



441 G St. N.W.
Washington, DC 20548

July 15, 2015

The Honorable Susan Collins
Chairman
The Honorable Jack Reed
Ranking Member
Subcommittee on Transportation, Housing and Urban Development, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Mario Diaz-Balart
Chairman
The Honorable David Price
Ranking Member
Subcommittee on Transportation, Housing and Urban Development, and Related Agencies
Committee on Appropriations
House of Representatives

Washington Metropolitan Area Transit Authority: Steps Taken to Address Financial Management and Safety Recommendations, but Financial Management Internal Controls Need Strengthening

The Washington Metropolitan Area Transit Authority's (WMATA) public rail transit and bus systems are vital to meeting the transportation needs of the national capital region, accounting for about 1.2-million passenger trips per weekday. Over the last decade, WMATA has also faced financial challenges maintaining the system's infrastructure, and several fatal accidents have occurred on WMATA's rail transit system. In June 2014, the Federal Transit Administration (FTA) provided WMATA with the results of FTA's financial management oversight review of WMATA's financial management systems.¹ FTA's review identified material weaknesses and significant deficiencies in internal control, concluded that WMATA did not maintain effective internal control over its compliance with FTA's financial management system requirements, and included 38 financial management recommendations that FTA requires WMATA to address.² As a result of FTA's review, among other things, FTA restricted WMATA's ability to draw down

¹Milligan & Company, LLC, *Financial Management Oversight Review: Full Scope Systems Review of the Washington Metropolitan Area Transit Authority*, Performed for U.S. Department of Transportation, Federal Transit Administration, and prepared by Milligan & Company, LLC for Samlin Milligan JV (June 10, 2014).

²For the purpose of FTA's financial management oversight reviews, a material weakness is a deficiency, or combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented or detected and corrected on a timely basis. A significant deficiency is a deficiency, or combination of deficiencies, in internal control over a grantee's financial management system that is less severe than a material weakness yet important enough to merit attention by those charged with governance.

federal grant funds without prior FTA approval until further notice.³ Furthermore, in recent years the National Transportation Safety Board (NTSB) has made a number of recommendations to WMATA aimed at improving the safety of its rail transit system and, as of the time of our review, was actively investigating a fatal accident that occurred on WMATA's rail transit system.⁴

The House committee report accompanying the Departments of Transportation, Housing and Urban Development, and Related Agencies Appropriations Bill for fiscal year 2015⁵ included a provision for us to review WMATA's progress responding to FTA's and NTSB's recent recommendations to WMATA. This report discusses (1) WMATA's progress addressing the financial management recommendations contained in FTA's June 2014 oversight report, (2) WMATA's progress addressing the safety recommendations NTSB has made to WMATA since 2008, and (3) to what extent WMATA's financial management controls incorporate the risk assessment and monitoring components of internal control. On June 12, 2015, we provided your staff with preliminary briefing slides on the results of our review; this report formally transmits the final updated briefing slides (see enc. I).

To examine WMATA's progress addressing FTA's and NTSB's recommendations, we reviewed the recommendations FTA and NTSB made to WMATA, as well as related documents, such as WMATA's status reports and WMATA's correspondence with FTA and NTSB regarding these recommendations. With regard to NTSB's recommendations, we limited our review to NTSB's recommendations to WMATA from January 2008 through June 2015. We selected 2008 as our base year because at the time of our review, NTSB's oldest open recommendation to WMATA was from 2008. We did not independently assess the validity of FTA's and NTSB's recommendations or whether WMATA's corrective actions appropriately addressed their findings. To assess the extent to which WMATA's financial management controls incorporate the risk assessment and monitoring components of internal control, we evaluated the nature of the internal control deficiencies FTA identified using the internal control framework published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).⁶ We focused on examining the risk assessment and monitoring components of internal control because our analysis of FTA's findings indicated that the majority of FTA's recommendations to

³The restrictions FTA placed on WMATA limit its authority to draw down federal funds under its existing grants without prior written approval, as is the general practice for FTA grantees.

⁴On January 12, 2015, a WMATA train stopped in a tunnel after encountering heavy smoke. The smoke caused one passenger fatality and required medical transportation for 86 passengers. As part of its investigation into the accident, NTSB held a fact-finding hearing in June 2015 and expects to publish its final report on the accident in 2016. For more information on NTSB's investigation into this accident, see http://www.nts.gov/investigations/Pages/2015_WMATA_Washington_DC.aspx.

⁵H. Rpt. No. 113-464, at 56 (2014).

⁶Internal control involves the plans, methods, policies, and procedures that an entity uses to fulfill its mission, strategic plan, goals, and objectives. The five components of internal control are (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring. We used the Committee of Sponsoring Organizations of the Treadway Commission's (COSO) internal control guidance as criteria for WMATA's internal control. COSO guidance has been adopted as the generally accepted framework for internal control and is recognized as the standard against which organizations measure the effectiveness of their systems of internal control. See Committee of Sponsoring Organizations of the Treadway Commission, *Internal Control - Integrated Framework* (New York: American Institute of Certified Public Accountants, 2013).

WMATA were related to those internal control components. We also interviewed officials from WMATA, FTA, NTSB, and the Tri-State Oversight Committee.⁷

We conducted this performance audit from March 2015 to July 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary,

- According to FTA's assessment, WMATA has generally been responsive to FTA's 38 financial management recommendations. Specifically, according to our review of FTA documents, WMATA has taken positive steps toward addressing 35 of the 38 recommendations it is required to address and is on track to address the remaining three recommendations by June 30, 2015. However, FTA does not plan to close its recommendations to WMATA until it can verify that WMATA's corrective actions have been implemented and are functioning—a process FTA officials estimate will start in 2016.
- Since 2008, NTSB has issued 29 safety recommendations to WMATA that stem from four accidents. Three of these accidents involved WMATA while the fourth involved another transit agency.⁸ While GAO's review of NTSB documents shows that WMATA has implemented most of NTSB's recommendations (21), 8 recommendations were open as of June 2015. These 8 open safety recommendations—which were issued to WMATA from January 2008 through June 2015—require, among other things, that WMATA replace its original, 1000-series railcars; install onboard event recorders in the lead car of each train-set; and install technology that will automatically alert wayside workers of approaching trains. NTSB officials told us that WMATA has been generally timely in implementing its recommendations, and WMATA officials told us they are taking steps toward addressing the remaining recommendations. Even so, according to WMATA officials, the agency likely will not close the remaining recommendations until 2018 because the recommendations require significant research, time, and funding to address. For example, according to WMATA officials, replacing the 1000-series railcars will cost the agency almost \$700 million over 10 years.
- We identified instances where some of the deficiencies noted in FTA's report were previously reported. For example, in 2008, both FTA, during a previous financial management review, and WMATA's Office of Inspector General reported deficiencies related to WMATA's controls over federal expenditures. Specifically, these expenditures were not appropriately accounted for or reported in accordance with federal grant agreements. In some instances the findings continued as part of the material weaknesses or significant deficiencies reported in FTA's June 2014 report. Although WMATA's

⁷The Tri-State Oversight Committee was created by state-level agencies in Maryland, Virginia, and the District of Columbia to jointly oversee rail safety and security at WMATA.

⁸The accidents involving WMATA include a May 2006 accident at the Dupont Circle Station in which a WMATA train struck and killed a WMATA employee; a June 2009 accident near the Fort Totten Station in which two WMATA trains collided resulting in nine fatalities and 52 injuries; and a January 2015 accident that led to one passenger fatality and 86 injuries after a WMATA train encountered heavy smoke in a tunnel near the L'Enfant Plaza Station. The non-WMATA accident occurred in May 2008; in that case, NTSB issued two recommendations to all transit agencies in the United States.

management has taken corrective actions, we found that WMATA (1) has not established a policy and related procedures for conducting periodic assessments of its financial management-related risks and (2) is not currently monitoring the achievement of its financial management internal control objectives in a manner to achieve maximum results. COSO's internal control guidance provides a generally accepted framework for internal control and specifies that an entity should assess the risk of an internal or external event's occurring that would prevent it from achieving its objectives and that an entity's monitoring activities can better achieve maximum results when these activities evaluate all components of internal control. WMATA officials noted a number of factors for why no policy existed for conducting financial management-related risk assessments, including a lack of prioritization by the board of directors. In addition, based on our discussions with WMATA officials and review of the documentation provided, we found that while WMATA has established an Office of Internal Compliance to monitor WMATA's adherence to financial management controls and related policies and procedures, this office is not designed to cover the five components of internal control. The deficiencies we identified could contribute to FTA's findings resurfacing in the future or hamper WMATA's ability to prevent, or detect and correct, on a timely basis a material misstatement in its internal and external reporting.

