

H. CARL McCALL
STATE COMPTROLLER



A.E. SMITH STATE OFFICE BUILDING
ALBANY, NEW YORK 12236

STATE OF NEW YORK
OFFICE OF THE STATE COMPTROLLER

January 30, 1997

Mr. Elliot G. Sander
Commissioner
New York City Department of Transportation
40 Worth Street
New York, New York 10013

Re: Final Report - Improvements Needed
in Emergency Bridge Repair Program,
Report 96-N-14

Dear Commissioner Sander:

The following is our report on the Department of Transportation Bridge and Roadway Division's emergency bridge repair program. We conducted this audit according to the State Comptroller's authority set forth in Article 10, Section 5 of the State Constitution, and Article 3, Section 33 of the General Municipal Law.

We lists major contributors to this report in Appendix A.

Office of the State Comptroller
Division of Management Audit

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**NEW YORK CITY DEPARTMENT OF TRANSPORTATION
BRIDGE AND ROADWAY DIVISION**

**IMPROVEMENTS NEEDED IN
EMERGENCY BRIDGE REPAIR PROGRAM**

EXECUTIVE SUMMARY

PURPOSE

The objective of this audit was to determine whether the Bridge and Roadway Division of the New York City Department of Transportation completed emergency repairs of the City's bridges in a timely manner and correctly reported the current status of hazardous conditions requiring repairs.

BACKGROUND

The New York City Department of Transportation's (Department) Bridge and Roadway Division (Division) was established in 1988 to design, inspect, construct, repair and maintain the City's 859 bridges and the connected roadway system. Based on mandated inspections by State and City inspectors, hazardous condition reports, known as flags, are issued on the structures found to be defective. The Division should correct the hazardous condition identified within specified time frames in order to prevent further deterioration of the City's bridges and protect the public from damages and injuries.

The Division resolves hazardous conditions by assigning flags to appropriate in-house repair units and outside contractors. These emergency repairs are funded through the City's expense budget, which for fiscal year 1995 was estimated at \$9.1 million for in-house repairs and \$7.8 million for outside contracts.

RESULTS IN BRIEF

DELAYED REPAIRS IN FURTHER DETERIORATION

The Division has experienced considerable delays in making RESULT emergency repairs to its bridges. We found that 37 percent or 436 of the 1,166 outstanding flags under the Division's jurisdiction as of September 30, 1995, were not repaired within the required time frames. We reviewed 42 of the 436 flags, and noted that in eleven cases the initially flagged conditions had deteriorated further. Many of the repairs, when made, were temporary in nature and did not address the underlying problem.

REPORTED STATISTICS ARE INACCURATE

Communication between the Department's repair and monitoring units is inadequate and consequently the reported status of hazardous conditions is inaccurate. The open flag statistics are unreliable and overstate the reported workload of required repairs. We found conflicting data from various Department units on whether repairs were completed and flags open or closed. Nineteen percent of the outstanding flagged conditions were regarded closed by the repair units, but reported as still open by the monitoring unit. One in-house repair unit reported that 80 out of the 229 open emergency conditions had already been resolved.

AGENCY RESPONSE AND AUDITOR COMMENTS

We made four recommendations to improve the timeliness of repairs and accuracy of reported flagged conditions. Department officials agreed with our recommendation concerning periodic reviews of the status of flag conditions. However, they disagreed with our recommendations to develop a comprehensive action plan to resolve flags in a timely manner, to include cost estimates of required repairs, and to reconcile activity reports between different units involved in flag operations. The Department's response is based on a fundamental difference regarding their responsibility for repairing flagged conditions in a timely manner. They maintain that the only time frame requirement for resolving flagged conditions is for them to respond to the NYS Department of Transportation within six weeks, explaining "what action is or will be taken and when it will be taken." Therefore, Department officials maintain that failure to repair a flag within six weeks does not represent a violation of any procedure.

