR develop a formal reporting system for accident investigations, use the system to monitor the progress of the investigations, and take action to expedite the completion of investigations when they are delayed. As part of this monitoring process, we recommend that open accident files be reviewed on a regular basis to ensure that they are complete.

The individuals or companies that are involved in crossing accidents may file claims (lawsuits) against the LIRR. For example, six pending claims totaling about \$450.1 million were filed against the LIRR as a result of an accident that occurred on March 10, 2004. In this accident, a runaway freight train caused damage at two crossings (because two crossings were involved, this accident accounts for 2 of the 26 LIRR crossing accidents in our audit period). According to LIRR records, an additional \$22 million in pending claims were filed against the LIRR in two other crossing accidents from our audit period.

(LIRR officials replied to our draft audit report that during the period 1998 to 2002, there were a total of 45 grade crossing incidents which resulted in lawsuits. Although the total monetary relief sought was \$26 million, the Claims Department paid out only \$3,000 while collecting \$4,025 for reimbursement of LIRR property damage.)

The LIRR Claims Department maintains files for accidents. According to LIRR procedures, certain documentation should be maintained in these files. However, we found that required documents were often missing from these files. As a result, the LIRR may not always be able to fully protect its interests in any related lawsuits. We recommend that a checklist of the required documents be included in each Claims Department file and be used to ensure that all required documents are obtained for the file.

(In response to our draft audit report, LIRR officials stated that five files missing documents were for safety incidents and not accidents. Therefore, accident files were not established by the Claims Department.)

Auditor's Comments: According to records provided by LIRR officials during the audit, the five missing files pertained to accidents reported as such to the FRA.

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## ***Elimination of Hazardous Crossings***

In 1992, the LIRR issued its Highway Grade Crossing Evaluation Strategic Plan (Strategic Plan). The Strategic Plan, which was prepared by an engineering firm, proposed a number of capital improvements that would result in the elimination of grade-level crossings on the LIRR's heavily traveled Main Line between Queens and Hicksville. A total of 23 crossing closures were identified. As of November 2004, LIRR officials informed us that one crossing had been closed, two other crossings were funded for closure and one crossing identified for closure was instead being reconstructed. Accordingly, LIRR's results for the elimination of grade crossings have been minimal with only one grade-level crossing eliminated. LIRR officials advised us that it was time consuming to complete all of the processes required for grade-level crossing closures.

(In responding to our draft audit report, LIRR officials stated that the decision to eliminate hazardous crossings is not done solely by the Rail Road. They indicated that the New York State Department of Transportation has the primary responsibility to identify and fund grade crossing eliminations. With respect to grade crossings on the Main Line between Queens and Hicksville, LIRR officials indicate that they have included up to five grade crossing eliminations as part of its Main Line Corridor

Improvements Project and that the Department of Transportation has identified funding for these eliminations.)

Auditor's Comments: New York State Department of Transportation officials advised us that there is Memorandum of Understanding between the Governor's Office, the Department of Transportation and the LIRR for \$80 million for the elimination of up to five crossings. It is estimated that the elimination will take between five and eight years to complete.

The Strategic Plan also proposed that the number of Operation Lifesaver programs be increased and a new type of intelligent crossing protection system be designed and installed for demonstration/prototype purposes. We found that the number of Operation Lifesaver programs was increased and a new type of crossing alert system has been designed and installed. This system, which is being piloted, notifies management when the warning devices at a crossing do not function as intended.

## **Recommendations**

1. Improve public awareness of safety requirements at grade-level crossings through an outreach strategy that includes: an annual plan with performance measures, targeting more adults, particularly motorists, for attendance in safety awareness programs; accurately reporting attendance at T.R.A.C.K.S.; and determining how to increase acceptance of T.R.A.C.K.S. presentations in schools.

(LIRR officials responded that System Safety staff attended health fairs and spoke to civic groups to educate and promote safety at grade crossings during 2005. In addition, they reported that more than 1,500 letters were sent to the New York State Truckers Association, school bus companies, the United States Postal Service and UPS promoting general safety at grade level crossings while extending an offer to provide a professional driver crossing safety program at their facilities. In addition, over 30,000 pamphlets were handed out to customers, pedestrians and drivers at grade crossings as part of the Operation Lifesaver program. Officials also indicated that they will make attempts to develop more accurate methods to estimate the number of individuals that attend a T.R.A.C.K.S. function.)

Auditor's Comments: At the time of our audit, documentation provided by the LIRR did not indicate that letters had been sent to companies or that there had been any significant outreach presentations to motorists and professional drivers. We believe that the steps reportedly taken by the LIRR during 2005 may help to diminish the violations we observed at grade level crossings in late 2004 and early 2005.

2. Strengthen accident investigation procedures by: using a checklist to ensure all required documentation is included in each Claims Department file, periodically reviewing open files to identify missing documentation so that it can be obtained and filed, and developing a reporting system to monitor and manage the progress of investigations.

## **Recommendations (Cont'd)**

(LIRR officials agreed to adopt a checklist to help the Claims Department obtain all applicable documents.)

3. Base the alarm interval for malfunctioning crossing gates on documented criteria such as railroad industry practices or traffic engineering studies.

(LIRR officials responded that there are no regulations or recommended industry standards establishing a time interval for an alarm to be sounded if crossing gates are falsely activated. They indicated that their practice is to respond immediately to any reports of gate malfunctions, including false activations.)

Auditor's Comments: The LIRR should continue to monitor this condition to determine if the eight minute interval is an appropriate benchmark.

4. If a need for a municipality to take corrective action is identified in an inspection of a grade-level railroad crossing, notify the municipality as soon as the inspection is completed and follow up with the municipality to verify that appropriate corrective action was taken. Develop written procedures for these processes.

(LIRR officials responded to the draft audit report stating that they had no enforcement authority over the maintenance or installation of roadway signs or devices located off railroad property. They indicated that they are being proactive by inspecting these devices and notifying the respective owners of any deficiencies. They added that it would be more appropriate for us to direct audit recommendations for periodic inspections of these devices to such entities that are responsible for action; generally municipalities.)

Auditor's Comments: We acknowledge that the LIRR is being proactive in this area. Since they have taken this position, we merely point out that they can

## Recommendations (Cont'd)

increase their effectiveness by filing their reports with the responsible entities immediately after the inspection and by following up with them to determine that corrective actions were taken.

5. Assess the risks identified at Crossing #7 and Crossing #8 and determine whether corrective actions are needed.

(LIRR officials agreed with this recommendation and indicated that they have and will continue to work with New York State Department of Transportation and traffic engineers to assess conditions at the grade crossings.)

6. Post emergency notification signs at all grade-level crossings.

(LIRR officials agreed with this recommendation. As of April 2006, it was reported that 150 emergency notification signs were installed and the rest will be installed before the end of the year.)

