



March 29, 2017

# WMATA After SafeTrack

Subcommittee on Government Operations, Committee on Oversight and Government Reform, United States House of Representatives, One Hundred Fifteenth Congress, First Session

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## HEARING CONTENTS:

### Witnesses

Paul Wiedefeld  
General Manager  
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[View Testimony](#)

Dennis Anosike  
Chief Financial Officer  
Washington Metropolitan Area Transit Authority

Mark L. Goldstein  
Director of Physical Infrastructure Issues  
U.S. Government Accountability Office  
[View Testimony](#)

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Testimony of Paul J. Wiedefeld, General Manager and Chief Executive Officer of the  
Washington Metropolitan Area Transit Authority

Before a hearing of the Subcommittee on Government Operations under the Committee on  
Oversight and Government Reform

U.S. House of Representatives  
Wednesday, March 29, 2017

Good afternoon, Chairman Meadows, Ranking Member Connolly and Members of the Subcommittee. Thank you for the opportunity to testify today. I am Paul Wiedefeld, General Manager and Chief Executive Officer of the Washington Metropolitan Area Transit Authority (WMATA), known as Metro.

Since I appeared before this committee on December 2, 2016, Metro continues to make progress on our top three priorities of improving safety, reliability and fiscal management. In particular, I am especially pleased with our advancements in implementing SafeTrack and the Federal Transit Administration (FTA) and National Transportation Safety Board (NTSB) recommendations.

On the financial side, on March 23<sup>rd</sup>, the Metro Board passed our FY18 capital and operating budgets. But as important as that approval was, Metro and the Region still face looming financial issues.

Given the constrained budgets at the local, state, and federal levels of government, combined with negative impacts of raising fares, it is critical that we now turn to resolving Metro's long-term capital funding needs, and Metro's unsustainable cost model.

Simply put, much more needs to be done to address funding needs and control costs that management actions alone cannot solve.

Recognizing that we are at a critical juncture, I have already begun to determine Metro's capital and operating requirements going forward and will come out with those next month.

The requirements and recommendations I lay out will be specific, actionable, and ambitious in terms of providing the tools we need to effectively manage this agency and to safely and efficiently deliver reliable service to our customers.

I am working with the Board and other stakeholders in the Region as we move forward in solving some of the long recognized financial issues facing the agency so we can provide the kind of Metro system required for the economic future of the Region and that provides the quality service our customers deserve.

## **Response to the Government Accountability Office (GAO) Report**

Recently, the Government Accountability Office (GAO) provided the report the committee requested entitled: Washington Metropolitan Area Transit Authority; Improved Planning of Future Rehabilitation Projects Could Prevent Limitations Identified with Safe Track (GAO 17-348).

We want to thank the GAO for the highly professional manner in which the review was conducted. We appreciate the diligent effort by the GAO team representing the Physical Infrastructure and General Counsel Offices and are pleased to have worked closely with them.

As noted in our letter which accompanied the GAO report, WMATA concurs with the findings and conclusions in the report and is already working to address the recommendations. However, we are concerned that the report does not accurately reflect the urgent safety state that demanded that we move as quickly as possible to start SafeTrack. The report does not clearly express the true level of crisis and safety challenges the agency was facing almost one year ago.

WMATA needed to make real time decisions to address urgent National Transportation Safety Board recommendations and Federal Transit Administration Safety Directives. Correspondence from Federal Transit Administration's (FTA) Acting Administrator to WMATA leadership dated May 11, 2016 underscored the pressing nature of the situation, "During the Federal Transit Administration's (FTA) recent investigations and inspections of the Washington Metropolitan Area Transit Authority (WMATA) Metrorail system, FTA safety oversight officials have identified track locations where urgent repairs are required to reduce the risk of smoke and fire events and to ensure the safety of passengers and employees." We moved swiftly and worked collaboratively with the FTA on the SafeTrack plan and schedule. In fact, the FTA directed adjustments to the schedule based on its assessment that segments of our infrastructure needed to be repaired immediately rather than toward the end of the program.

FTA did not ask us to delay the commencement of SafeTrack, nor were concerns expressed regarding the level of project planning prior to implementing this initiative.