Conclusions

WMATA has taken steps toward addressing FTA's June 2014 financial management oversight recommendations and, while it has addressed a number of safety recommendations issued by NTSB, certain actions, such as replacing the 1000-series railcars, will require substantial time and funding. However, for an internal control system to be effective, all five components of internal control must be effectively designed, implemented, and operating together in an integrated manner. Therefore, in the case of FTA's findings and recommendations, strengthening WMATA's risk assessment and monitoring components of internal control could better position WMATA toward having a more effective internal control system. Left unaddressed, WMATA increases the risk that the deficiencies identified in FTA's June 2014 oversight report will continue to exist or resurface in the future and that a material misstatement of WMATA's internal and external reporting will not be prevented, or detected and corrected, on a timely basis.

Recommendations for Executive Action

To strengthen the Washington Metropolitan Area Transit Authority's (WMATA) risk assessment and monitoring components of internal control, we recommend that WMATA's board of directors, working with the General Manager and Chief Executive Officer of WMATA, direct the appropriate WMATA officials to take the following two actions:

- develop and implement a policy and related procedures for assessing WMATA's financial management-related risks, and
- develop and implement a policy and related written procedures for the Office of Internal Compliance to monitor the design and operating effectiveness of the five components of internal control related to financial management.

Agency Comments

We provided WMATA, FTA, and NTSB with a draft of this report for their review and comment. WMATA provided written comments, which are reprinted in enclosure II. In its comments, WMATA concurred with our recommendations and stated it planned to take steps to strengthen

its risk assessment and monitoring components of internal control. Specifically, WMATA stated that it will present to its Board of Directors a financial risk management policy, develop and implement related procedures for its Office of Internal Compliance, and conduct a comprehensive assessment of its financial management-related risks. WMATA stated that it expects to complete these actions by June 30, 2016.

NTSB provided technical comments that we incorporated where appropriate. FTA did not have comments on the report.

- - - - -

We are sending copies of this report to the appropriate congressional committees, the Secretary of Transportation, the Chairman of the National Transportation Safety Board, and the Interim General Manager and Chief Executive Officer of the Washington Metropolitan Area Transit Authority. This report will also be available at no charge on the GAO website <http://www.gao.gov>.

Should you or your staff have questions concerning this report, please contact me at (202) 512-2834 or goldsteinm@gao.gov. Contact points for our offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff members who made major contributions to this report were Ray Sendejas, Assistant Director; John Sawyer, Assistant Director; Melissa Bodeau; Wesley A. Johnson; Hannah Laufe; Chari Nash-Cannaday; Kelly Rubin; and Melissa Swearingen.

A handwritten signature in black ink, appearing to read 'M. Goldstein', with a long horizontal line extending from the end of the signature.

Mark Goldstein
Director, Physical Infrastructure Issues

Enclosures



Status of the Federal Transit Administration's and the National Transportation Safety Board's Recommendations Made to the Washington Metropolitan Area Transit Authority

Briefing to Congressional Staff

Introduction

- The Washington Metropolitan Area Transit Authority's (WMATA) public rail transit and bus systems are vital to meeting the transportation needs of the national capital region. Over the last decade, WMATA has also faced financial challenges maintaining the system's infrastructure, and several fatal accidents have occurred on WMATA's rail transit system.
- The House committee report accompanying the Departments of Transportation, Housing and Urban Development, and Related Agencies Appropriations Bill for fiscal year 2015¹ included a provision that GAO review WMATA's progress responding to recent recommendations from the Federal Transit Administration (FTA) and the National Transportation Safety Board (NTSB).
- This briefing discusses: (1) WMATA's progress addressing the 38 financial management recommendations contained in FTA's June 2014 oversight report, (2) WMATA's progress addressing the 29 safety recommendations NTSB has made to WMATA since 2008, and (3) to what extent WMATA's financial management controls incorporate the risk assessment and monitoring components of internal control.²

¹The House Committee Report accompanying the Departments of Transportation, Housing and Urban Development, and Related Agencies Appropriations Bill for fiscal year 2015, H.R. 4745, directed GAO to conduct this review. H. Rpt. No. 113-464, at 56 (2014).

²Internal control involves the plans, methods, policies, and procedures that an entity uses to fulfill its mission, strategic plan, goals, and objectives. The five components of internal control are (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring.

Scope

- For our first and second objectives, we:
 - focused on identifying the status of recommendations FTA and NTSB require WMATA to address.
 - limited our review to NTSB's recommendations to WMATA from January 2008 through June 2015. We selected 2008 as our base year because, at the time of our review, NTSB's oldest open recommendation to WMATA was from 2008.
 - did not independently assess the validity of FTA's and NTSB's recommendations or whether WMATA's corrective actions appropriately addressed their findings because it was outside the scope of our review.
- For our third objective, we evaluated the nature of the internal control deficiencies reported by FTA using the internal control framework published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).³

³COSO guidance has been adopted as the generally accepted framework for internal control and is recognized as the standard against which organizations measure the effectiveness of their systems of internal control. See Committee of Sponsoring Organizations of the Treadway Commission, *Internal Control - Integrated Framework* (New York: American Institute of Certified Public Accountants, 2013). WMATA uses COSO guidance as its criteria for internal control evaluations.

Methodology

- In conducting our examination, we
 - Reviewed the recommendations FTA and NTSB made to WMATA and related documentation, such as WMATA's status reports and correspondence with FTA and NTSB regarding these recommendations.
 - Reviewed financial-related reports issued by WMATA's Office of Inspector General and others covering similar issues.
 - Interviewed knowledgeable officials from WMATA, FTA, and NTSB about the status of these recommendations and interviewed members of the Tri-State Oversight Committee.⁴
 - Interviewed senior WMATA officials to discuss the design and implementation of controls necessary to achieve its financial management objectives.
- We provided WMATA, FTA, and NTSB with a summary of the content of this briefing and obtained technical comments from the agencies, which we incorporated as appropriate.

⁴The Tri-State Oversight Committee was created by state-level agencies in Maryland, Virginia, and the District of Columbia to jointly oversee rail safety and security at WMATA.

Background: WMATA

- WMATA provides transit services for the national capital region, which includes the District of Columbia, suburban Maryland, and Northern Virginia. WMATA operates the nation's second largest heavy rail transit system (Metrorail), fifth largest paratransit system (MetroAccess), and sixth largest bus system (Metrobus), accounting for about 1.2 million passenger trips per weekday (figure 1).
- WMATA's funding comes from rider fares, parking fees, and a variety of federal, state, and local sources including grants from the federal government and annual contributions from the jurisdictions WMATA serves. For fiscal year 2015, WMATA's budget was about \$2.9 billion, which included about \$517 million in federal funds.⁵

Figure 1: The Washington Metropolitan Area Transit Authority (WMATA)



⁵WMATA, Fiscal Year 2015 Approved Budget (May 2014). WMATA's fiscal year begins on July 1.

Sources: GAO and WMATA. | GAO-15-640R

Background: FTA

- The federal government, through FTA, provides financial assistance in the form of grants to state and local transit providers like WMATA to develop new transit systems and improve, maintain, and operate existing systems. FTA oversees grants that are made to these providers, and grantees are responsible for managing their programs in accordance with federal requirements. As part of its oversight of these grants, FTA evaluates grantees' adherence to federal financial management standards to determine whether grantees' financial management systems meet those requirements.⁶
- One of the mechanisms FTA uses to oversee its grants is its Financial Management Oversight Program, which engages independent public accountants to conduct on-site reviews, called full-scope reviews, of selected grantees' financial management systems. These reviews are to be conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and during these reviews an FTA contractor is to test and evaluate the design and operating effectiveness of management's internal control over compliance with FTA's financial management system requirements.
- Full-scope financial management oversight reviews take, on average, 5-6 months to complete, and over fiscal years 2010 to 2014, FTA conducted about 17 such reviews of its grantees each year.

⁶For grants made to state and local governments prior to December 26, 2014, the standards used by FTA for evaluating the financial management systems of its grantees were drawn from the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments. For the grants that were the subject of FTA's review, the requirements were found in section 18.20 of title 49 of the Code of Federal Regulations (C.F.R.), "Standards for Financial Management Systems," which included standards for financial reporting, accounting records, internal control, budget control, allowable costs, source documentation, and cash management. The uniform administrative requirements for federal awards made on or after December 26, 2014, are now found at 2 C.F.R. part 200.