We maintain that Department officials have incorrectly interpreted NYS Department of Transportation's engineering instructions. The NYS

Department of Transportation's Engineering Instruction manual indicates that the response to a red flagged condition must explain what action will be taken, and that, "generally, all actions taken should be completed within six weeks." Seven of the fifteen red flags discussed in our report included letters from NYC Department of Transportation to NYS Department of Transportation officials acknowledging the required time frames. These written responses describe the scheduled corrective action to repair the flagged condition, and all seven letters include the following language: "actual field work will be done by our in-house forces and will be completed within the next six (6) weeks." Only one of these seven flags was repaired within the six weeks indicated.

Furthermore, the Department's own Flag Package Instruction Manual, issued by the Bureau of Bridges, establishes specific time frames, by stating: "All Priority 'A' Flags are scheduled to be repaired within six months of the initial notification. Red flags warrant a resolution within six weeks of the initial State notification." Twenty-two of the 27 yellow and safety flags discussed in our report were marked Priority "A," and should have been repaired within six months, not delayed for more than two years.

Our interpretations that flagged conditions require timely repair is further substantiated by the City of New York Bridges and Tunnels Annual Condition Report of 1994, which states: "All red flags must be addressed within 24 hours of notification and resolved within six weeks. Yellow flags require resolution within the time frame of the next scheduled inspection, no greater than two years." Our report adopts these time frame standards as essential conditions for maintaining the integrity of the City's bridges.

**NEW YORK CITY DEPARTMENT OF TRANSPORTATION
BRIDGE AND ROADWAY DIVISION**

**IMPROVEMENTS NEEDED IN
EMERGENCY BRIDGE REPAIR PROGRAM**

CHAPTER I. INTRODUCTION

The City's bridge and roadway system contains 859 bridges. Some of these have been described as, "the oldest, largest, and most deteriorated bridge infrastructure in the country."¹ Over the years, the City's bridges have suffered from a lack of maintenance. As a result, many of the City's bridges are nearing the end of their useful lives -- 54.3 percent of the City's bridges in 1995 required substantial rehabilitation or repair.

The City Charter (Chapter 49, section 1110-a) defines maintenance of the City's capital plant as ". . . those activities necessary to keep the relevant portion of the capital plant in good repair so as to preserve its structural integrity and to prevent its deterioration." The New York City Department of Transportation's Bridge and Roadway Division (Division), established in 1988, fulfills this responsibility in three areas of bridge maintenance: preventive maintenance, repairs, and monitoring of hazardous conditions.

Under New York State regulations, both State and City professional engineers inspect all City bridges at least once every two years, and may conduct interim inspections of bridges with conditions that present a danger to public safety. Based on these inspections, hazardous condition reports, known as "flags," are issued to the Department regarding the structures found to be defective. Flags are coded according to the urgency of the condition or type of hazard reported on. There are three flag codes: red, yellow and safety.

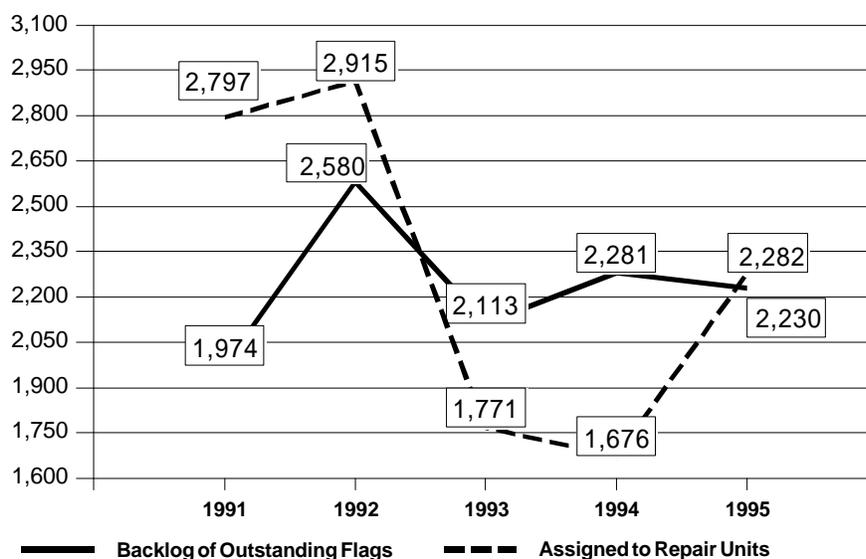
"Red flags" issued to the most serious conditions, those involving primary structural components, require action within 24 hours of notification and repairs within six weeks. Non-critical primary structural component defects are reported as "yellow flags," and require resolution within the time frame of the next scheduled inspection, no greater than two years. "Safety flags" report conditions that present a clear and present danger to the traveling public, however, there is no danger of structural failure. The Division did not provide us with written time frame criteria to repair safety flags, nor was there any in the New York State Department of Transportation's Engineering Instructions for "Inspection Flagging Procedures for Bridges."