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## METRO-NORTH RAILROAD

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We found that the warning devices at selected Metro-North grade-level railroad crossings met certain operating standards and were inspected at the required intervals. We noted that for 19 active grade-level crossings on the Beacon line, Metro-North had removed the crossing gates and deactivated the warning devices. The equipment at these crossings has not been inspected since 1995 when the line was acquired. Metro-North officials advised us that these steps were taken because the Beacon line is used only infrequently for freight service and once-a-year passenger service. In addition, officials point out that use of the line requires two weeks advance notice so that Metro-North can arrange to block the crossings in New York State.

However, according to FRA regulations, railroad crossing warning devices cannot be taken down or deactivated without the express approval of the appropriate State regulatory agency (in this instance DOT). In fact, Metro-North and LIRR have both previously petitioned DOT pursuant to section 91 of the Railroad Law for orders authorizing the removal of railroad crossing warning devices. Nevertheless, Metro-North did not seek and obtain DOT approval to remove crossing gates or deactivate warning devices at the 19 crossings on the Beacon line.

Metro-North has developed a safety awareness program to educate the public about the dangers of railroad crossings. We found significant improvements are needed in the program. For example, there was no indication the program was presented to adults in recent years and the number of school children exposed to the program was small.

We observed 11 Metro-North crossings and found that motorists sometimes committed safety violations at the crossings. In a total of 22 hours of observation, we identified a total of 91 safety violations. While the violations were not as extensive as the violations we observed at LIRR crossings (perhaps because traffic was generally heavier as the LIRR crossings), the violations were frequent enough and serious enough to cause concern. We also observed that required safety signs were not posted at many of the crossings and potential safety hazards

needed to be addressed at two of the crossings. We also identified the need for improvement in Metro-North's administration of crossing accident investigations, and found Metro-North had made progress in eliminating crossings that were identified as hazardous.

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## ***Performance of Warning Devices***

Railroad crossing warning devices such as gates and flashers are required to meet operating standards set by the FRA. Metro-North, like the LIRR, has established its own operating standards for grade-level railroad crossing warning devices. We examined some of these standards and found that they are either identical to, or more demanding than, the FRA standards.

To determine whether the warning devices at Metro-North's grade-level crossings met these operating standards, we videotaped the performance of the devices at 11 crossings. We randomly selected the 11 crossings from the 92 grade-level crossings on five of Metro-North's six branch lines [we did not include any of the 55 grade-level crossings (49 in New York State and 6 in Connecticut) from the Beacon line for reasons that are discussed in the section of this report entitled *Inspection of Warning Devices*].

We videotaped each crossing for a total of two hours, generally between 6:00 a.m. and 10:00 a.m. or between 4:00 p.m. and 8:00 p.m. During each two-hour period, at least three trains went through the crossings. We timed the performance of the warning devices on the videotapes and compared the videotaped performances to the following FRA and Metro-North operating standards:

<b>Operating Standard</b>	<b>FRA</b>	<b>Metro-North</b>
Light flashes	At least 35, but no more than 65, flashes per minute	At least 35, but no more than 65, flashes per minute
Gates start down	Not fewer than 3 seconds after train is detected	3 to 5 seconds after train is detected
Gates are horizontal	At least 5 seconds before train enters crossing	10 to 12 seconds before train enters crossing
Warning time	At least 20 seconds between detection and arrival of train	At least 28 seconds between detection and arrival of train
Gates are back up	No more than 12 seconds after train leaves crossing	No more than 12 seconds after train leaves crossing

We found that the warning devices at all 11 crossings met these operating standards.

However, at 7 of the 11 crossings, the warning bells did not continue ringing after the gates were all the way down. While the bells are an optional warning device and are not subject to FRA or Metro-North operating standards, public safety is enhanced if the warning bells continue to ring until the train has passed. According to Metro-North officials, the bells at some crossings are programmed to stop ringing after the gates are down, because this arrangement is preferred by communities that wish to minimize the noise from the bells. We recognize Metro-North officials have an obligation to be responsive to local concerns regarding the railroad. We recommend, however, that Metro-North periodically reassess these arrangements to ensure that appropriate grade-level crossing safety is maintained.

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### ***Inspection of Warning Devices***

**F**RA regulations require that railroad crossing warning devices be inspected at certain intervals (monthly, quarterly and annually) to ensure that they are in good working order. The regulations also require that the inspections be documented on a prescribed inspection form. To determine whether these inspections were performed at the required intervals by Metro-North, we selected 25 of Metro-North's grade-level crossings and examined the inspection forms on file for these crossings for the year ended December 31, 2004. We randomly selected

the 25 crossings from the 88 grade-level crossings located on Metro-North's three main lines (the Hudson, Harlem and New Haven lines). We did not include any of the 63 crossings located on Metro-North's 3 less traveled lines (the Beacon line with 55 crossings, the Pascack Valley line with 4 crossings, and the Port Jervis line with 4 crossings).

During this one-year period, a total of 425 inspections should have been performed at these 25 crossings. We found documentation (i.e., inspection reports) that all of these inspections had been performed.

Some of the warning signs at the Metro-North's grade level crossings (e.g., "Do Not Stop On Tracks" signs) are located on property that is owned by the local municipality. These signs are posted and maintained by the local municipalities. If a Metro-North inspector notices that one of these signs needs to be replaced or fixed, the inspector should note the problem in an area of the inspection form that is reserved for such matters. However, we found that, when such problems are noted on the inspection forms, Metro-North's written procedures do not require that the municipalities be notified about the need for corrective action. As a result, corrective action is less likely to be taken. As is noted later in this report, such corrective action was needed at 8 of the 11 crossings that we observed, because warning signs maintained by the municipalities were either missing or on the ground. We recommend a process be established at Metro-North for notifying municipalities about the need for corrective action and for following up with the municipalities to verify that corrective action was taken.

Metro-North's Beacon line connects the City of Beacon in Dutchess County to the Village of Brewster in Putnam County. There are a total of 55 grade level crossings on the line, which Metro-North acquired in 1995. There are 49 grade level crossings in New York State, but only 19 of these are active. The other 30 are passive crossings. According to Metro-North officials, the line was out-of-service when they acquired it and has been used infrequently since that time, providing occasional freight service and special once-a-year passenger service. Since the line is used so infrequently, Metro-North took down the crossing gates and cut off power to the 19 active grade level crossings.

If someone such as a freight train operator wants to use the line, they must file a formal request with Metro-North at least two weeks prior to that use. Metro-North then arranges for some of its personnel or MTA Police Department personnel to block the crossings in New York State, as necessary, on the day(s) of use. When we asked Metro-North officials approximately how often the line was used (e.g., once a week, once a month, once a year), the officials would not specify, saying only that it was used “infrequently.”

According to FRA regulations, once warning devices have been installed at a railroad crossing, the devices should not be taken down or deactivated without the express approval of the appropriate state regulatory agency (in this instance, DOT). However, Metro-North did not obtain, and did not seek, DOT’s approval for its decision to deactivate the warning devices on the 19 grade-level crossings in New York State.