Background: FTA's June 2014 Recommendations to WMATA

- In June 2014, FTA provided WMATA with the final report of its full-scope review of WMATA's financial management systems.⁷ FTA's review identified material weaknesses and significant deficiencies in internal control, concluded that WMATA did not maintain effective internal control over its compliance with FTA financial management system requirements, and included 38 recommendations which WMATA is required to address.⁸ As a result of FTA's review, FTA restricted WMATA's ability to draw down federal grant funds without prior FTA approval until further notice.
- For the purposes of FTA's financial management oversight reviews:
 - a **material weakness** is a deficiency, or combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented or detected and corrected on a timely basis, and
 - a **significant deficiency** is a deficiency, or combination of deficiencies, in internal control over a grantee's financial management system that is less severe than a material weakness yet important enough to merit attention by those charged with governance.
- In response, WMATA committed to taking corrective actions to address FTA's recommendations.

⁷Milligan & Company, LLC, *Financial Management Oversight Review: Full Scope Systems Review of the Washington Metropolitan Area Transit Authority*, Performed for U.S. Department of Transportation, Federal Transit Administration, and prepared by Milligan & Company, LLC for Samlin Milligan JV (June 10, 2014).

⁸FTA's reviews may also include recommendations in the form of advisory comments, which are minor control deficiencies in the design or operation of a financial management system that are not significant enough to adversely affect a grantee's ability to comply with federal requirements. FTA's review of WMATA's financial management system included seven recommendations in the form of advisory comments. However, we excluded these from our review because FTA does not require its grantees to address its advisory comments, nor does it review the corrective actions grantees may take in response.

Background: NTSB

- NTSB is an independent federal agency that investigates all U.S. civil aviation accidents and significant accidents in other transportation modes. For example, according to NTSB, since 2008 it has investigated more than 20 transit and commuter rail accidents and issued about 100 recommendations.
- NTSB issues its recommendations to the entity that is best able to act on the recommendation. In some instances, NTSB has issued recommendations stemming from one rail accident to all transit agencies if the safety concerns it identifies have broader applicability. According to NTSB officials, NTSB does not consider implementation costs when making recommendations.
- To conduct its investigations, NTSB (1) deploys investigative teams to accident sites to determine the probable cause of the accident and (2) issue recommendations aimed at preventing similar accidents in the future. NTSB does not set time frames for when its recommendations should be closed; however, it follows up annually with any organization that has an open safety recommendation. In some instances, NTSB issues urgent safety recommendations; this is typically done when NTSB identifies an imminent hazard before completing its final report. According to NTSB officials, urgent recommendations are expected to be closed within 6 months to a year after they are issued. Unlike agencies within the Department of Transportation that have the authority to issue and enforce regulations, such as FTA, NTSB does not have any authority to enforce its recommendations.

Background: Internal Control

- Internal control involves the plans, methods, policies, and procedures affected by an entity's oversight body, management, and other personnel that provide reasonable assurance that the following objectives are being achieved: (1) effectiveness and efficiency of operations; (2) reliability of reporting for internal and external use, and (3) compliance with applicable laws and regulations.
- COSO internal control guidance states that there are five components of internal control that must be effectively designed, implemented, and operating in an integrated manner for an internal control system to be effective. These five components are as follows:
 1. **Control environment:** The foundation for an internal control system. It provides the discipline and structure to help an entity achieve its objectives.
 2. **Risk assessment:** Assesses the risks facing the entity as it seeks to achieve its objectives. This assessment provides the basis for developing appropriate risk responses.
 3. **Control activities:** The actions management establishes through policies and procedures to achieve objectives and respond to risks in the internal control system, which includes the entity's information system.
 4. **Information and communication:** The quality of information management and personnel communicate and use to support the internal control system.
 5. **Monitoring:** Activities management establishes and operates to assess the quality of performance over time and promptly resolve the findings of audits and other reviews.

Summary

- According to FTA's assessment, WMATA has taken positive steps toward addressing the 38 financial management recommendations it is required to address and is on track to address all 38 recommendations by June 30, 2015. However, FTA does not plan to close its recommendations to WMATA until it can verify that WMATA's corrective actions have been implemented and are functioning, which the agency estimates will likely happen in 2016.
- Since 2008, NTSB has issued 29 safety recommendations to WMATA that stem from four fatal accidents. Three of these accidents involved WMATA while the fourth involved another transit agency. Of these recommendations, NTSB has closed 21 recommendations and 8 recommendations are still open. The 8 open safety recommendations—which were issued to WMATA from January 2008 through June 2015—require, among other things, that WMATA replace its original, 1000-series railcars; install onboard event recorders in the lead car of each train-set; and install technology that will automatically alert wayside workers of approaching trains. WMATA officials hope to address the remaining open recommendations by 2018.
- While FTA believes WMATA has been generally responsive to FTA's financial management recommendations, we found that the risk assessment and monitoring components of its internal control are not effective in assisting management in achieving its financial management objectives. In order for an internal control system to provide management reasonable assurance regarding achievement of its financial management objectives, all five components of internal control must be present and functioning. Without all components operating effectively, there is an increased likelihood that deficiencies identified in previous reviews will continue to exist or resurface in the future and that a material misstatement of WMATA's internal and external reporting will not be prevented, or detected and corrected, on a timely basis.

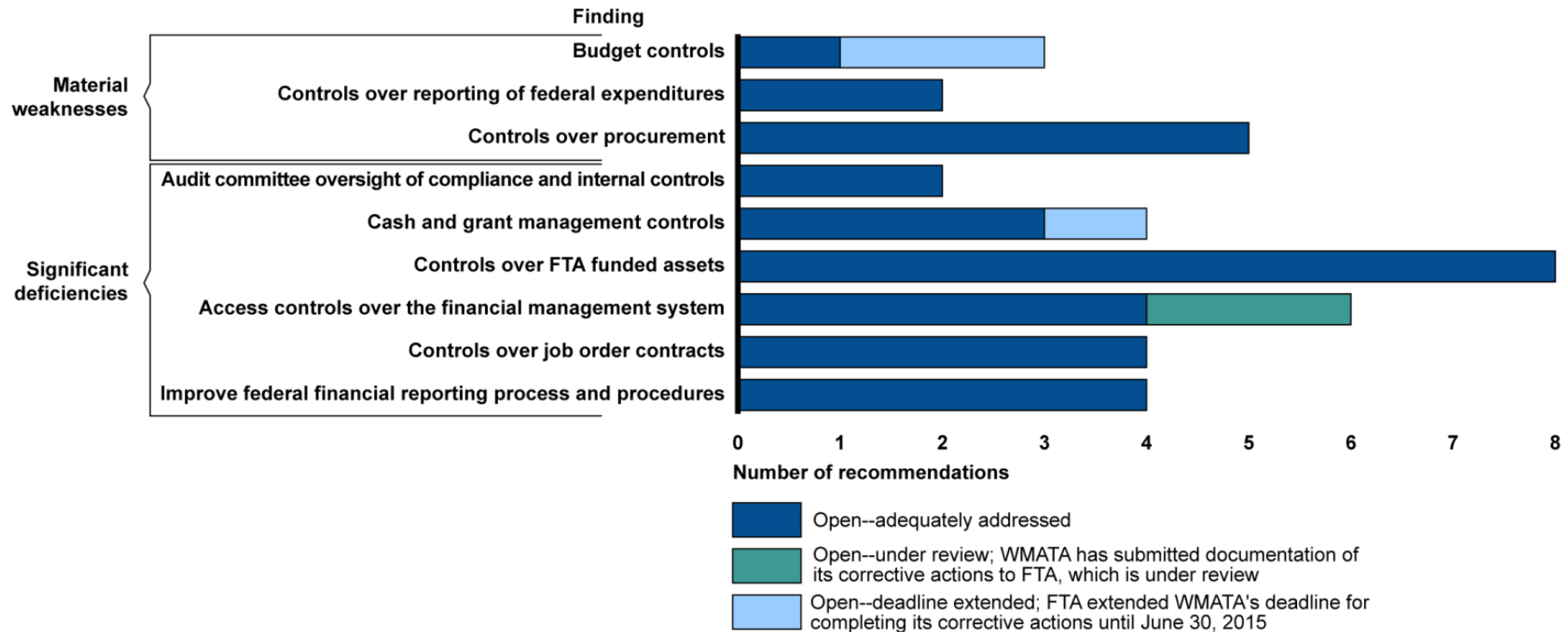
Objective 1: Status of FTA's June 2014 Recommendations to WMATA

WMATA Has Taken Positive Steps to Address FTA's Recommendations; However, FTA Does Not Plan to Close its Recommendations Until it Verifies WMATA's Corrective Actions Have Been Implemented

- FTA officials told us that WMATA has taken positive steps towards addressing the 38 recommendations it is required to address and that WMATA is on track to address all 38 financial management recommendations by June 30, 2015.
- According to FTA's assessment, as of June 2015, WMATA's corrective actions adequately addressed 33 of the 38 FTA recommendations it is required to address, as shown in figure 2. However, FTA does not plan to close its recommendations to WMATA until it can verify that WMATA's corrective actions have been implemented and are functioning. FTA officials told us that:
 - Recommendations will not be closed until FTA considers that WMATA has adequately addressed all 38 recommendations and at least 6 months of financial data are available for FTA to test.
 - They anticipate scheduling these tests in early 2016 at the earliest and noted their financial management oversight recommendations are typically not closed until 12-18 months after a grantee receives the final report of its review.⁹
- See appendix I for the status of each recommendation by finding.