The Division's Bridge Flag Repair Section (Flags Unit) is responsible for evaluating and tracking the status of all bridge flags. After determining the extent and nature of a flagged condition, the flag may be assigned for repair to an in-house repair unit, to an outside contractor, or certified that the condition is not an imminent safety hazard to the public but needs to be under continuous inspection. The Division maintains a flag status monitoring system, which lists responsibility for resolution of the flag

¹ New York City Department of Transportation, Bridges and Tunnels Annual Condition Report 1995. Deteriorated bridges are those that have been classified as "poor" or "fair" by the City, based on the bridge's numerical rating assigned by the State or City engineer.

condition, and helps assure that corrective action occurs within established time frames. The Department's Annual Condition Report compiles this data on a calendar year basis, while the Mayor's Management Report reports it on a fiscal year basis. During the past five calendar years, the number of flags assigned to the repair units decreased by 18 percent, from 2,797 in 1991 to 2,282 in 1995 as indicated in the graph below. During the same period, the backlog of flags awaiting repairs increased from 1,974 in 1991 to 2,230 in 1995, an increase of 13 percent.

**Comparison of the Number of Flags Assigned and the Year End Backlog
Calendar Years 1991 Through 1995²**



D a t a

Source: NYC Department of Transportation, Bridges and Tunnels Annual Condition Report, 1995.

Flag repairs are funded through the Department's expense budget, both for the in-house and contracted components. Actual expenditures for the contracted-out repairs increased 227 percent from 1991 to 1994, from \$1.5 million to \$4.9 million, with \$7.8 million planned for 1995. The estimated expenditure for the in-house component was \$9.1 million for each of 1994 and 1995.

Starting in May 1996, the functions of the Department are being consolidated with that of other New York City agencies. Functions currently performed by the Department will be assumed by the Police Department (enforcement); the newly formed Department of Design and Construction (design and construction of streets and highways); and the proposed Department of Infrastructure and Facilities Management (the Department's bridge and street maintenance, street lights and signals, and transit operations). The reorganization will reportedly enable the City to coordinate similar or related functions

² This graph reflects all flags reported to the Department, including those related to structures operated and maintained by other agencies such as the MTA and Conrail. These agencies are responsible for resolving flags on its structures.

currently performed by separate agencies in order to produce administrative savings.

Objectives, Scope and Methodology

York City Department of Transportation reported and completed emergency repairs for the City's bridges in a timely manner, and accurately reported the status of hazardous conditions requiring repairs.

In order to determine whether repairs were made within mandated time frames, we reviewed annual reports, monthly flag indicator reports, inspection documents contained in various Department files, and "flag folders" which record the actions taken on each flag, from its initial discovery to its final resolution. We reconciled in-house repair units' status re the accuracy of various monitoring and performance reports issued by the Department. The flag population reviewed was comprised of all open flags reported by the Flags Unit as of June 21, 1995. We performed an aging analysis of all outstanding flags, and separated those that appeared overdue based on flag repair criteria. To determine whether repairs were made timely, we analyzed the September 30, 1995 open flag report and selected for review a sample of 42 of the 436 flags not repaired within the required time frames.