In cutting off the power to the 19 active level crossings, Metro-North has lost the ability to provide motorists and pedestrians with advance warning of an approaching train. While Metro-North or MTA Police Department personnel may be able to block a crossing when a train approaches, motorists and pedestrians are less likely to be aware of the train until they are about to cross the tracks. As a result, there is an increased risk that motorists and pedestrians may approach the crossing too fast and not be able to stop before entering on the tracks.

We recommend that Metro-North seek and obtain DOT approval for its decision to remove crossing gates and to deactivate warning devices on the Beacon line crossings.

(Metro-North officials responded to our draft report indicating that representatives of Metro-North and the New York State Department of Transportation conducted a joint inspection of the Beacon Line crossings to make certain appropriate signage is in place and sight lines are not obstructed. As a result, Metro-North agreed to complete several action items and all of these were done. Subsequent to that inspection, a representative of the Department of Transportation requested that Metro-North post “exempt” signs on certain Beacon Line grade crossings. Those exempt signs were installed. In addition, Metro-North officials indicate that, subsequent to transmittal of our draft audit report, the Department of Transportation requested that Metro-North file a petition pursuant to Section 91 of the Railroad law

for approval of the automatic devices. Metro-North has filed such a petition.)

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## ***Public Outreach Activities***

To educate the public about the dangers of railroad crossings, Metro-North has developed a public outreach program in which a safety employee will visit a school, business or civic group and make a presentation. In the presentation, the employee makes an introductory speech, shows a video, and oversees an interactive session involving a robot called Metro-Man. During this interactive session, the audience, and children in particular, are encouraged to ask questions. The safety employee also distributes pamphlets, brochures, coloring books and other literature.

Three Metro-North employees are certified as railroad crossing safety trainers by a national organization that promotes crossing safety (National Operation LifeSaver, Inc.). These three employees also have other duties at Metro-North and spend most of their time on these other duties. In fact, at the time of our audit, only one of these three employees was actually assigned to the public outreach program and that employee had been on extended leave for several months. Consequently, the program had been put “on hold” and was expected to resume in the Fall of 2005.

According to records maintained by Metro-North, between November 2003 and August 2004, Metro-North made 16 of these crossing safety presentations to a total of 2,336 students at private and public schools. The students at these presentations ranged from pre-kindergarten age to driver education age. No presentations were made to other organizations during this period and no records were available for presentations made prior to November 2003, because the employee who was in charge of the program at that time was no longer with Metro-North and program records were not maintained by anyone else.

We conclude that significant improvements are needed in Metro-North’s public outreach program. There is no indication that the program has been presented to adults in recent years, and the number of children exposed to the program is small. Metro-North officials told us that presentations are usually made in response to requests from schools, businesses and civic

groups. We recommend Metro-North develop a more proactive approach to public outreach, as follows:

- To increase its involvement in local schools, Metro-North should consult with the LIRR, as the LIRR has developed an active program of public outreach in the schools.
- Metro-North should develop a strategy for providing safety awareness programs to adults, particularly motorists (e.g., public service announcements on radio and television, and appearances on local news media). As we make the same recommendation to the LIRR, it may be beneficial for the two railroads to coordinate with one another in the development and implementation of this strategy.
- Metro-North should evaluate the adequacy of its staffing commitment to public outreach. We note that the LIRR assigns three full-time employees to its public outreach activities, while Metro-North assigns one part-time employee. Perhaps Metro-North can coordinate efforts with the LIRR so that both railroads can attain certain efficiencies.

Metro-North's outreach approach should be included in a strategic plan, with performance measures, and should include annual plans for increasing the number of presentations made and the number of people reached. Metro-North should also document its outreach efforts by listing all the schools, businesses and civic groups that are contacted for possible sessions.

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## ***Safety Violations and Other Conditions at Crossings***

According to Part 1085.14 of Metro-North's rules and regulations, only Metro-North employees performing their duties may traverse a Metro-North railroad crossing when the crossing gate is going down or coming up, or when an approaching train is plainly visible. All other persons must not traverse a crossing in these circumstances. In addition, school bus drivers are required by State law to come to a full stop before crossing railroad tracks.

When we videotaped the performance of the warning devices at the 11 randomly selected crossings, our videotapes showed motorists, cyclists and pedestrians going through the crossings.

We observed their actions to determine whether they complied with Metro-North rules and regulations and with other relevant State and local laws.

We found that motorists did not always comply with Metro-North rules and regulations, as they sometimes went through the crossings when the crossing gates were going down or coming up. We also noted that motorists often failed to obey yield signs at the crossings. Finally, we saw eight school buses that did not come to a full stop before crossing railroad tracks.

As is summarized in the following table, in a total of 22 hours of observation, we identified a total of 91 crossing or traffic violations. The violations were fairly widespread, as they occurred at 8 of the 11 crossings. However, most of the violations (79 of 91) occurred at five crossings.

Crossing	Crossed While Gates Were Going Down or Were Already Down		Crossed While Gates Were Going Up		Did Not Yield	Stopped on Tracks	Did Not Stop At Crossing	Totals
	Cars or Trucks	Cyclists or Pedestrians	Cars or Trucks	Cyclists or Pedestrians	Trucks or Vans	Cars	School Buses	
Crossing #11	10	0	12	0	1	0	0	23
Crossing #12	1	0	2	0	0	0	2	5
Crossing #13	0	0	6	0	13	0	2	21
Crossing #14	0	0	0	0	2	0	0	2
Crossing #15	0	0	3	0	5	0	2	10
Crossing #16	1	1	6	2	2	2	0	14
Crossing #17	0	0	0	0	0	0	0	0
Crossing #18	1	0	9	0	0	0	1	11
Crossing #19	0	0	0	0	0	0	0	0
Crossing #20	1	0	3	0	0	0	1	5
Crossing #21	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>14</b>	<b>1</b>	<b>41</b>	<b>2</b>	<b>23</b>	<b>2</b>	<b>8</b>	<b>91</b>

While the violations were not as frequent as the violations we observed at LIRR crossings (perhaps because traffic was generally heavier at the LIRR crossings), the violations were frequent enough and serious enough to cause concern.

Some of the violations were as follows:

- Video 7
 • At Crossing #18, school bus did not come to a full stop before making a right turn over the tracks.

- **Video 8** At Crossing #16, despite the red flashing lights and descending gates, a Jeep did not stop and continued crossing over the tracks.

- **Video 9** At Crossing #12, gasoline truck on the left hand side did not make a full stop before crossing the tracks.

In addition, at many of the crossings we observed, signs and other crossing markings were not adequately maintained or were not present, as follows:

- At Crossing #11, the markings painted on the road to warn motorists of the crossing were barely visible.
- At 7 of the 11 crossings, there was no “Do Not Stop on Tracks” sign.
- At Crossing #12, the “Do Not Stop on Tracks” sign was on the ground.
- At Crossing #16 and Crossing #18, there was no sign containing a telephone number to call in case of an emergency, as is required by the FRA. Such a sign was posted at the other nine crossings.