⁹FTA's final report to WMATA was dated June 10, 2014.

Figure 2: Status of the Federal Transit Administration's (FTA) Recommendations to the Washington Metropolitan Area Transit Authority (WMATA), June 2015^a



Source: GAO presentation of the status of FTA's recommendations issued to WMATA, June 2015. | GAO-15-640R

Note:

^aThis table shows the status of FTA's recommendations that WMATA is required to address—that is, recommendations stemming from material weaknesses or significant deficiencies that FTA identified. For the purpose of FTA's financial management oversight reviews, a material weakness is a deficiency, or combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented or detected and corrected on a timely basis. A significant deficiency is a deficiency, or combination of deficiencies, in internal control over a grantee's financial management system that is less severe than a material weakness yet important enough to merit attention by those charged with governance. According to FTA officials, these recommendations will not be closed until WMATA has adequately addressed all the recommendations, and FTA is able to verify that WMATA's corrective actions have been implemented and are functioning.

Objective 1: Status of FTA's June 2014 Recommendations to WMATA

FTA Granted WMATA an Extension to Complete Three of its Corrective Actions Due to the Extent of the Work Involved

- According to FTA and WMATA officials, WMATA requested, and FTA granted, an extension to complete two of its corrective actions to address FTA's finding that WMATA did not have adequate controls in place to ensure that federal expenditures were incurred and charged to grants in accordance with approved budgets. FTA also extended WMATA's deadline to complete its corrective actions to address a related finding that WMATA did not have adequate controls over its cash and grant management process.
- FTA extended WMATA's deadline to complete its corrective actions in response to these findings due to the extent of the work involved. More specifically, to address these recommendations WMATA needed to research and validate that its federal grants expenditures were consistent with its approved agreements for 35 grants as well as review its capital expenditures for fiscal years 2012, 2013, and 2014. FTA also required that WMATA reconcile the costs charged to its grants and submit to FTA any requests for budget revisions as a result of its reconciliation, among other things.
 - WMATA officials told us they supplemented their staff and hired an accounting firm to assist in this effort.
- As of June 2015, FTA officials told us that WMATA was on track to meet its new deadline of June 30, 2015, for completing its corrective actions.

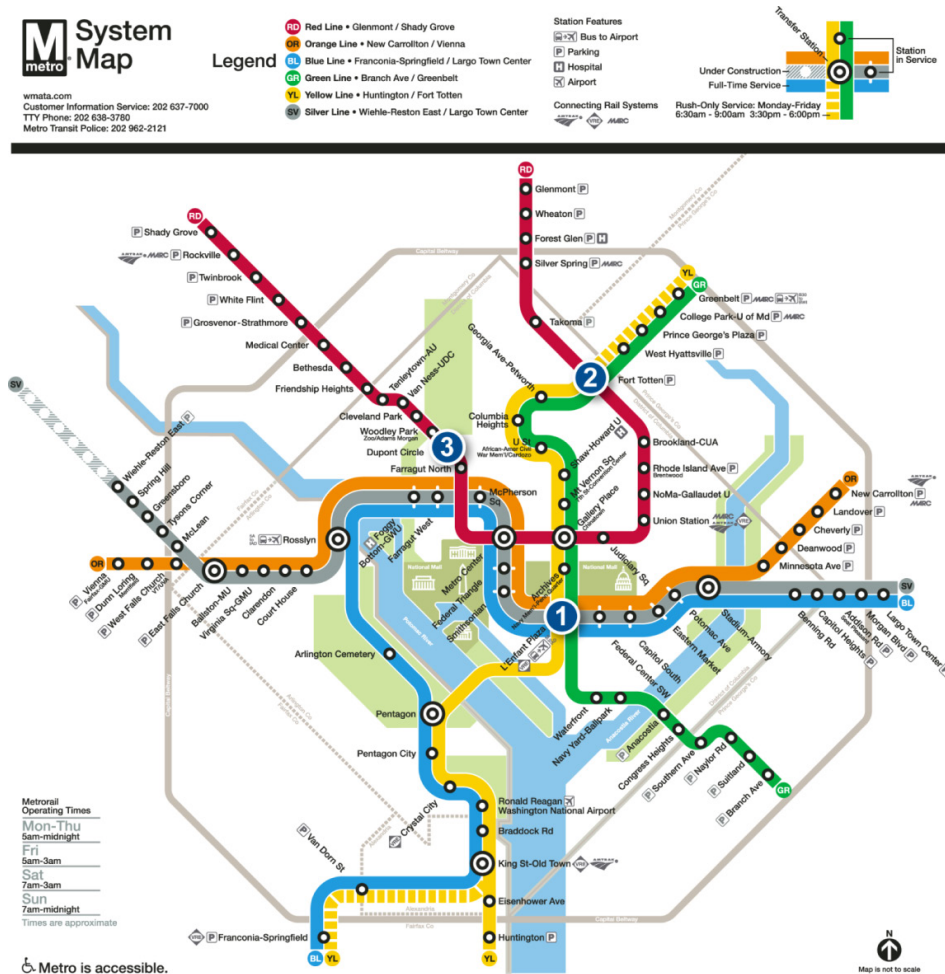
Objective 2: Status of NTSB's Recommendations to WMATA Since 2008

WMATA Has Implemented 21 of the 29 NTSB Recommendations Issued Since 2008

- NTSB has issued 29 safety recommendations to WMATA since 2008. As of June 8, 2015:
 - NTSB had closed 21 of the 29 recommendations it issued to WMATA, and
 - 8 recommendations were still open (see appendix II for a complete list of all recommendations NTSB has issued to WMATA since 2008).
- NTSB's recommendations to WMATA stemmed from three fatal WMATA accidents (see fig. 3) occurring from May 2006 to January 2015, and one non-WMATA fatal accident for which NTSB issued two recommendations to all transit agencies. NTSB has closed WMATA's portion of these two recommendations.¹⁰
- According to NTSB officials, in general, WMATA has been timely in responding to NTSB's recommendations.

¹⁰On May 28, 2008, a Massachusetts Bay Transportation Authority light rail train traveling about 40 miles per hour struck a stopped light rail train on the same track. The accident resulted in one fatality, 8 injuries, and \$8.6 million in damages. The NTSB determined that the probable cause of the collision was due, in part, to the train operator falling asleep. As result of its investigation, NTSB recommended that all transit agencies: (1) ensure that medical history forms for train operators solicit information on sleep-related disorders, and (2) establish a program to identify operators at risk of sleep-related disorders.

Figure 3: Accidents on Washington Metropolitan Area Transit Authority (WMATA) Metrorail on which the National Transportation Safety Board (NTSB) Has Issued Safety Recommendations Since 2008



- 1 On January 12, 2015, a WMATA train stopped after encountering heavy smoke in a tunnel near the L'Enfant Plaza Station. According to NTSB's preliminary report from its investigation, the smoke caused one passenger fatality and required medical transportation for 86 passengers. Initial property damages were estimated by WMATA to be \$120,000.
- 2 On June 22, 2009, a WMATA train struck the rear of a stopped train near the Fort Totten Station. The accident resulted in nine fatalities, 52 injuries, and an estimated \$12 million in damaged equipment. NTSB determined that the probable cause was likely, among other things, (1) a malfunction of WMATA's automatic train control system, coupled with (2) WMATA's inconsistent implementation of procedures.^a
- 3 On May 14, 2006, a WMATA train struck and killed a mechanic as the train was entering the Dupont Circle Station. The mechanic had been working with two other WMATA employees north of the station. NTSB determined that the probable cause of the accident was the failure of the mechanic to stay clear of the approaching train.

^aThe Automatic Train Control system regulates trains' speed and braking through a series of track circuits.