We conducted our audit in accordance with generally accepted government auditing standards. Audit fieldwork was conducted between May 1995 and January 1996.

CHAPTER II. DELAYED REPAIRS RESULTED IN WORSENING CONDITIONS

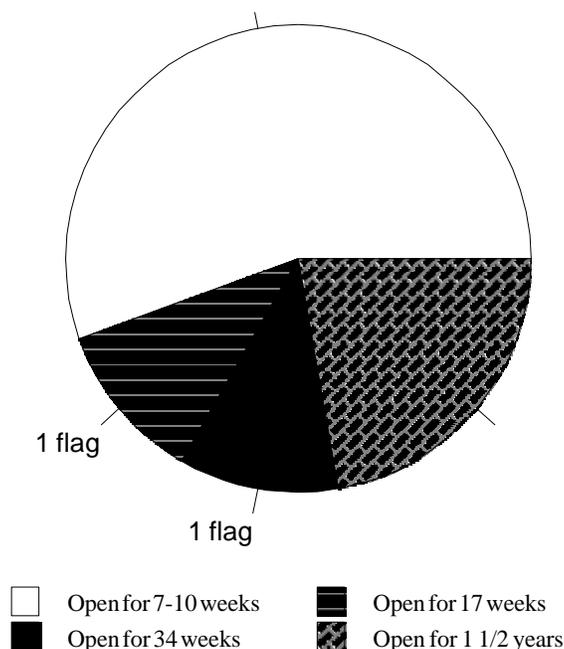
Bridge and Roadway Division has experienced considerable delays in making emergency repairs to its bridges. We found that 37 percent, or 436 of the 1,166 outstanding flags under Division's jurisdiction as of September 30, 1995, were not repaired within the required time frames. We reviewed 42 of the 436 flags, and noted that in eleven cases the initially flagged conditions had deteriorated further.

This section examines the timeliness in resolving and correcting bridge conditions which have been flagged. There are three primary sources from which these flags initiate: New York State Department of Transportation inspectors, New York City Department of Transportation inspectors and public complaints. Each site and condition is described in engineering terms for easy identification. If the same condition at the same site is not corrected and is flagged again, it will be assigned to the already existing flag number. When the hazardous condition is corrected the flag is closed. The time frames used in responding to and repairing flags are based on the New York State Department of Transportation's Engineering Instructions for "Inspection Flagging Procedure for Bridges." These activities are required in order to preserve the structural integrity of the bridges and to protect the public from hazardous conditions.

Red Flag Conditions not Repaired Within Established Time Frames

Red flags involving primary structural components are not being attended to properly. According to the State inspection instructions, a red flag must be dealt with within 24 hours of notification, and resolved within six weeks. Our sample of 42 flags included 15 red flags, listed open as of September 30, 1995. Some conditions had deteriorated as a result of delays in repairs. As shown in the following graph, nine of the 15 sampled red flags were not repaired within the 6-week time frame.

REPAIR DELAYS ON NINE RED FLAGS



Data Source: Our analysis of “red flag” folders furnished by the N.Y.C. Department of Transportation’s Flags Unit.

Our analysis showed that two of the above flags not repaired in a timely manner had deteriorated further were cited on three prior occasions, the first reported in January 1993. When this condition was first identified, it was not considered an emergency and was categorized as a yellow flag. Because the did not address this condition in a timely manner, it was upgraded to a red flag on

bottom of a vertical leg, comprising a member of the bridge span. A memo from East River Bridges’ Flags Division stated that corrective action consisting of reinforcing the deteriorated web will be taken

Despite the emergency condition, it took the Department over 10 weeks to close the flag from the date

However, their response stated that a Department engineer made the determination, that the repair delay would not compromise the condition of the red flagged bridge component and the safety of the

We found a pattern of continued neglect for flag #15,940. The conditions relating to this flag were first reported as a yellow flag in 1992. Subsequently, this condition was cited four more times, until on

two components had a hole through the metal of 5-inches by 5-inches, and a 100 percent section loss for a length of 3 feet 3 inches. The flag was closed on January 27, 1996, 128 days after it was assigned

to the East River Bridge unit for repairs.