I want to reemphasize what we have said since the beginning of the SafeTrack program --- SafeTrack was never intended to address all of our state of good repair track needs in one year. The stated goal was to accelerate the return to a state of good repair, not achieve it in one year. When SafeTrack is completed, Metrorail will be a 40 year old heavy rail system whose track infrastructure has been rehabilitated.

The report points out that WMATA developed three alternatives for SafeTrack, but does not emphasize the integral role of track time in determining the final schedule. Prior to SafeTrack, the Metrorail system was closed only 33 hours each week, providing little time for maintenance

and inspections. By contrast, in 1998 when the Metrorail system was roughly 20 percent smaller, had 12 fewer stations and was under less stress (i.e. by running shorter trains less frequently), the system enjoyed 25 percent more maintenance time – 44 hours per week. Adjusting Metrorail operating hours and increasing track access has enabled Metro crews to properly maintain and rehabilitate tracks and signals, mitigate water intrusion and complete other safety-critical maintenance and inspections beyond the completion of SafeTrack. The change will also reduce the risk of disruptive shutdowns for extensive repairs. Maximizing track time was a key consideration in SafeTrack planning.

While the report discusses the planning processes undertaken by other transit agencies for major capital projects, we appreciate the acknowledgement by GAO that “the information gathered from these entities is not generalizable to all transit agencies.” Industry best practices and sharing of information with other transit agencies are of great value, but the unique nature of the challenges WMATA faced a year ago called for an equally unique response.

The work that has been accomplished under SafeTrack has been significant. Highlights of the work completed to date include:

- Work and productivity rates have met or exceeded what was originally planned.
- 12 of the 16 SafeTrack surges have been completed.
- Over 28,000 ties have been replaced, more than done in the past 2 years combined.
- Over 25,000 fasteners have been replaced.
- Over 20,000 linear feet of grout pad have been replaced, which would have taken 2.5 years to accomplish under previous maintenance access.
- By the end of SafeTrack, over 50,000 ties will have been replaced, reducing the number of defective ties to under 5,000.

In addition to the track work that is the primary focus of SafeTrack, we are taking advantage of the Surges to advance a number of other projects. We have made significant advancements on inspecting ETS boxes (286 to date), replacing high voltage cables (1010 to date), refurbishing signals (76 to date), repairing tunnel lights (1368 to date), and inspecting Intrusion Detection Warning (IDW) boxes (2631 boxes to date). All of this work has been done by capitalizing on the outages to deliver other work that would have required a separate event to access the roadway.

The other component of SafeTrack, outside of the Surges, has been focused on the Red Line to address the water incursion conditions which have required single tracking in the evenings and at times speed restrictions. A crew that has been dedicated to this area since July of 2016 has made significant progress improving this section by cleaning drains and removing debris, as water and mud are leading causes of deterioration of the track and underlying structure. The expanded work window created by the early closures and late night single tracking scheduled as part of SafeTrack is being leveraged to complete the added work.

We are making progress. In 2016, we reduced track-related delays by seven percent, including delays caused by smoke, fire or arcing insulators (compared to previous year). In addition, by the end of calendar year 2017, nearly 20 percent of all track in the Metrorail system will be refurbished under the SafeTrack program.

As we work to improve Metro, I have sought to make it clear to our customers, employees, and the entire region that “Safety Trumps Service”. This message has been communicated across the Authority and we are seeing results. While speed restrictions and other safety actions may be inconvenient, these actions are evidence that safety is now our number one priority.

## **Preventive Maintenance Program**

We have achieved significant progress with the SafeTrack program; however, it is not a cure-all on its own. To sustain progress, we must provide adequate track time to address the FTA recommendations, which include maintaining the rehabilitated tracks and signals; mitigating water intrusion; maintaining lighting, fans, and other life-safety systems; testing and inspecting equipment; and conducting training in emergency preparedness. During a November 3<sup>rd</sup> WMATA Board committee meeting, a preventive maintenance program (PM) was presented to explain exactly how we will use the night-time hours and why the work is needed to operate a safe system. In December, the Board approved the change in service hours necessary to implement an industry-standard preventive maintenance program.