Objective 2: Status of NTSB's Recommendations to WMATA Since 2008

WMATA Has Taken Steps to Implement NTSB's Urgent Recommendations from the January 2015 L'Enfant Plaza Accident

- In February 2015, NTSB issued three urgent recommendations to WMATA. Specifically, NTSB recommended that WMATA:
 - Assess its subway tunnel ventilation system to verify the state of good repair and compliance with industry best practices and standards;
 - develop and implement detailed written tunnel ventilation procedures; and
 - incorporate new tunnel ventilation procedures into training programs.
- In June 2015, while continuing to analyze the L'Enfant accident site, NTSB issued one additional recommendation.¹¹ Specifically, NTSB recommended that WMATA:
 - Promptly develop and implement a program to ensure that all power cables are constructed and installed in accordance with engineering design specifications.¹²

¹¹On February 11, 2015, a WMATA train traveling between Court House and Rosslyn Stations encountered smoke in a tunnel causing WMATA to move the train back to the Court House Station. According to the NTSB press release, there were no injuries as a result of the incident and NTSB is investigating the accident to determine if there are similarities with the January 12, 2015 L'Enfant Plaza Station accident.

¹²According to NTSB's analysis, investigators found that some electrical connections associated with the power supply to the third rail were improperly constructed and installed, which can allow moisture and contaminants to enter the components and create the potential for electrical short circuiting, which could result in fire and smoke events on WMATA Metrorail.

Objective 2: Status of NTSB's Recommendations to WMATA Since 2008

WMATA Has Taken Steps to Implement NTSB's Urgent Recommendations from the January 2015 L'Enfant Plaza Accident

- WMATA is taking steps to address the three recommendations issued in February 2015. For example, WMATA officials told us that they:
 - completed their assessment of the subway tunnel ventilation system in April 2015, and
 - engaged a transportation industry group to develop a peer review team to review WMATA's current procedures and make recommendations for the agency's new detailed written tunnel ventilation procedures. The team completed its initial review of WMATA's current procedures and issued its preliminary recommendations in April 2015. As of June 2015, WMATA officials were unsure when the peer review report would be completed and, as a result, they do not know when the new ventilation procedures will be finalized.
- With respect to the recommendation issued in June 2015, according to a WMATA officials, the agency will begin to install the recommended weather tight seals which are located on third rail power feeds and jumper connections. Given that hundreds of such connections are made throughout the system, WMATA will prioritize locations based on water intrusion conditions.
- NTSB expects to publish its final report of this accident, and any additional recommendations, in 2016.

Objective 2: Status of NTSB's Recommendations to WMATA Since 2008

NTSB Has Closed Most of the Recommendations It Issued to WMATA from the 2009 Fort Totten Accident

- NTSB issued 19 recommendations to WMATA following the 2009 train collision at Fort Totten.¹³ As of June 2015, according to our review of NTSB documents, NTSB had closed 16 of these recommendations.
- The open recommendations to WMATA are:
 - Remove all 1000-series railcars from service. These are WMATA's original train cars, which were manufactured in the 1970s, and are not as crash-resistant as newer model railcars.
 - Install operating onboard event recorders on the lead car of each trainset.
 - Implement a program to monitor onboard event recorders and ensure they are functioning properly.

¹³NTSB, *Collision of Two Washington Metropolitan Area Transit Authority Metrorail Trains Near Fort Totten Station*, NTSB/RAR-1002, PB 2010-916302 (Washington, D.C.: June 22, 2009).

Objective 2: Status of NTSB's Recommendations to WMATA Since 2008

WMATA Expects To Implement All Open Recommendations from the 2009 Fort Totten Accident by 2018

- WMATA is in the process of replacing its more than 300 1000-series railcars and, according to WMATA officials, expects to complete this action by 2018. By that time, NTSB's recommendation will have been open for almost a decade. According to WMATA officials, this recommendation has been challenging to implement because:
 - Replacing the 1000-series railcars is costly. WMATA officials estimated that replacing the railcars will cost the agency almost \$700 million, over 10 years.
 - Procuring new railcars can take years. According to WMATA officials, procuring new railcars involved a number of steps—researching available railcars, requesting information from manufacturers, putting the request out for competitive bidding, and testing systems—that are all time-intensive.
 - Factors outside the control of the manufacturer and WMATA have affected production. For example, the 2011 tsunami that hit Japan destroyed the facility that was manufacturing the railcars.
- As of April 2015, according to officials, WMATA had installed onboard event recorders on all of its lead railcars except for the 1000-series railcars since they are being replaced. WMATA officials also told us they submitted documentation to NTSB to close this recommendation on May 14, 2015.
- With respect to the last recommendation, WMATA has encountered challenges with the recorder software and is working to implement this recommendation. According to officials, WMATA has experienced challenges harmonizing the recorders across its fleet of trains and additional analysis is needed to troubleshoot the problem. WMATA officials expect to complete this work by June 2016.

Objective 2: Status of NTSB's Recommendations to WMATA Since 2008

WMATA Has Closed All But One of NTSB's Recommendations from the 2006 Dupont Circle Accident

- As of June 2015, NTSB had closed 3 of the 4 recommendations it made to WMATA following the May 2006 accident at Dupont Circle.
- WMATA has not yet implemented NTSB's recommendation that WMATA install technology that will automatically alert wayside workers of approaching trains and train operators of areas with workers.
- WMATA and NTSB officials told us that WMATA is taking steps to address this last recommendation.

Objective 2: Status of NTSB's Recommendations to WMATA Since 2008

WMATA Has Taken Steps to Address Worker Safety Since the 2006 Dupont Circle Accident

- According to our review of NTSB documents, WMATA has not fully implemented NTSB's recommendation to implement technology that will automatically alert workers of approaching trains and train operators in work areas. However, WMATA officials told us that the agency has taken additional steps to improve worker safety. For example:
 - In 2010, WMATA published a roadway worker protection manual that improved how it alerts workers and train operators in areas with workers. WMATA also updated this guidance in 2012 and 2014. The new procedures more clearly identify work areas, among other things, which better alerts train operators. Under WMATA's new alert system, (1) work areas are clearly marked, (2) flashing lights and sirens are installed 500 feet around each work zone, and (3) workers, who are located on each end of the worksite facing the oncoming trains, use flags and other devices to alert other workers of oncoming trains.
- According to WMATA officials, in the last two months of 2014, they reviewed two personal alert device systems that would be worn by each worker and alert them of approaching trains. Each of these systems, which are currently being used on other transit lines, would act as an additional source of protection within the designated work area. However, according to WMATA officials, neither system they reviewed was failsafe and both systems would require substantial costs and time to install. WMATA officials told us they are concerned that if an employee is wearing a personal system, they might ignore WMATA's procedures outlined in their roadway worker protection manual which were designed to be the main warning tool. WMATA officials told us they are currently exploring new worker protection technologies.

Objective 3: Controls over Financial Management Do Not Fully Incorporate the Risk Assessment and Monitoring Components of Internal Control

WMATA Has Not Established an Effective Process for Designing Its Financial Management Internal Control

- We identified instances where some of the deficiencies noted in FTA's report were previously reported. This was particularly apparent with regard to WMATA's controls over reporting federal expenditures, managing information systems, and procuring services. For example, in 2008, both FTA, during a previous financial management review, and WMATA's Office of Inspector General reported deficiencies related to WMATA's controls over federal expenditures. Specifically, these expenditures were not appropriately accounted for or reported in accordance with federal grant agreements. These deficiencies either escalated to a material weakness or continued as part of the material weaknesses or significant deficiencies reported in FTA's June 2014 report. Although WMATA's management implemented corrective actions, these actions did not prompt an assessment of the design, implementation, and operating effectiveness of controls necessary to achieve its financial management objectives.
- Further, during the course of our review we identified additional deficiencies that could contribute to similar FTA findings resurfacing in the future. Specifically, we found that
 - 1) WMATA has not established a policy and related procedures for conducting periodic assessments of its financial management-related risks, and
 - 2) WMATA is not currently monitoring the achievement of its financial management internal control objectives in a manner to achieve maximum results.

Objective 3: Controls over Financial Management Do Not Fully Incorporate the Risk Assessment and Monitoring Components of Internal Control

Establishing policies and procedures for assessing risks

- We found that WMATA has not established policies and procedures for assessing its financial management-related risks. WMATA officials noted a number of factors for why no policy existed for conducting financial management-related risk assessments, including limited resources, turnover of key financial management staff, and lack of prioritization by the board of directors.
- COSO states that an entity should assess the internal and external risks it faces that would prevent it from achieving its objectives. Risk assessments inform an entity's policies, planning, and priorities, and help it mitigate those risks.
- Without establishing policies and procedures for assessing risks, there is an increased likelihood that WMATA will not identify or manage its risks associated with achieving its objectives concerning federal financial reporting. This therefore increases the likelihood that deficiencies identified in previous reviews will continue to exist or resurface in the future and that a material misstatement of WMATA's internal and external reporting will not be prevented, or detected and corrected, on a timely basis.