In addition, two red flags, although repaired in a timely manner, had been previously outstanding as yellow flags and had been neglected. The upgrading from yellow to red indicated a deterioration of the pre-existing flagged conditions. For example, flag #15,941 involved a condition which was first assigned for repair work in 1993. As a result of deterioration the problem was upgraded to a red flag in 1995. Once this occurred, the Department closed the flag within the required time frame. Similarly, flag #15,979, first noted as a yellow flag in 1993, deteriorated until it had to be reclassified to a red flag in August 1995. The Department removed this flag from the list of open red flags, but the condition was “covered up,” not resolved. This flag was addressed within the required time frame by covering a hole in a pedestrian sidewalk with a steel plate. While this temporary measure removed the safety hazard to the traveling public, it will not prevent further deterioration of the concrete walkway.

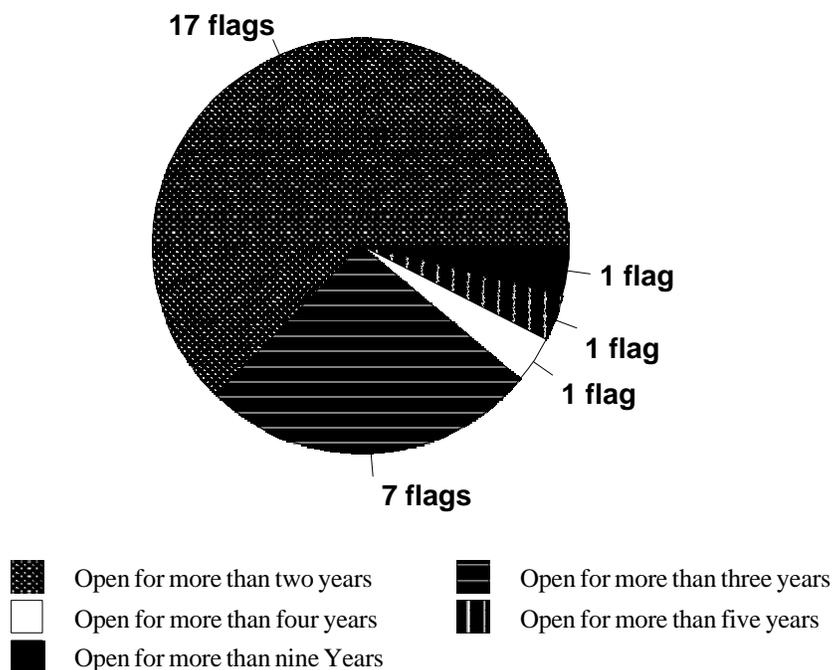
Yellow and Safety Flags Not Repaired on Time

Non-critical primary structural component defects are reported as “yellow flags,” “safety flags” report conditions that present a clear and present danger to the traveling public, however, there is no danger of structural failure. Yellow flags require resolution within the time frame of the next scheduled inspection, but no greater than two years. While the safety flags report serious threats to public safety, we found no written time frame criteria for repairing them, and applied the same criteria used for repairing yellow flags.

We selected 13 of the 148 yellow flags and 14 of the 285 safety flags that were open and not resolved within the required time frame as of September 30, 1995. The delays in repairs ranged from one to nine years as shown in the following chart:

REPAIR DELAYS

Analysis of 13 Yellow and 14 Safety Flags



Source: Our analysis of yellow and safety flag folders furnished by the Department's Flags Unit.