We further observed potential public safety risks at two of the crossings as follows:

- At Crossing #18, motorists are forced to turn left or right shortly after crossing the tracks, because the street becomes one-way in the other direction. The oncoming traffic is usually traveling fast because it is coming downhill. As a result, vehicles often back up onto the tracks while waiting to turn left.
- At Crossing #20, it is difficult for motorists approaching the crossing to see the flashing warning lights because the lights are very dim.

We recommend Metro-North officials monitor grade-level crossings more closely to ensure that all required signs are present and signs and other crossing markings are adequately maintained. As was previously noted, Metro-North officials also need to work more closely with municipal officials when corrective action needs to be taken by a municipality. In

addition, we recommend that Metro-North officials further assess potential public safety risks we observed at the two crossings previously discussed.

We made a DVD of some of our observations at the Metro-North crossings and showed the DVD to Metro-North officials on May 2, 2005. We also provided a copy of selected occurrences observed at these crossings to three MTA officials.

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### ***Accident Reporting, Investigation and Documentation***

According to Metro-North records, in the three years ended December 31, 2004, a total of 11 accidents occurred at Metro-North's grade-level crossings, and fatalities were incurred in two of these accidents, as follows:

<b>Year</b>	<b>Accidents Occurring at Crossings</b>	<b>Accidents Involving Fatalities</b>
<b>2002</b>	4	1
<b>2003</b>	2	0
<b>2004</b>	5	1
<b>Total</b>	11	2

Five of the accidents occurred in New York State on the Hudson and Harlem lines, and six of the accidents occurred in Connecticut on the New Haven line. According to Metro-North records, all 11 accidents were caused by motorists' safety violations (none were suicides or attempted suicides).

Railroads are required by the FRA to report all accidents occurring at crossings. To determine whether Metro-North reported these 11 accidents to the FRA, we reviewed the FRA website. We found that all 11 accidents were reported to the FRA.

Train accidents occurring at Metro-North crossings are to be investigated by four Metro-North units: the Safety Department, the Claims Services Department, the Occupational Health Services Department, and the Operations Control Center. The investigations should be performed in accordance with Metro-North's Incident Investigation and Reporting Manual (Manual).

To determine whether the 11 accidents were investigated in accordance with the Manual, we reviewed the accident files maintained by the Safety Department and the Claims Services Department. We found that investigations were performed for all 11 accidents. However, some of the documentation required by the Manual was missing from the files, as follows:

- None of the files had a corrective action log.
- Nine files did not have medical reports relating to the injuries reportedly incurred in the accident.
- Eight files did not have interviews with, or written statements from, witnesses.
- Seven files did not have police reports of the accident.
- Three files did not have any photographs (or alternatively, any sketches or videotapes) of the accident site.
- Three files were missing other required reports.

If required documents are missing from the accident files, there is less assurance the investigations were performed in a thorough manner. If corrective action logs are not completed, there is less assurance action will be taken to correct unsafe conditions and prevent future accidents.

Metro-North officials stated that some of the files did not have police reports because the accidents occurred in Connecticut and police reports are not required for train accidents in Connecticut. They stated that, in New York State, the Public Transportation Safety Board requires police reports for train accidents. We note that the Manual does not make this distinction and requires that police reports be included in all accident files. We recommend the Manual be amended to reflect the differing requirements in the different states. We also recommend that a checklist of required documents be included in each accident file and be used to ensure that all required documents are obtained for the file.

The Manual states that four Metro-North units are to be involved in the investigation of accidents. However, the Manual does not indicate which unit should take the lead in performing these investigations. In the absence of such a designation,

investigations are less likely to be coordinated in an effective manner and records are less likely to be well organized and readily accessible.

For example, when we were reviewing the records maintained by the Claims Services Department, we found that there was no master index matching claims records to the related accidents. In addition, even though the Claims Services Department is supposed to maintain the permanent investigation file for all accidents, the Claims Services Department had no investigation records for 8 of the 11 accidents that we reviewed. We recommend that one Metro-North unit be responsible for the overall coordination of accident investigations.

We also note that the Manual has not been revised since December 2002. Metro-North officials agree that the Manual is outdated and told us that Metro-North was in the process of developing a new, updated Manual that will unify accident investigation procedures for the four units. We encourage such an effort, but note that Metro-North officials provided no documentation of this effort.

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### ***Elimination of Hazardous Crossings***

In its strategic plan, which covered the five-year period 2000 through 2004, Metro-North proposed improvements to reduce safety hazards at two grade-level crossings. New warning devices were to be installed at one of the crossings, and the other crossing was to be eliminated through certain capital improvements (the construction of a new access road). In addition, the strategic plan stated that Metro-North would rehabilitate and renew grade crossing materials, such as roadbeds, at various locations along the railroad's right-of-way. We found that all of these actions had been taken.

## **Recommendations (Cont'd)**

7. Improve public awareness of safety requirements at grade-level crossings through an outreach strategy that includes: providing an annual plan with performance measures and documentation of organizations and people contacted; targeting more adults, particularly motorists, for attendance in safety awareness programs; and increasing local school involvement in safety awareness presentations. Coordinate outreach strategy with the LIRR to the extent possible so that staffing and other efficiencies can be identified.

(Metro-North officials responded that several initiatives have been undertaken to improve their public outreach including working with the Operation Lifesaver Representatives in both New York and Connecticut to develop a driver's awareness program for targeted schools with greatest potential for encountering grade crossings. In addition, officials indicate that they will develop an annual plan and will document contacts and presentations. They also will further explore outreach and will work with the LIRR to determine if a coordinated outreach strategy for adult motorists can be developed.)

8. Monitor crossings more closely to ensure that all required signs are present and signs and other crossing markings are adequately maintained. Coordinate corrective actions with responsible local municipalities, as necessary.
9. If the need for a municipality to take corrective action is identified in an inspection of a railroad crossing, notify the municipality as soon as the inspection is completed and follow up with the municipality to verify that appropriate corrective action was taken. Develop written procedures for these processes.

(Metro-North officials do not agree that recommendation number 8 and recommendation number 9 apply to them. They indicate that the responsibility for these recommendations falls to the municipalities of the New York State Department of Transportation.)

## **Recommendations (Cont'd)**

Auditor's Comments: We acknowledge that Metro-North does not have enforcement authority over equipment and signs on municipal property. However, we urge the Metro-North to be more proactive in supporting general safety concerns by embracing our recommendations.

10. Strengthen accident investigation procedures by: making one unit responsible for overall coordination of accident investigations, using a checklist to ensure all required documentation is included in permanent files, and providing employees with an updated Incident Investigation and Reporting Manual that reflects the differing requirements for police reports in various states.

(Metro-North officials agree to take corrective action including adding a section to its Incident Investigation and Reporting Manual.)

11. Obtain DOT approval for the removal of crossing gates and the deactivation of warning devices on the Beacon line.

(Metro-North officials stated that this recommendation did not apply to them. However, they also reported that, at the request of New York State Department of Transportation officials, they filed a petition pursuant to Section 91 of the Railroad Law for the approval of automatic devices for the Beacon Line.)