Objective 3: Controls over Financial Management Do Not Fully Incorporate the Risk Assessment and Monitoring Components of Internal Control

Ensuring effective monitoring efforts

- In January 2015, WMATA established the Office of Internal Compliance to monitor WMATA's adherence to financial management controls and related policies and procedures, with a primary focus on compliance with applicable federal regulations. However, based on our discussions with WMATA officials and review of the documentation provided, we found that WMATA's current focus is largely on entity-level controls (e.g., approval of time charges related to federal grants) and is not designed to cover all the five components of internal control.
- According to COSO, in order for an entity to effectively assess whether its financial management internal control is relevant and able to address new risks to the agency, evaluations should include all components of internal control.
- Contributing to this deficiency is that WMATA has not established a policy or procedures that clearly delineates senior management responsibilities and processes for assessing or monitoring the effectiveness of the five components of internal control related to its financial management activities over time.
- By not having a policy that clearly delineates these responsibilities or procedures for ensuring evaluations include all five components of internal control, there is increased risk that WMATA management will be unable to timely detect and correct financial-related weaknesses and other control deficiencies or identify needed changes in internal control due to changes in the entity and its environment.



Objective 3: Controls over Financial Management Do Not Fully Incorporate the Risk Assessment and Monitoring Components of Internal Control

Next steps

- We will continue to evaluate these issues and will consider making recommendations, as appropriate, as we finalize our work.

Appendix I: FTA's Recommendations to WMATA

Finding	Recommendation to WMATA	FTA's Status ^a
<u>Material Weakness: Budget Controls</u> FTA found that WMATA did not have adequate controls in place to ensure that Federal expenditures were incurred and charged to grants in accordance with approved budgets.	<ul style="list-style-type: none"> complete the reconciliation of all costs charged to all active grants to the allowable budget categories, or Activity Line Items, specified in the Federal awards. 	Open—deadline extended until June 30, 2015
	<ul style="list-style-type: none"> submit to FTA any requests for budget revisions or amendments for grants necessary as result of the reconciliation. 	Open—deadline extended until June 30, 2015
	<ul style="list-style-type: none"> develop and submit to FTA policies and procedures to ensure expenditures incurred are charged to Federal grants in accordance with approved budgets. 	Open—adequately addressed
<u>Material Weakness: Controls Over Reporting of Federal Expenditures</u> FTA found that WMATA did not have adequate controls in place to ensure that Federal expenditures were accurately reported.	<ul style="list-style-type: none"> develop and submit to FTA a process to ensure only allowable costs are reported in the <i>Federal Financial Reports</i>. 	Open—adequately addressed
	<ul style="list-style-type: none"> develop and submit to FTA a process to ensure information used to report expenditures in the <i>Federal Financial Reports</i> is consistent with the information used to report expenditures in other annual reports. 	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<p><u>Material Weakness: Controls Over Procurement</u></p> <p>FTA found that WMATA did not have adequate controls in place to ensure that goods and services were procured in accordance with Federal regulations.</p>	<ul style="list-style-type: none"> • develop and submit to FTA documentation that WMATA Procurement staff has received training on federally funded procurement requirements. 	Open—adequately addressed
	<ul style="list-style-type: none"> • develop and submit to FTA a process to ensure full and open competition practices are followed in procuring products and services. 	Open—adequately addressed
	<ul style="list-style-type: none"> • develop and submit to FTA procedures for determining whether procurements will be funded using Federal or local sources. 	Open—adequately addressed
	<ul style="list-style-type: none"> • develop and submit to FTA an updated procurement file checklist to include a requirement for an independent cost estimate. 	Open—adequately addressed
	<ul style="list-style-type: none"> • develop and submit to FTA procedures to ensure all components of procurement files are assembled timely. 	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<u>Significant Deficiency: Audit Committee Oversight of Compliance and Internal Controls</u> FTA found that WMATA's monitoring of deficiencies should be improved by the Audit Committee of its Board of Directors.	• establish and submit to FTA a policy that ensures any audit findings cited by its Internal Office of Inspector General and/or external auditors are addressed timely. Findings should not be closed out until they have been fully addressed. If management does not agree with the findings or recommendations, the Audit Committee should be informed and determine appropriate resolution.	Open—adequately addressed
	• evaluate the expertise of its Audit Committee's members to assess if they have adequate knowledge or expertise to fully understand the nature of audit findings and assess if corrective actions are adequate.	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<p><u>Significant Deficiency: Cash and Grant Management Controls</u></p> <p>FTA found that WMATA did not have adequate controls over its cash and grant management process.</p>	<ul style="list-style-type: none"> • develop and submit to FTA procedures to ensure minimal time elapsing between when Federal expenditures are incurred and reported and the funds are drawn down. 	Open—adequately addressed
	<ul style="list-style-type: none"> • develop and submit to FTA a process to ensure draw down of FTA funds is only made on the Federal share of expenditures incurred and ensure that amounts overdrawn are repaid to the FTA immediately. 	Open—deadline extended until June 30, 2015
	<ul style="list-style-type: none"> • develop and submit to FTA procedures to ensure milestone progress reports include all required elements upon submission to FTA. 	Open—adequately addressed
	<ul style="list-style-type: none"> • develop and submit to FTA procedures to ensure grant close-outs are done timely. 	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<u>Significant Deficiency: Controls Over FTA Funded Assets</u> FTA found that WMATA did not have adequate controls over managing and disposing of FTA funded assets.	• perform and submit to FTA an inventory of its federally funded assets and reconcile the inventory against the asset management records within PeopleSoft. Additionally, update the asset information within PeopleSoft so that it is complete and accurate based on the results of the inventory.	Open—adequately addressed
	• develop and submit to FTA procedures to ensure that an inventory is performed on a biannual basis and the results are reconciled against asset records.	Open—adequately addressed
	• develop and submit to FTA procedures for disposing of assets that include procedures for notifying the FTA about the disposal of assets, determining the fair value of federally funded assets, determining the FTA's interest in disposed assets, and ensuring that FTA is reimbursed timely.	Open—adequately addressed
	• develop and submit to FTA procedures to ensure that Rolling Stock Status Reports are used to notify the FTA when federally funded assets are being disposed.	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<u>Significant Deficiency: Controls Over FTA Funded Assets</u> (cont.)	• review its asset records and ensure that the FTA has been notified of all disposed federally funded assets, the proceeds received from all disposals in excess of \$5,000, and all vehicles disposed before the end of their useful life.	Open—adequately addressed
	• review its asset records and ensure that proceeds from the disposal of federally funded assets are accurately recorded in its accounting records.	Open—adequately addressed
	• ensure documentation for changes in the asset records is complete to support information recorded in the financial system.	Open—adequately addressed
	• develop and submit to FTA procedures for managing property losses that include procedures for notifying the FTA, calculating the fair value of the vehicles, returning to FTA its remaining Federal interest in the withdrawn project property, and seeking prior FTA approval to invest an amount equal to the remaining Federal interest in like-kind property eligible for assistance.	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<p><u>Significant Deficiency: Access Controls Over the Financial Management System</u></p> <p>FTA found that WMATA did not have adequate controls over managing logical access to the financial management system.</p>	<ul style="list-style-type: none"> • develop and submit to FTA a formal process for granting, periodically reviewing and removing access for PeopleSoft, its supporting database, and its operating system infrastructure, and the datacenter where PeopleSoft is stored. 	Open—adequately addressed
	<ul style="list-style-type: none"> • develop and submit to FTA a formal process for notifying system administrators to remove access for terminated employees and contractors. 	Open—adequately addressed
	<ul style="list-style-type: none"> • submit documentation to FTA of its updated password policy to include stronger password requirements. 	Open—adequately addressed
	<ul style="list-style-type: none"> • submit documentation to FTA that it has performed a formal review of all accounts for PeopleSoft, the supporting database and operating system and of all individuals with access to the datacenter where the PeopleSoft infrastructure resides, to ensure that all terminated individuals have been removed and access permissions are consistent with user job responsibilities. Maintain documentation of these reviews on file. 	Open—under review

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<u>Significant Deficiency: Access Controls Over the Financial Management System</u> (cont.)	• develop and submit to FTA procedures to ensure that password settings and requirements are consistent with WMATA's password policies.	Open—under review
	• develop and submit to FTA controls to ensure that the same individuals do not have system administrator access to the application and database in addition to having the ability to move program changes into production.	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<p><u>Significant Deficiency: Controls Over Job Order Contracts</u></p> <p>FTA found that WMATA's procurement department does not have adequate policies and procedures over its job order contract procurement process.</p>	<ul style="list-style-type: none"> • evaluate its job order contract program and develop and submit to FTA documented changes that the Master job order contract includes all required FTA contract clauses. 	Open—adequately addressed
	<ul style="list-style-type: none"> • evaluate its job order contract program and develop and submit to FTA documented changes that the pool of contractors in the job order contract program is sufficient in number and capabilities to ensure that the ability to have adequate competition among the pooled contractors and that they have the required expertise to perform the services contracted. 	Open—adequately addressed
	<ul style="list-style-type: none"> • evaluate its job order contract program and develop and submit to FTA documented changes that there are policies and procedures that document the process for determining which procurements can be adequately competed with the pool of job order contract contractors versus which procurements should be competed through a full and open competitive process. 	Open—adequately addressed
	<ul style="list-style-type: none"> • evaluate its job order contract program and develop and submit to FTA documented changes that there is adequate competition among the pool of job order contract contractors to ensure that tasks are awarded to the most qualified vendor in the pool. 	Open—adequately addressed

Appendix I: FTA's Recommendations to WMATA (cont.)