This program will reduce service disruptions due to track failures such as insulator fires, cable fires, broken joint bars, and broken fasteners. Further, this program will create opportunities to identify and repair track problems before they disrupt daytime rail service.

The additional time will allow for new preventive maintenance programs, including quality control and quality assurance, basic maintenance tasks prescribed by our standards and industry best practices, as well as benefiting capital programs. At the conclusion of SafeTrack, Metro will commence industry standard PM programs. Prior to SafeTrack, these critical programs had either been inadequately implemented or not carried out to a degree sufficient to deliver meaningful results. The five PM programs that Metro will initiate after SafeTrack are:

- Systemwide Tamping and Surfacing (T&S)
- Interlocking Component Maintenance
- Mechanical Joint Maintenance
- Traction Power Cable Meggering
- Earth to Ground Stray Current Testing

We also recognize that having adequate internal controls in place to ensure these programs are effective in meeting stated quality objectives is key to achieving the intended state of good repair. To this end, in October 2016, we established an independent internal compliance department that reports directly to me, providing quality assurance and oversight of maintenance programs such as these. This internal compliance function, overall, is intended to promote compliance with internal policies and procedures, external laws, regulations and directives while adding greater accountability and transparency to Metro’s compliance and internal control activities.

## **Budget**

On March 23<sup>rd</sup>, the Metro Board of Directors approved the FY2018 operating and capital budgets and the FY2018-2023 Capital Improvement Program (CIP). Our three priorities of safety, service reliability, and fiscal management guided the development of the FY2018 budget and informed every key decision. The approved budgets and CIP are the product of significant public input and Board deliberation following the presentation of initial operating and capital budgets in November and December of 2016.

Though we have just completed the FY18 budget process, we must turn our attention to an even greater financial challenge expected in FY19 and beyond. Metro will commit to using our resources to efficiently rebuild the system and get back to good. At the same time, as we look to FY19, the region will have to consider what type of Metro system it wants and how the region would like to provide the resources necessary to operate and maintain the system.

As I mentioned at the beginning of my testimony, but I want to reiterate, in the coming weeks I will release an analysis of Metro's operational and funding needs, including a year-by-year breakdown of how much money Metro will need for both operating and capital. We will seek to work cooperatively with regional leaders to solve the long-term funding problems facing Metro.

### *FY2018 Operating Budget*

The FY2018 budget funds key safety improvements, improves train and track reliability, and enhances the customer experience. The budget closes a \$290 million gap through a significant reduction in Metro employee headcount and other management actions; right-sizing of bus and rail service to current ridership levels; a fare increase; and an increase in funding from the jurisdictions.

Daily ridership on bus and rail declined significantly in FY2016 in response to poor service quality and reliability as well as external factors. The impacts of SafeTrack are likely to keep ridership at this lower level throughout FY2017 and into FY2018.

Further compounding the situation, labor costs have continued to rise for many years due to contractually-required wage increases and growing headcount to support service expansion as well as maintenance on the aging system. As ridership has stagnated or declined, fare increases and jurisdictional subsidy growth have made up the gap between expenses and revenues.

On the management side, the budget reduces WMATA's headcount to the level of service it provides. The ridership levels and constrained jurisdictional funding cannot support our current headcount. Beginning in FY2017, 500 positions were eliminated and the fiscal impact of this reduction will be fully realized in FY2018. The FY2018 budget includes a reduction of an additional 300 positions – 200 primarily in various management, administrative, and back-office operations throughout the Authority, and 100 in operations personnel as a result of right-sizing bus and rail services. These 800 positions represent a six percent reduction in total Metro headcount.

Given current ridership levels, Metro can reduce its rail service and remain within Board-approved standards for crowding. Therefore, the FY2018 Operating Budget increases scheduled peak period headways on the Orange, Silver, Green, Yellow, and Red Lines from six to eight minutes, with trains operating every two to four minutes at stations in the system's core. Scheduled headways on the Blue Line will be improved from 12 to eight minutes, and the Rush Plus Yellow Line service will be eliminated.