12. Periodically assess the safety considerations of the decisions not to require warning bells to continue to sound after the gates are all the way down.

(Metro-North officials do not agree with this recommendation. They indicated that the bells at the crossing operate in a safe manner consistent with operation regulations.)

Auditor's Comments: As we indicated in the body of our audit report, at some locations the bells continue to ring and provide additional safety after the gates are all the way down and at other locations this was not the case. We

## Recommendations (Cont'd)

acknowledge that no regulations are violated when the bells do not ring and the gates are down. We simply urge Metro-North to periodically assess whether safety interests are adequately served in those instances where the bells do not ring.

13. Assess the risks identified at Crossing # 18 and Crossing #20 and determine whether corrective actions are needed.

(Metro-North officials do not agree that this recommendation applies to them. They believe the risks at the cited crossings are the responsibility of the municipalities and the New York State Department of Transportation to address.)

Auditor's Comments: We understand that Metro-North lacks enforcement over and is not responsible to correct the risks at the cited crossings. However, we urge the Metro-North to be more proactive in assessing the safety risks with the responsible municipality.



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# MTA POLICE DEPARTMENT

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The MTA Police Department enforces the rules and regulations of the MTA's various constituent agencies. The Police Department divides the areas served by the LIRR and Metro-North into eight geographic districts (four for each railroad). Each district is overseen by a police captain who is responsible for the police officers assigned to that district. While the officers may be assigned to particular crossings as the need arises, they generally are not assigned to crossings on a regular basis.

If an MTA police officer observes a motorist, cyclist or pedestrian violating a law, rule or regulation at a LIRR or Metro-North railroad crossing, the officer may issue a court summons to the individual. The officer may also choose to give the individual a warning. According to MTA Police Department officials, officers are to use their judgment in deciding whether to issue a warning or a summons.

During 20 hours of observations at 10 selected LIRR crossings, we identified a total of 203 safety violations (an average of about ten violations per hour, or one violation every six minutes). In comparison, according to the MTA Police Department's database of issued summonses, during the three years ended December 31, 2004, officers issued summonses for only 41 violations at these 10 crossings.

Moreover, according to the database of issued summonses, for the 20-month period May 1, 2003 through December 31, 2004, only 241 summonses were issued for violations at all 293 crossings. Due to problems resulting from the implementation of a new information system, summons data is not readily available for periods prior to May 1, 2003. We could not perform a similar analysis for Metro-North crossings, because some of the Metro-North data was lost when the new information system was implemented. The data that was available indicated that, during this same 20-month period, only four summons were issued for violations at Metro-North crossings.

According to MTA Police Department officials, officers are sent to crossings in response to emergencies or other reported problems. No systematic effort is made to observe the crossings (as we did) to determine whether more active enforcement is needed at any of the crossings. This limited deployment of officers may explain why we observed so few summons actually issued.

We recommend that the MTA coordinate its railroad crossing safety enforcement efforts with those of local law enforcement agencies to improve public compliance with laws, rules and regulations. For example, in coordination with the MTA Police Department, the railroads should reach out to school bus operators and trucking companies. In addition, the Police Department should request that local law enforcement agencies increase their presence at high volume grade crossings during peak rush hour periods to improve enforcement.

MTA officials told us that legislation was introduced several years ago to have video cameras to help them monitor the conditions at the crossings, but it was not passed, and has not been reintroduced.

We also note that the MTA Police Department has no written procedures describing how it is to coordinate its activities with the specific LIRR and Metro-North departments that are responsible for crossing safety. We recommend that such procedures be developed.

## Recommendations (Cont'd)

14. Coordinate with local law enforcement agencies to improve public compliance with LIRR and Metro-North Rules and Regulations as well as traffic laws.

(In responding to our draft audit report, MTA Police Department officials indicated that they encourage associate law enforcement agencies that share jurisdiction, to assist in improving public compliance with LIRR and Metro-North Rules and Regulations as well as New York State VTL laws at all crossings. They indicated that this is accomplished through instruction at police academies of those agencies that share jurisdiction.)

Auditor's Comments: We acknowledge the reported efforts of the MTA Police Department. However, our audit observations show that more needs to be done. For example, increased coverage at crossings that experience high traffic and pedestrian volume as well high incidence of safety violations should be pursued in coordination with local law enforcement officials.

15. Develop written procedures describing how the MTA Police Department is to coordinate its activities with the specific LIRR and Metro-North departments that are responsible for crossing safety.

(MTA Police Department officials agreed with our recommendation. They indicated that written procedures have been developed to better coordinate and facilitate not only communication but the activities of both railroads.)



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## MAJOR CONTRIBUTORS TO THIS REPORT

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Abraham Markowitz

Santo Rendon

Joseph Smith

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**Katherine N. Lapp**  
Executive Director



**Metropolitan Transportation Authority**

State of New York

May 26, 2006

Ms. Carmen Maldonado  
Audit Director  
The State of New York Office of the Comptroller  
123 William Street – 21<sup>st</sup> Floor  
New York, New York 10038

**Re: Report #2004-S-63 MTA's Long Island Rail Road and Metro-North Railroad  
Safety of Grade-Level Railroad Crossings**

Dear Ms. Maldonado:

This is in reply to your letter requesting a response to the above-referenced draft audit report.

I have attached for your information the comments of Mr. James J. Dermody, President, MTA Long Island Rail Road; Mr. Peter A. Cannito, President, MTA Metro-North Railroad; and Chief Kevin J. McConville, MTA Police Department, which address this report.

Sincerely,

Attachment

*The agencies of the MTA, Peter S. Kalikow, Chairman*  
MTA New York City Transit  
MTA Long Island Rail Road

MTA Long Island Bus  
MTA Metro-North Railroad

MTA Bridges and Tunnels  
MTA Capital Construction

Jamaica Station  
Jamaica, NY 11435-4380  
718 558-8252 Tel  
718 657-9047 Fax

James J. Dermody  
President



May 22, 2006

Honorable Peter S. Kalikow  
Chairman  
Metropolitan Transportation Authority  
347 Madison Avenue  
New York, NY 10017-3739

**New York State Comptroller's Request for Response  
Metropolitan Transportation Authority Long Island Rail Road and Metro-North  
Railroad Safety of Grade Level Railroad Crossings - 2004-S-63**

Dear Chairman Kalikow:

Detailed below is the LIRR's response to the Findings and Recommendations contained in the above referenced report. While the LIRR has previously responded to the audit's preliminary findings, not all of our comments were considered or reflected in the draft report. As a result, we are again submitting those comments, as we believe they provide a more balanced and accurate assessment of the issues raised in the audit. We would also like to report that the LIRR was recently notified that the Rail Road's T.R.A.C.K.S. program will be awarded the 2006 Senator Norman J. Levy Safety Award by the NYS Public Transportation Safety Board. This award is relevant because it has been our position throughout the entire audit process that the State Auditors have refused to recognize the overall effectiveness of T.R.A.C.K.S. in promoting customer safety.