Finding	Recommendation to WMATA	FTA's Status ^a
<u>Significant Deficiency: Improve Federal Financial Reporting Process and Procedures</u> FTA found that WMATA's controls over reporting indirect costs and encumbrances in its <i>Federal Financial Reports</i> need improvement.	• develop and submit to FTA policies and procedures that ensure the approval process for preparation of <i>Federal Financial Reports</i> is documented.	Open—adequately addressed
	• develop and submit to FTA policies and procedures that ensure procedures for determining how encumbrances are allocated to Federal awards are documented.	Open—adequately addressed
	• develop and submit to FTA policies and procedures that ensure indirect costs are properly reported on the <i>Federal Financial Reports</i> for applicable grants.	Open—adequately addressed
	• develop and submit to FTA policies and procedures that ensure <i>Federal Financial Reports</i> are reviewed by someone other than the preparer.	Open—adequately addressed

Source: GAO presentation of the status of FTA's recommendations issued to WMATA, June 2015. | GAO-15-640R

Note:

^aThis table shows the status of FTA's recommendations that WMATA is required to address—that is, recommendations stemming from material weaknesses or significant deficiencies that FTA identified. For the purpose of FTA's financial management oversight reviews, a material weakness is a deficiency, or combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented or detected and corrected on a timely basis. A significant deficiency is a deficiency, or combination of deficiencies, in internal control over a grantee's financial management system that is less severe than a material weakness yet important enough to merit attention by those charged with governance. According to FTA officials, these recommendations will not be closed until WMATA has adequately addressed all the recommendations, and FTA is able to verify that WMATA's corrective actions have been implemented and are functioning.

Appendix II: NTSB's Recommendations to WMATA Since 2008

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<p><u>L'Enfant Plaza Station</u></p> <p>On January 12, 2015, a WMATA train stopped after encountering heavy smoke in a tunnel near L'Enfant Plaza. According to NTSB's preliminary report from its investigation, the smoke caused one passenger fatality and required medical transportation for 86 passengers. Initial property damage was estimated by WMATA to be \$120,000.</p>	<ul style="list-style-type: none"> • urgent: assess your subway tunnel ventilation system to verify the state of good repair and compliance with industry best practices and standards, such as those outlined in the National Fire Protection Association's Standard for Fixed Guideway Transit and Passenger Rail Systems. (R-15-008) 	Open—awaiting response
	<ul style="list-style-type: none"> • urgent: develop and implement detailed written tunnel ventilation procedures for operations control center staff that take into account the probable source location of smoke and fire, the location of the train, the best evacuation route, and unique infrastructure features; these procedures should be based on the most effective strategy for fan direction and activation to limit passengers' exposure to smoke. (R-15-009) 	Open—awaiting response
	<ul style="list-style-type: none"> • urgent: as part of the implementation of the procedures developed in response to recommendation R-15-009 above, incorporate the use of the procedures into your ongoing training and exercise programs and ensure that operations control center staff and emergency responders have ample opportunities to learn and practice activating ventilation fans. (R-15-010) 	Open—awaiting response
	<ul style="list-style-type: none"> • promptly develop and implement a program to ensure that all power cable connector assemblies are constructed and installed in accordance with its engineering design specifications. (R-15-025) 	Open—awaiting response

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<p><u>Fort Totten Station</u></p> <p>On June 22, 2009, a WMATA train struck the rear of a stopped train near Fort Totten. The accident resulted in nine fatalities, 52 injuries, and an estimated \$12 million in damaged equipment. NTSB determined that the probable cause was likely, among other things, (1) a malfunction of WMATA's automatic train control system, coupled with (2) WMATA's inconsistent implementation of procedures.^b</p>	<ul style="list-style-type: none"> • elevate the safety oversight role of the WMATA Board of Directors by (1) developing a policy statement to explicitly and publicly assume the responsibility for continual oversight of system safety, (2) implementing processes to exercise oversight of system safety, including appropriate proactive performance metrics, and (3) evaluating actions taken in response to NTSB and FTA recommendations, as well as the status of open corrective action plans and the results of audits conducted by the Tri-State Oversight Committee.^c (R-10-007) 	Closed—acceptable action
	<ul style="list-style-type: none"> • because of the susceptibility to pulse-type parasitic oscillation that can cause a loss of train detection by the Generation 2 General Railway Signal Company audio frequency track circuit modules, establish a program to permanently remove from service all of these modules within the Metrorail system. (R-10-008) 	Closed—acceptable action
	<ul style="list-style-type: none"> • establish periodic inspection and maintenance procedures to examine all audio frequency track circuit modules within the Metrorail system to identify and remove from service any modules that exhibit pulse-type parasitic oscillation. (R-10-009) 	Closed—acceptable action
	<ul style="list-style-type: none"> • review the process by which Metrorail technical bulletins and other safety information are provided to employees and revise that process as necessary to ensure that (1) employees have received the information intended for them, (2) employees understand the actions to be taken in response to the information, and (3) employees take the appropriate actions. (R-10-010) 	Closed—acceptable action

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<u>Fort Totten Station</u> (cont.)	• completely remove the unnecessary Metrorail wayside maintenance communication system to eliminate its potential for interfering with the proper functioning of the train control system. (R-10-011)	Closed—acceptable action
	• conduct a comprehensive safety analysis of the Metrorail automatic train control system to evaluate all foreseeable failures of this system that could result in a loss of train separation, and work with your train control equipment manufacturers to address in that analysis all potential failure modes that could cause a loss of train detection, including parasitic oscillation, cable faults and placement, and corrugated rail. (R-10-012)	Closed—acceptable action
	• based on the findings of the automatic train control system above, incorporate the design, operational, and maintenance controls necessary to address potential failures in the automatic train control system. (R-10-013)	Closed—acceptable action
	• implement cable insulation resistance testing as part of Metrorail's periodic maintenance program. (R-10-014)	Closed—acceptable action
	• Work with the Tri-State Oversight Committee to satisfactorily address the recommendations contained in the FTA's March 4, 2010, final report of its audit of the Tri-State Oversight Committee and WMATA. (R-10-015)	Closed—acceptable action

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<u>Fort Totten Station</u> (cont.)	<ul style="list-style-type: none"> • require that [WMATA's] safety department; representatives of the operations, maintenance, and engineering departments; and representatives of labor organizations regularly review recorded operational data from Metrorail train onboard recorders and the Advanced Information Management system to identify safety issues and trends and share the results across all divisions of your organization. (R-10-016) 	Closed—acceptable action
	<ul style="list-style-type: none"> • develop and implement a non-punitive safety reporting program to collect reports from employees in all divisions within your organization, and ensure that the safety department; representatives of the operations, maintenance, and engineering departments; and representatives of labor organizations regularly review these reports and share the results of those reviews across all divisions of your organization. (R-10-017) 	Closed—acceptable action
	<ul style="list-style-type: none"> • review the Hazard Identification and Resolution Matrix process in [WMATA's] system safety program plan to ensure that safety-critical systems such as the automatic train control system and its subsystem components are assigned appropriate levels of risk in light of the issues identified in this accident. (R-10-018) 	Closed—acceptable action
	<ul style="list-style-type: none"> • develop a formal process by which the general manager and managers responsible for WMATA operations, maintenance, and engineering will periodically review, in collaboration with the chief safety officer, all safety audits and open corrective action plans, and modify policy, identify and commit resources, and initiate any other action necessary to ensure that the plans are adequately addressed and closed within the required time frame. (R-10-019) 	Closed—acceptable action