Our analysis of the Department's flag folders showed that the conditions of seven of the above flags worsened after they were first identified. One of these flags, involving the Fresh Creek Bridge over the Belt Parkway in Brooklyn, remained open for more than nine years after it was first noted in 1986, and involved new potholes on the roadway with a deteriorating gap between the bridge and the highway. The holes were covered with temporary plates. By 1990 the holes had deteriorated further and the corners of the plates were loosely supported, resulting in hammering noises during the passage of vehicles. In addition, the report noted that the west bound lanes had areas of "mapcracking."³ The condition continued to deteriorate in 1991 and 1992, with asphalt eroding around the temporary plates. By 1993 an inspection report noted crushed concrete with potholes in random locations, and poor riding conditions. A photo taken in May 1996, illustrates that temporary plates are still being used:

³ "Mapcracking" is random line cracks on the surface, similar in appearance to a road map.



Fresh Creek Bridge, Belt Parkway, Brooklyn - Loosely supported metal plates

Descriptions of the other six flags in our sample which showed deterioration are listed in Appendix B.

No Estimates for Repairs

The Department does not estimate the cost of repairing a flag condition when it is first identified. Such estimates would enable the Department to determine the incremental costs resulting from delays in resolving the flag condition. Comparison of the initial estimates to the ultimate costs of repairs are likely to demonstrate that it is costly to defer needed repairs. In this connection, officials in the City of Newark Engineering Department advised us that their bridge inspectors prepare written cost estimates when needed repairs are first identified. Such estimates help justify the funds needed for repairs.

Recommendations:

1. Develop a comprehensive action plan to resolve outstanding flags in a timely manner.
2. Study the feasibility of including a cost estimate as part of the inspection process.

AGENCY RESPONSE AND AUDITOR COMMENTS

In response to Recommendation 1, Department officials indicated that they oppose any plan where the only criterion for repairing a flag is the date on which the flag was received.

Department officials disagreed with Recommendation 2, indicating that the primary function of an inspector is to inspect and identify flags. Estimating costs would reduce the number of inspections that could be completed.

The City of New York Department of Transportation Bridges and Tunnels Annual Condition Report of 1994 states that “during 1995, 54.3 percent of the City's structures were rated as 'deficient', meaning that they require substantial rehabilitation or repair.” This report underscores the need for Department officials to develop a comprehensive plan to repair flagged conditions in a timely manner. In addition, estimating the cost of resolving flagged conditions would quantify the effect of delayed repairs, which would encourage timely resolution of these conditions.

CHAPTER III. REPORTED STATISTICS ARE INACCURATE

The Bridge and Roadway Division and bridge repair units do not adequately communicate with each other, resulting in overstating the reported work load for three out of the six units reviewed. Due to conflicting status information, 19 percent of the outstanding flagged conditions shown on the Division's monitoring documents were actually closed by the repair units. The East River Bridges repair unit claimed that 35 percent (80 of 229) of the reported work orders had already been resolved. We concluded that the reported emergency maintenance work for the City's bridges are overstated.

The types of activity statistics gathered and reported by the Department are vital in relaying to responsible officials the service efforts and accomplishments in maintaining timely repairs of bridges. Statistical reporting systems are essential for the decision-making process because they help government officials and the public to manage and understand government programs more clearly. Inaccuracies in flag status reports may adversely affect maintenance decisions by the Department management.

Reported flag-conditions are the responsibility of the Bridge Flag Repair Section, which reported that the outstanding flag inventory increased from 2,113 at the end of 1993 to 2,230 at the end of 1995.⁴ As of June 21, 1995, the Flags Unit reported that there were 2,242 open flags assigned to outside contractors and Department repair units. Repair units may be in-house under the jurisdiction of the Division, such as East River Bridges, Harlem River Bridges and Brooklyn Queens River Bridges, or Department traffic units such as the Lighting Unit or Signs Unit.

The flag-tracking process begins with the Flags Unit which reviews the condition and determines the type of needed repairs. All relevant information is enclosed in a flag packet which is sent to the responsible repair unit. The repair unit repairs the flag and sends a completed tracking form to the Flags Unit. The Flags Unit verifies the repair and then eliminates that condition from its open flag inventory. We found that there was no mechanism to identify the receipt of the flag packet by the repair unit, or the notification to the Flags Unit that repairs had been made.