Our detailed comments follow:

**Response to Findings**

**Pedestrian Crossings (Page 6)**

The statement in the report regarding pedestrian crossings is incorrect in that not all LIRR pedestrian crossings have gates and flashers. The LIRR has six official pedestrian crossings: four have gates and flashers, one has flashers only, and one has only signage.



MTA Long Island Rail Road is an agency of the Metropolitan Transportation Authority, State of New York  
Peter S. Kalikow, Chairman

**State Comptroller's Note:**

\* Our Final audit report has been revised to reflect the information provided by LIRR.

Honorable Peter S. Kalikow, Chairman  
May 22, 2006  
Page 2

#### **Central Alarm (Page 12)**

There are no regulations or recommended industry practices to assist in establishing a time interval for an alarm to be sounded when a crossing gate is falsely activated. The LIRR responds immediately to any reports of gate malfunction including false activations. We have found the eight minute alarm time interval to be adequate for our operation since experience shows that gates can be falsely activated and results in extended station stops due to heavy customer loading, inclement weather, freight operations or crossing malfunction.

#### **Accident Reporting, Investigations and Documentation (Pages 19-23)**

The report is critical of the System Safety and the Claims departments for failing to have all required documentation in investigation files. The findings as presented, however, fail to reflect information provided by the LIRR in its responding to the preliminary draft findings. While the report acknowledges that all cases reviewed were accurately reported to the FRA, which would indicate that the reporting was complete, it nevertheless criticizes System Safety for not having all information listed on their checklist in the files. As was previously advised, the checklist is merely a guide: The documents listed on the checklist are to be included in the files, when available. With respect to the Claims Department files, all required documentation was included in the accident case files reviewed. The five files reviewed that auditors concluded were missing documents were in fact safety incidents, not accidents. Therefore, accident files were not established by the Claims Department. The Claims Department did agree, however, with the auditor's suggestion to create a checklist to assist in obtaining all required documents for the files.

It was also previously pointed out to the auditors that while lawsuits have been brought against the Rail Road for accidents at grade crossings, in each instance the resolution has been for an amount that was substantially less than the amount of the original claim. Case in point, during the period 1998 through 2002, there were a total of forty-five grade crossing incidents which resulted in five lawsuits. Although the total amount of monetary relief sought was \$26 million, the Claims Department paid out only \$3,500 while collecting \$4,025 for reimbursement of LIRR property damage.

#### **Elimination of Crossings (Page 23)**

In virtually all instances, the elimination of hazardous crossings is not a decision that is addressed solely by the Rail Road. NYS Department of Transportation has the primary responsibility to identify and fund grade crossing eliminations. In addition to substantial funding, such eliminations also require the coordination and support of the politicians and communities in which the crossing reside. With respect to the grade crossings on the Main Line between Queens and Hicksville, the LIRR has included up to five grade crossing eliminations as part of its Main Line Corridor Improvements Project and NYS DOT has identified funding for those eliminations.

**Recommendation No. 1**

**Improve public awareness of safety requirements at grade-level crossings through an outreach strategy that includes: an annual plan with performance measures, targeting more adults, particularly motorists, for attendance in safety awareness programs; accurately reporting attendance at T.R.A.C.K.S.; and determining how to increase acceptance of T.R.A.C.K.S presentations in schools.**

**Response to Recommendation No. 1**

The Rail Road continuously attempts to enhance and expand the use of its highly successful T.R.A.C.K.S. program to improve public awareness of safety requirements at grade crossings. For example, in 2005, System Safety attended a number of Health Fairs and spoke to civic groups to educate and promote safety at grade crossings. In addition, more than 1500 letters were sent to the NY Truckers Association, school bus companies, the US Postal Service and UPS promoting general provisions for safety at track level crossings while extending an offer to provide a professional driver crossing safety program at their facilities. Similarly, over 30,000 pamphlets were handed out to customers, pedestrians and drivers at grade crossings as part of the Operation Lifesaver program. Finally, on three occasions since April 2005, articles were included in Keeping Track (the monthly seat drop pamphlet that is distributed on all trains) to educate and/or remind our customers about safe practices at and near grade crossings.

With respect to the suggestion regarding improved record keeping, it is not practical, or the intended purpose, to have sign-in sheets to identify each and every student or adult that attends a safety related session. This point notwithstanding, attempts will be made to develop more accurate methods to estimate the number of individuals that attend a T.R.A.C.K.S. function.

**Recommendation No. 2**

**Strengthen accident investigation procedures by: using a checklist to ensure all required documentation is included in each Claims Department file, periodically reviewing open files to identify missing documentation so that it can be obtained and filed, and developing a reporting system to monitor and manage the progress of investigations.**

**Response to Recommendation No. 2**

The Claims Department has adopted a checklist to ensure that all applicable documents are obtained for files maintained by the department. These files are periodically reviewed to identify missing documents and to monitor and update the progress of required investigations.

Honorable Peter S. Kalikow, Chairman  
May 22, 2006  
Page 4

**Recommendation No. 3**

**Base the alarm interval for malfunctioning crossing gates on documented criteria such as railroad industry practices or traffic engineering studies.**

**Response to Recommendation No. 3**

There are no regulations or recommended industry standards establishing a time interval for an alarm to be sounded if crossing gates are falsely activated. It is the Rail Road's practice to respond immediately to any reports of gate malfunctions, including false activations.

**Recommendation No. 4**

**If a need for a municipality to take corrective action is identified in an inspection of a grade-level railroad crossing, notify the municipality as soon as the inspection is completed and follow up with the municipality to verify that appropriate corrective action was taken. Develop written procedures for these processes.**

**Response to Recommendation No. 4**

The LIRR has no enforcement authority over the maintenance or installation of roadway signs or devices located off railroad property. The Rail Road, as a means of being proactive in addressing safety at grade crossings, performs an annual inspection of these devices and formally notifies the respective roadway owners of any deficiencies. The LIRR is thereafter advised when the necessary repair work is completed. Moreover, since virtually all of the roadway owners are municipalities, it would be more appropriate for this recommendation to be directed to such entities responsible for action and to include the requirement that they also perform periodic inspections.

**Recommendation No. 5**

**Assess the risks identified at Crossing #7 and Crossing #8 and determine whether corrective actions are needed.**

**Response to Recommendation No. 5**

Agree. The LIRR has been, and will continue to work with NYSDOT and traffic engineers to find better traffic preemption solutions to the issues and safety related concerns at these and other grade crossings throughout our system.

Honorable Peter S. Kalikow, Chairman  
May 22, 2006  
Page 5

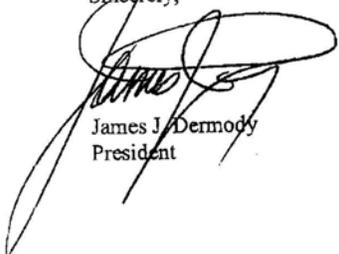
**Recommendation No. 6**

**Post emergency notification signs at all grade-level crossings.**

**Response to Recommendation No. 6**

Agree. As of April 2006, the LIRR has installed 150 emergency notification signs at grade crossings. The remaining signs will be installed before the end of the year.