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<u>Fort Totten Station</u> (cont.)	• remove all 1000-series railcars as soon as possible and replace them with cars that have crashworthiness collision protection at least comparable to the 6000-series railcars. (R-10-020)	Open—acceptable response
	• ensure that the lead married-pair car set of each train is equipped with an operating onboard event recorder. (R-10-021)	Open—acceptable response
	• develop and implement a program to monitor the performance of onboard event recorders and ensure they are functioning properly. (R-10-022)	Open—acceptable response
	• urgent: examine track circuits within your system that may be susceptible to parasitic oscillation and spurious signals capable of exploiting unintended signal paths, and eliminate those adverse conditions that could affect the safe performance of your train control system. This work should be conducted in coordination with your signal and train control equipment manufacturer(s). (R-09-015)	Closed—superseded by R-10-08
	• develop a program to periodically determine that electronic components in your train control system are performing within design tolerances. (R-09-016)	Closed—acceptable action

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<u>Fort Totten Station</u> (cont.)	<ul style="list-style-type: none">• urgent: take action to enhance the safety redundancy of [WMATA's] train control system by evaluating track occupancy data on a real-time basis in order to detect losses in track occupancy and automatically generate alerts. Alerts should prompt actions that include immediately stopping train movements or implementing appropriate speed restrictions to prevent collisions. (R-09-006)	Closed— acceptable action

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<p><u>Dupont Circle Station</u></p> <p>On May 14, 2006, a WMATA train struck and killed a mechanic as the train was entering Dupont Circle. The mechanic had been working with two other WMATA employees north of the station. NTSB determined that the probable cause of the accident was the failure of the mechanic to stay clear of the approaching train.</p>	<ul style="list-style-type: none"> • review your Metrorail Safety Rules and Procedures Handbook and revise it as necessary to create additional layers of protection for wayside workers, including: (1) Adding requirements for wayside pre-work job briefings to ensure that all workers are informed of their duties, of their respective roles in work crew safety, and of the areas that are to be used to stay clear of trains. (2) Requiring that when train operators request permission to either enter a main track, or when a train is turned for a return trip, the train operators along the affected lines must acknowledge receipt of the updated radio announcement from the control center regarding wayside workers. (3) Establishing procedures to be used for members of a work crew to acknowledge a lookout's warning that a train is approaching on a particular track from a particular direction before a lookout gives an all clear signal to a train. (R-08-001) 	Closed—acceptable action
	<ul style="list-style-type: none"> • establish a systematic program for frequent unannounced checks of employee compliance with Metrorail operating and safety rules and procedures. (R-08-002) 	Closed—acceptable action
	<ul style="list-style-type: none"> • perform periodic hazard analyses on the deficiencies identified by unannounced checks of employee compliance in response to the recommendation above, and use the results to revise Metrorail training curricula or enforcement activities, as necessary, to improve employee compliance with operating and safety rules and procedures. (R-08-003) 	Closed—acceptable action

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<u>Dupont Circle Station</u> (cont.)	<ul style="list-style-type: none">• promptly implement appropriate technology that will automatically alert wayside workers of approaching trains and will automatically alert train operators when approaching areas with workers on or near the tracks. (R-08-004)	Open— acceptable response

Appendix II: NTSB's Recommendations to WMATA Since 2008 (cont.)

Accident synopsis	Recommendation to WMATA (recommendation number)	NTSB's status ^a
<p><u>Non-WMATA</u></p> <p>On May 28, 2008, a Massachusetts Bay Transportation Authority light rail train traveling about 40 miles per hour struck a stopped light rail train on the same track. The accident resulted in one fatality, 8 injuries, and \$8.6 million in damages. The NTSB determined that the collision was due, in part, to the train operator falling asleep.</p>	<ul style="list-style-type: none"> • establish a program to identify operators who are at high risk for obstructive sleep apnea or other sleep disorders and require that such operators be appropriately evaluated and treated. (R-09-011) 	Closed—acceptable action
	<ul style="list-style-type: none"> • review [WMATA's] medical history and physical examination forms and modify them as necessary to ensure that they elicit specific information about any previous diagnosis of obstructive sleep apnea or other sleep disorders and about the presence of specific risk factors for such disorders. (R-09-010) 	Closed—acceptable action

Source: GAO presentation of the status of NTSB's recommendations issued to WMATA, June 2015. | GAO-15-640R

Notes:

^aThis table lists the status of each recommendation as determined by NTSB. So, for example, while WMATA has reported taking action to close the recommendations from the accident at L'Enfant Plaza Station, these recommendations are listed as open-awaiting response because WMATA has not yet submitted a written response to NTSB.

^bThe Automatic Train Control system regulates trains' speed and braking through a series of track circuits.

^cThe Tri-State Oversight Committee was created by state-level agencies in Maryland, Virginia, and the District of Columbia to jointly oversee rail safety and security at WMATA.



GAO on the Web

Web site: <http://www.gao.gov/>

Congressional Relations

Katherine Siggerud, Managing Director, siggerudk@gao.gov
(202) 512-4400, U.S. Government Accountability Office
441 G Street, NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov
(202) 512-4800, U.S. Government Accountability Office
441 G Street, NW, Room 7149, Washington, DC 20548

Copyright

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

Enclosure II: Comments from the Washington Metropolitan Area Transit Authority

June 29, 2015



By email

Ray Sendejas
Assistant Director, Physical Infrastructure Issues
U.S. Government Accountability Office
441 G St, NW
Washington, DC 20548

Dear Mr. Sendejas,

Thank you for allowing the Washington Metropolitan Area Transit Authority (WMATA) an opportunity to provide a formal response to the Government Accountability Office (GAO) report to Congress entitled: *Washington Metropolitan Area Transit Authority: Steps Taken to Address Financial Management and Safety Recommendations, but Financial Management Internal Controls Need Strengthening* (GAO-15-640R).

First, we want to commend the GAO for the thorough and highly professional manner in which the performance audit was conducted. We appreciate the diligent effort by GAO staff representing both the Physical Infrastructure and Financial Management and Assurance Teams, and are pleased to have worked closely with them over several months on this effort.

In general, WMATA concurs with the findings and conclusions presented in the report, and plans to implement GAO's two recommendations. We would, however, like to clarify that WMATA's delay in developing a formal financial management risk policy is not related to Board prioritization. Our corrective action plans for the recommendations follow.

GAO Recommendation:

1. Develop and implement a policy and related procedures for assessing WMATA's financial management-related risks

Corrective action plan:

- a. WMATA will present to the Board of Directors, as part of the October Board cycle, a financial risk management policy. The policy will establish and maintain guidelines for assessing WMATA's financial management-related risks. Related procedures will also be developed and implemented.

**Washington
Metropolitan Area
Transit Authority**

600 Fifth Street, NW
Washington, D.C. 20001
202/962-1234

*By Metrorail:
Judiciary Square-Red Line
Gallery Place-Chinatown
Red, Green and
Yellow Lines*

*A District of Columbia
Maryland and Virginia
Transit Partnership*

Ray Sendejas
Page 2

- b. A comprehensive assessment of financial management-related risks will be completed in alignment with WMATA's overarching framework for enterprise risk management.

Target completion – 6/30/2016

GAO Recommendation:

- 2. Develop and implement a policy and related written procedures for the Office of Internal Compliance to monitor the design and operating effectiveness of the five components of internal control related to financial management.

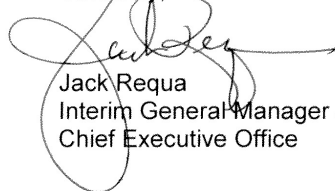
Corrective Action Plan:

- a. WMATA will present to the Board of Directors, as part of the October Board cycle, a financial management control policy. The purpose of the policy will be to establish an effective system of internal control over financial management operations for the Authority in compliance with the requirements and standards set forth by the Committee of Sponsoring Organizations of the Treadway Commission's (COSO) Internal Control - Integrated Framework. Adoption of the COSO framework for the management of financial controls will facilitate WMATA's ability to monitor the design and effectiveness of the five components of internal control related to financial management across the organization. Related procedures for the Office of Internal Compliance will also be developed and implemented.

Target completion – 6/30/2016

In closing, WMATA looks forward to continuing our productive working relationship with the GAO as it monitors our implementation of its recommendations. These recommendations will serve to guide the improvements that are necessary to reestablish and maintain an effective internal control system, and support WMATA's financial stability objectives.

Sincerely,



Jack Requa
Interim General Manager and
Chief Executive Office

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (<http://www.gao.gov>). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to <http://www.gao.gov> and select "E-mail Updates."

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#). Subscribe to our [RSS Feeds](#) or [E-mail Updates](#). Listen to our [Podcasts](#). Visit GAO on the web at www.gao.gov.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: <http://www.gao.gov/fraudnet/fraudnet.htm>

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Katherine Siggerud, Managing Director, siggerudk@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800, U.S. Government Accountability Office, 441 G Street NW, Room 7149, Washington, DC 20548