We reviewed open flags assigned to six repair units, and found differences in the number of reported open flags for three units. These units reported that they had already closed 156 of the 803 open flags assigned to them. The Flags Unit acknowledged that 39 of the 156 flags reported open were in fact closed, but maintained that the remaining 117 flags are still open.

There were substantial delays in transmitting closure documents from the repair units to the Flags Unit. For the 39 reported open flags that should have been closed by the Flags Unit, it took from 62 days to over four years to transmit information from the repair unit to the Flags Unit. For example, the Flags Unit claimed that a December 1995 memo received from the Lighting unit reported flag closings, two of which had been completed in 1993 and eight in 1994.

⁴ See: Bridges and Tunnels Annual Condition Report 1995.

For the remaining 117 flags, opinion was divided as to the number of flags that were outstanding. The Flags Unit claimed that no notification of completion was received from the repair units for 108 of the 117 open flags. However, the East River Bridges repair unit (East River Bridges Unit) reported that it notified the Flags Unit that these flags were “closed out” after the flags were turned over to outside contractors to perform major repairs. We verified several instances where the East River Bridges Unit did, in fact, notify the Flags Unit that the flag should be closed. For example, on October 11, 1994, flag #10,971 was closed by the East River Bridges Unit after the job was turned over to a contractor. This information was entered on a tracking form and sent to the Flags Unit with a memo explaining that the current contractor on the Williamsburg Bridge was installing a concrete-filled metal deck and would resolve the flag condition. Similarly, flag #6,776 was assigned to the East River Bridges Unit on December 9, 1991. On June 22, 1992, the flag was assigned to an outside contractor. Based on work-in-process reports, the East River Bridges Unit closed out these flags, but the Flags Unit continued to show the conditions as open and assigned to the East River Bridges Unit.

The Flags Unit claimed that another three of the 117 open flags remained open because they were only partially resolved by the East River Bridges Unit. Our review indicated that the East River Bridges Unit correctly notified the Flags Unit. For example, flag #3,103 described deteriorations on the north and south roadways of the Williamsburg Bridge as two distinct segments of the same flag. East River Bridges Unit repaired the roadway on May 14, 1991, and reported it to the Flags Unit on the Flag tracking form. The second part of the condition was turned over to an outside contractor on May 17, 1993. As of June 21, 1995, the Flags Unit had not updated its status report and still listed the flag as open and assigned to the East River Bridges Unit.

For another six of the 117 flags kept open by the Flags Unit, the assigned repair unit reported that no defect had been found at the location and, therefore, the Flags Unit should close the flag. For example, East River Bridges Unit closed flag #11,905 on May 11, 1994 and notified the Flags Unit that the recommended repair was not required. The location would, however, require annual monitoring and inspection. The Flags Unit disagreed and kept the flag open and assigned to the East River Bridges Unit as of June 21, 1995. The East River Bridges Unit, however, continued to indicate that the flag was closed.

In our opinion, poor communication between the Department units and a lack of formal reporting procedures are the main causes for the above discrepancies. For instance, some inconsistencies resulted in duplicate flag listings. Two red flags, #13,043 and #13,044, were assigned to the East River Bridges Unit on July 11, 1994. They described emergencies located at the top of two intermediate towers of the Williamsburg Bridge. Two “rockers”, each composed of compression link plates, were rusted and frozen, thereby preventing movement of the link plates and the wind chords. East River Bridges Unit tried but failed to correct the condition with its own in-house workforce. On September 15, 1994, the two flags were consolidated into flag #13,474, which was then assigned to the Design unit for monitoring. Flag #13,043 and #13,044 were closed out of the East River Bridges Unit backlog on August 3, 1994. The Flags Unit, however, continued to show all three red flags as open.