Sincerely,

A handwritten signature in black ink, appearing to read "James J. Dermody", is written over the typed name and title. The signature is stylized and somewhat cursive.

James J. Dermody  
President

347 Madison Avenue  
New York, NY 10017-3739  
212 340-3000

Peter A. Cannito  
President



May 18, 2006

Honorable Peter S. Kalikow  
Chairman  
Metropolitan Transportation Authority  
347 Madison Ave.  
New York, New York 10017-3739

Re: Audit Report 2004-S-63

Dear Chairman Kalikow:

The following is Metro-North's response to the Draft Report on Safety of Grade Level Crossings #2004-S-63 for Metro-North and the LIRR. We are addressing the material presented in the report and recommendations regarding Metro-North Railroad.

**General Comments and Response to Recommendations**

Metro-North's C&S Department has worked with the New York State audit team over the duration of the audit and along with the Metro-North's Safety Department and General Counsel, we have reviewed and commented on draft reports and findings. Outlined below are our comments for review and inclusion into the final report.

**A) Executive Summary**

- 1) Page 3 top of page – References to pages 10-12 are for LIRR only. Add pages 27-28 for MNR.
- 2) Page 3 last paragraph – The report still contends that Metro-North does not follow proper procedures with the decommissioning of the grade crossings on the Beacon Line. Refer to the section below for our comments.
- 3) Page 4 – The comments and explanations supplied by the C&S Department and Legal Department were not reflected as made in our Preliminary Draft responses.

MTA Metro-North Railroad is an agency of the Metropolitan Transportation Authority, State of New York  
Peter S. Kalikow, Chairman

**State Comptroller's Note:**

\* Our Final audit report has been revised to reflect the information provided by Metro-North.

**B) Comments on the Metro-North Section**

- 1) Page 25 paragraph 2 – The quantity of active crossings (those with automatic flashers) on the New York portion of the Beacon Line is 19 not 49. Refer to our letter of February 14, 2005 item number 9 (copy attached). The remaining 30 crossing were passive (signs only). \*
  
- 2) Page 25 paragraph 2 - As indicated in our correspondence dated February 14, 2005 item number 9 (copy attached), CFR Part 234.247 clearly permits Metro-North relief from testing the crossings when the tracks are out of service. The Beacon Line tracks are out of service under Form M to the Track Department. Since Metro-North is compliant with the regulations, no fine can be levied. The FRA has never inspected the Beacon Line since the crossings have been out of service since the line was obtained by Metro-North. \*
  
- 3) Page 25 paragraph 2 - Attached is correspondence, dated May 6, 2005, from Mr. Bernard to Mr. Mark McKeon of the FRA requesting confirmation that Metro-North does not require FRA approval to remove the Beacon Line crossings from service. The New York State auditors were copied on the correspondence. A response from Mr. McKeon dated July 18, 2005 confirmed that the FRA does not have approval rights for crossing removal. A copy of this letter was transmitted to Ms. Carmen Maldonado on July 28, 2005. \*
  
- 4) Page 25 paragraph 2 – Attached is correspondence, dated June 27, 2005, from Mr. Bernard to Ms. Carmen Maldonado outlining the case law relieving Metro-North of the requirements of railroad law. Therefore, Metro-North is not required to obtain approval from the State of New York. \*
  
- 5) Page 26 “Performance of Warning Devices” paragraph 2 – The quantity of crossing on the Beacon Line is not correct. The number should be 49 total. The middle sentence contains “sixth”. It is not clear what this means. \*
  
- 6) Page 27 middle paragraph – Attached correspondence, dated July 29, 2005, addresses the issue of bells at the grade crossings. The bells at the crossing operate in a safe manner consistent with operation regulations. \*
  
- 7) Page 28 top paragraph – The quantity of crossing on the Port Jervis line should be 4. The Pascack Valley line crossings are maintained by New Jersey Transit under contract to Metro-North. \*
  
- 8) Page 28 paragraph 3 – The local municipalities are responsible for the signs on their property. This includes all signs such as stop signs, no parking and the “Do Not Stop On Tracks” signs. If you require additional information you should contact the local municipalities and check their inspection processes. \*

State Comptroller's Note:

\* Our Final audit report has been revised to reflect the information provided by Metro-North.

- 9) Page 28 last paragraph – The New York portion of the Beacon Line had 19 crossings that were deactivated. There were 30 passive crossings.
- 10) Page 29 paragraph 2 - As previously indicted above Metro-North is in complete compliance with both the FRA and New York State regulations.
- 11) Page 29 paragraph 4 - As indicated in our correspondence dated February 14, 2005 item number 8 (copy attached) the reference to CFR Part 235.9 is in error. Part 235 refers to Part 236 (signal systems). The correct referenced CFR section for grade crossings should be Part 234. Metro-North is in full compliance with the FRA and New York State regulations. There is not a risk of fines.
- 12) Page 29 last paragraph – If the 19 crossings (not 49) were in service we would still have a “Stop and Warn” in effect. We have repeatedly indicted to the auditors that due to the lack of any traffic on the rails a “rusty rail” condition exists that prevents the trains from shunting the tracks and activating the crossing system. A “Stop and Warn” at each crossing is in place to provide the safest operation for both trains and automobiles. There seems a misunderstanding with regard to the principals associated with the operation of a grade crossing. Metro-North has made the operation safer by eliminating the automatic equipment. There will be no confusion on the motorist’s part that the crossing equipment will be working. The railroad crossing signs are in place and fully appropriate for the level of operation of the Beacon Line.
- 13) Page 33 Crossing references -- Attached correspondence, dated July 29, 2005, addresses the issues outlined on this page. In summary, the local municipalities of New York State Department of Transportation are responsible for painting on the streets, signs off our property and approach roads or viewing of crossing apparatus. Any Metro-North issue has been addressed.
- 14) Page 37 – Recommendations 8, 9, 11, 12 and 13 do not apply to Metro-North regarding the responsibility of the municipalities. The responsibility for these recommendations falls to the municipalities of New York State Department of Transportation.
- 15) Page 37- Recommendation 7; Metro-North Safety Department is presently working with the Operation Lifesaver Representatives in both New York and Connecticut to develop a driver’s awareness program for targeted schools with the greatest potential of encountering grade crossings. We will develop an annual plan and document the contacts and presentations. We will continue to explore community outreach thru the internet and various local media sources and also work with the LIRR to determine if a coordinated outreach strategy for adult motorists can be developed.
- 16) Page 37- Recommendation 10; The Metro-North Operations Services Department is responsible for the lead in all grade crossing accidents. They coordinate all the required inspections of the crossing and train equipment and are responsible for

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State Comptroller's Note:

\* Our Final audit report has been revised to reflect the information provided by Metro-North.

completing FRA reports. The Safety Department will collect and maintain all reports concerning grade crossing accidents. The Incident Investigation and Reporting Manual was not designed to address the investigation of grade crossing accidents. The Safety Department will develop a section within the manual to address this.