The FY2018 operating budget also includes fare adjustments that will balance the need to generate adequate revenue against the ridership impact. The fare increase is expected to generate approximately \$20 million in net additional revenue, after accounting for a loss of approximately 10 million total trips as a result of the increase. While the Board chose to postpone fare increases for one year in FY2017, this proposal is consistent with the overall Board policy regarding fare increases, which recommends biennial fare increases linked to inflation. Metro's last broad-based fare increase occurred in July 2014 as part of the FY2015 budget.

Between the bus and rail service reductions, ridership is projected to decline by an estimated three to four million trips annually. Combined with the impacts of the proposed fare increases, Metro annual ridership is expected to decline by 13 to 14 million trips.

Of particular importance to this Committee, Metro will decrease reliance on federal funds for preventive maintenance. As you know, in the FY17 budget, Metro utilized an FTA-approved, and common industry practice, of utilizing federal grant funds for certain eligible "preventive maintenance" expenses that would otherwise be funded through the operating budget. WMATA Board practice had generally limited FTA grants for PM to approximately \$31 million annually prior to FY2017. For FY2017, the Board increased the amount of eligible PM expenses that could be funded with FTA grants from \$31 million to \$95 million. For FY2018, the budget reduces the use of these funds to \$60 million. I intend for FY18 to be the last year that the use of FTA grant funds for preventive maintenance would exceed historical practice and, by FY2019, only the traditional \$31 million of grant funding would be used for this purpose.

The Board made some important revisions to the FY2018 operating budget compared to what was originally proposed in November. These revisions include the restoration of proposed cuts in off-peak Metrorail service and on many Metrobus routes. Specifically, the budget:

- Restores off-peak rail: The proposed Metrorail service reductions in the off-peak, including a headway increase from 12 to 15 minutes and the reduction in Red Line service beyond Grosvenor, have been removed from the budget.
- Restores selected bus service: Service on some key bus routes that had been targeted for reduction or elimination has been restored in the FY18 budget, primarily in Virginia and Maryland. Fewer routes will be completely eliminated – instead, service frequency is reduced and some routes now terminate at Metrorail stations rather than continuing into downtown. These changes also ensure that the service area for MetroAccess remains unchanged, so that no current paratransit user is left without service.
- Keeps 7-day bus pass price unchanged: The 7-day unlimited bus pass is Metro's most popular pass product. The pass is convenient, easy to purchase, and

important for many low-income riders across the region. By keeping the price of this pass the same, the impact of the base bus fare increase is mitigated for many of Metro's most frequent bus customers.

These changes reflect Metro's response to the feedback received from riders during the public hearing and outreach process.

The budget also incorporates recently announced initiatives to control absenteeism, workers' compensation costs, and overtime. Additionally, the budget advances a plan to begin to address Metro's unfunded liabilities for other post-employment benefits (OPEB), including retiree healthcare. Metro's current unfunded OPEB liability is approximately \$1.8 billion, and Metro has no funds set aside for these future expenses – all benefits are funded on a pay-as-you-go basis. The revised FY2018 budget authorizes the creation of an OPEB Trust for the pre-funding of benefits, to be funded in FY2018 by anticipated expense savings (up to \$3 million in FY2018) resulting from the initiatives to control absenteeism, workers' compensation, and overtime. The OPEB Trust will be established by the fourth quarter of FY2018 if sufficient savings are achieved.

The FY2018 operating budget totals \$1.825 billion and is funded with \$845 million of projected operating revenues, primarily from passenger fares, parking fees, and advertising revenues, and with \$980 million of jurisdictional subsidy.

#### *FY2018 Capital Budget and FY2018-2023 six-year CIP*

I am pleased that Metro's rate of capital program investment continues to improve. Over \$1 billion was invested through the FY2016 CIP, and we forecast that between \$1.1 and \$1.2 billion will be invested in FY2017. The FY2018 capital budget will build on this success and invest \$1.25 billion in critical safety and reliability work. The six-year CIP invests \$7.2 billion in rebuilding our infrastructure to a state of good repair. Planned investment under the FY2018 capital budget includes \$528 million for railcars, \$127 million for rail systems including state of good repair rehabilitation and a new radio and wireless communication infrastructure, \$113 million for track and structure state of good repair, \$191 million for station and passenger facility improvements, and \$211 million for bus and paratransit. These capital investments will ensure WMATA can continue to improve safety and reliability. The PRIIA commitment of \$150 million from the federal government, matched by \$50 million each from the State of Maryland, Commonwealth of Virginia, and the District of Columbia, represents approximately 25% of Metro's capital budget.