Both the 1994 and 1995 Bridges and Tunnels Annual Condition reports cite the need “to eliminate the backlog of 'safety' flags” as the reason to extend the duration of outside contracts. The cost of these contracts for 1994 was \$4.9 million, and estimated at \$7.8 million for 1995. Another \$9.1 million was estimated for each of the two fiscal years for in-house repairs. Since the backlog is overstated, the cost of future contracts and estimates for in-house repairs may be overstated.

Recommendations:

3. Periodically review and determine that the flag monitoring and reporting documents correctly reflect the present status of flagged conditions.
4. Reconcile the activity reports and improve the communication between different units involved in flag operations so that differences are corrected.

AGENCY RESPONSE AND AUDITOR COMMENTS

Department officials agreed with Recommendation 3. They disagreed with Recommendation 4, and indicated that it did not make sense to reconcile activity reports between the various units. Reconciliation with work units, they stated, is not necessary since the main purpose of the units is to track their own workload, while the Division monitors the flags from the standpoint of the City as a whole. However, Department officials do agree that to the extent there are completed flags that are not promptly reported to the Division, communications should be improved.

Our reconciliation indicated substantial delays in reporting closed flags to the Division and instances of duplication of open flags, both of which resulted in overstating the number of open flags. In addition, the Division's failure to reconcile activity reports results in a loss of control over assigning accountability for repairs, and compromises their responsibility for tracking the status of all bridge flags.

APPENDIX A

MAJOR CONTRIBUTORS TO THIS REPORT

Allen Vann
Stanley Evans
Aaron Fruchter
Arnold Broklawski
Emma Wohlberg
Christine Chu
Olga Baranchuk



Mill Basin Bridge, Belt Parkway, Brooklyn - Wood planks that are being used to prevent deterioration of the column bases.



Mill Basin Bridge, Belt Parkway, Brooklyn - Close-up of the wood planks that are being used to prevent deterioration of column bases

Yellow Flag #9708 - This condition, flagged by a State engineer in 1991, concerns Route 1, Boston Post Road, over East 233rd Street and the Hutchinson River. The 1992 report noted severe deterioration of concrete and corrosion of the embedded metals. In addition, previously noted hollow sounding concrete had been chipped off. The 1993 report notes "More hollow sounding concrete areas have been found since last inspection." The repair work was completed in December 1995, four years after the condition was first reported.

SAFETY HAZARDS:

Safety Flag #11144 - An inspection report, dated May 3, 1993, noted that as a result of a missing height limit sign under the East 155th St Bridge over the Major Degan Expressway parts of the bridge showed signs of being repeatedly hit by over- height trucks. The same condition was subsequently reported several times in 1994 and 1995. Each report described further damage to the underside of the bridge.

Safety Flag #10930 - An inspection report, dated June 2, 1990, reported that a height limitation sign was missing on the 62nd Street bridge over the FDR Drive. Subsequently a 1993 collision of an oversize trailer damaged both the sign structure and the attached lighting fixture. Similar elements in an adjacent location were damaged from previous collisions.

Safety Flag #9618 - Since 1992, a vertical clearance sign had been missing on the First Avenue service road near the Willis Avenue Bridge over the Harlem River Drive. This condition presented a hazard to the over-height vehicles using the road. This hazard was subsequently flagged in the 1993 and 1994 State inspection reports. On the July 1995 flagged bridge report the inspector noted that ". . .scratch marks are seen on the underside. . ." of the bridge structure, which is indicative of trucks hitting the bridge structure.

Safety Flag #9532 - This flagged condition on the landmark cobblestone bridge over the Endale Arch in Prospect Park was first reported on August 25, 1992. At that time the damage involved the loss of the embankment holding a section of the wall. Through three years of neglect the condition worsened from a small loss of support to the cobblestone wall, to increased erosion where an August 1994 inspection reported that a four-foot section of the stone parapet wall had toppled over.



Prospect Park, Brooklyn - Partially collapsed stone parapet on the landmark cobblestone bridge.



Prospect Park, Brooklyn - View of same parapet from above upper roadway.