### Beacon Branch Crossings

The audit report states that “according to FRA regulations, railroad crossing warning devices cannot be taken down or deactivated without the express approval of the appropriate State regulatory agency (in this instance NYSDOT). Based upon that incorrect reading of the FRA regulations, the State report indicates that because Metro-North did not obtain NYSDOT approval to deactivate warning devices on the Beacon Line, those crossings remain subject to FRA regulations requiring inspection of rail crossing warning devices. Since, according to the draft report, Metro-North did not make the required inspections, it is subject to a total of \$45.6 million in fines. There is absolutely no support in the FRA regulations for this conclusion.



The applicable FRA regulation is set forth at 49 CFR 234.247. That section requires that the inspection and test of grade crossing warning devices set forth in Sections 234.248 through 234.271 of 49 CFR be conducted only where such crossings are on “in service railroad tracks.” The regulations go on to provide in subdivision (b) of Section 234.247 that a railroad has the right to elect not to comply with the inspection and testing requirements of Sections 234.249 through 234.271 when “all tracks over the grade crossing are out of service....” The Beacon Line tracks are, as the Comptroller’s report acknowledges, out of service. Further, there is nothing in the FRA regulations which refers to or mandates compliance with State regulation in order to obtain the benefit of the exclusion for out-of-service railroad tracks set forth in Section 234.247 of 49 CFR. The FRA, by letter dated July 18, 2005 from Mark McKeon, its Regional Administrator, confirmed Metro-North’s reading of the applicable FRA regulations. Mr. McKeon did observe in that letter that rail operators are “generally required to obtain prior approval from the state agency responsible for highway/rail grade crossing safety before they can modify and/or remove any automatic grade crossing warning system.” The FRA, however, did not opine on the requirements of New York State law. Indeed, Mr. McKeon stated the “FRA cannot provide further guidance on the process for obtaining the requisite administrative approval for highway/rail grade crossing modification/removal in the State of New York.” The State Comptroller’s representatives were given copies of our exchange of correspondence with the FRA on this subject. In my letter of June 27, 2005 to the State Comptroller’s Audit Director, Carmen Maldonado, I pointed out the provisions of the MTA Act (Section 1266(5) of the New York State Public Authorities Law) which exempt Metro-North from the provisions of New York State law which would require the Commissioner of Transportation’s permission to remove from service grade crossing warning devices. I also enclosed a copy of a judicial decision expressly confirming that exemption. That decision was affirmed by the State’s highest court.



Notwithstanding that exemption from the jurisdiction of the New York State Department of Transportation, representatives of Metro-North and NYSDOT conducted a joint

#### State Comptroller's Note:

\* Our Final audit report has been revised to reflect the information provided by Metro-North.

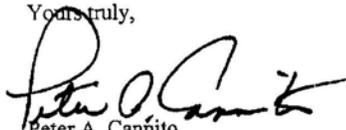
inspection of the Beacon Line crossings to make certain appropriate signage is in place and sight lines are not obstructed. As a consequence of that inspection, Metro-North agreed to complete several action items. All of those action items were completed. Reference should be made to Wayne Staley's September 26, 2005 letter to Edward Rosen, NYSDOT's Acting Director of Grade Crossing Projects. Subsequent to that inspection, a representative of NYSDOT requested that Metro-North post "exempt" signs on certain Beacon Line grade crossings. Those exempt signs were installed. See Wayne Staley's April 26, 2006 letter to LeRoi Armstead of NYSDOT's Region 8 office.

All references to the Beacon Line crossings should be removed from the report. Metro-North is not at risk of any fines since we are fully compliant with both the FRA and State of New York regulations.

Subsequently the Draft Report was transmitted to the New York State DOT and officials of the NYSDOT requested that Metro-North file a petition pursuant to Section 91 of the Railroad Law for approval of the automatic devices. Mr. Richard Bernard, the Metro-North General Counsel has filed such a petition.. I have attached a copy of that petition.

If there are any questions regarding our responses, please contact my office.

Yours truly,



Peter A. Cannito

cc: G. Walker  
G. Firnhaber  
M. Campbell  
L. Dick  
W. Staley  
R. Bernard  
S. McLaughlin-MTA Police  
K. Malloy-MTA Audit Services  
S. Rendon-Office of the State Comptroller  
  
C. Wytenus-NYSgradecrossingFinal

Police Department  
347 Madison Avenue  
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## Metropolitan Transportation Authority

State of New York

May 16, 2006

Peter S. Kalikow  
Chairman  
Metropolitan Transportation Authority  
347 Madison Avenue  
New York, New York 10017

Dear Chairman Kalikow:

In connection with your audit of Safety of Grade-Level Railroad Crossings during the period January 1, 2002 through April 30, 2005, we confirm to you, to the best of our knowledge and belief, the following representations and assurances:

1. We are primarily responsible for ensuring that all applicable laws are obeyed at Grade crossings and along the Right of Way of the Long Island Rail Road and the Metro North Railroad. In our efforts to fulfill this mission we do encourage associate law enforcement agencies that share concurrent jurisdictions, to assist us in improving public compliance with LIRR and MNRRL Rules & Regulations as well as NYS VTL laws at all of our crossings. This is accomplished through instruction at police academies of those agencies that share jurisdiction with this command.
2. Written procedures have been developed to better coordinate and facilitate not only communication but the activities of both railroads and the MTA Police department. These documents are specific to each entity but they share common threads to accomplish timely response to incidents, educational strategies and proactive enforcement efforts. The MTAPD has both a departmental manual which is supplemented by a communications unit manual that addresses the protocols necessary to coordinate activities with both railroads. It is also understood that both railroads have internal procedures that parallel the police manual so that there is no conflict between the agencies.
3. The Metropolitan Transportation Police Department in conjunction with the LIRR System Safety conducts educational outreach through the program, Together Railroads and Communities Keeping Safe (TRACKS). Through this program two officers are assigned full time to conduct educational programs relative to safety on or about the railroad right of ways in schools throughout the LIRR service region from kindergarten through 12th grade. Additionally they make efforts to also target adults through driver education classes, community groups, and

*The agencies of the MTA, Peter S. Kalikow, Chairman*  
MTA New York City Transit  
MTA Long Island Rail Road

MTA Long Island Bus  
MTA Metro-North Railroad

MTA Bridges and Tunnels  
MTA Capital Construction

also target adults through driver education classes, community groups, and professional driver groups and in adult continuing education programs. In the calendar year ending 2005, the TRACKS program reached in excess of 152,000 persons. In the 1<sup>st</sup> quarter of 2006 reached in excess of 25,000 participants.

If you have any concerns or need further clarification on these issues or any other issue of mutual concern, please feel free to contact me at (212) 878-1084.

Respectfully,



Kevin J. McConville  
Chief of Department  
MTA Police Department

cc: file