The capital budget also includes the establishment of a structured Development and Evaluation (D&E) program for major capital projects, including Red Line Water Remediation; 2000/3000 Series Railcar Replacement; Red Line Core Capacity; Tunnel Ventilation; Bladensburg/Northern Bus Garage Rebuild or Replacement; and Metro Office Facilities. Before major capital projects move to the construction or acquisition phase, the D&E program will ensure that projects have clearly defined scopes, schedules, and cost estimates are completed, and that appropriate consideration has been given to risks and alternative solutions.

The FY2018 capital budget is funded by approximately \$461 million in expected federal grant funds, including \$313 million from federal formula grants and other smaller discretionary grant programs, as well as \$148.5 million from PRIIA. The formula and discretionary grants generally require a 20 percent local match, while the PRIIA funds require a 50 percent match, so the total required match to federal grants in FY2018 will total approximately \$226 million. In addition to providing the required match to federal grants, Metro's funding jurisdictions also contribute additional capital funds and participate in Metro's long-term debt issuances.

The FY2018-2023 CIP Financial Plan assumes continued federal grant funding at current levels (\$2.8 billion over the six-year period) and \$4.1 billion of jurisdictional investment and long-term financing.

## **Back To Good**

In December, I announced my plan for getting Metro Back 2 Good. My goals, which I will hold all Metro employees accountable for achieving, are to continue to improve safety, reduce delays and offloads from track defects and rail car failures, and balance the budget.

On service, customers will be pleased when we cross the SafeTrack finish line and move to preventive maintenance, as I mentioned earlier. Preventive maintenance is the "anti-SafeTrack" that prevents emergency conditions and will begin to cut in half infrastructure related delays.

Next, we will accelerate the retirement of the oldest and most unreliable cars, commission a total of 50 new trains, implement targeted repair campaigns of defective components on the legacy fleet, and rebalance the rail yards to minimize missed terminal dispatches. By the end of 2017, all 8-car trains will be 7000 series consists and all 1000 series cars will be retired. Metro will also complete component fixes on legacy fleet – 2000, 3000, 5000 and 6000 series cars, including HVAC, propulsion systems, and pneumatic brakes to reduce train offloads during the customers' journey.

Due to the generous support of Congress, new safer, more reliable trains are serving more customers. Over the past year, delivery of new 7000 series rail cars from Kawasaki's Nebraska plant was accelerated from eight to 20 cars per month. The 7000 series cars operate as 8-car train sets and, today 38, 7000 series train sets are in passenger service.

The Railcar Get Well Plan will reduce passenger offloads and delays by at least a quarter by the end of 2017.

Indeed, we are already seeing results. Railcar-related offloads were down 17 percent in 2016 compared to the previous year and railcar-related delays were down 13 percent.

In addition, we will make our stations cleaner and brighter, and improve station management, to better serve customers. For example, instead of every four years, all 91 stations will be power washed, scrubbed, and polished annually – improving the surfaces commuters touch and walk on. Each station has been assigned a "champion" among senior managers to

work with station personnel to ensure internal coordination of timely repairs to equipment and systems. Additional station improvements, along with adoption of peer review recommendations to improve rail operations, will enhance the customer experience.

On safety, Metro will continue our progress to address FTA and NTSB recommendations. We will also adopt new software onboard trains to prevent an inattentive operator from passing a red signal by requiring the operator to perform multiple sequential actions before they can move their train as well as implementing a cap on the maximum speed that trains can attain to prevent over speeding.

In addition, stations that have the highest frequency of red signal overruns are having their signals upgraded to LED bulbs to improve their visibility to operators and prevent overruns. We will begin using enhanced technology for roadway worker protections in hazardous areas. Specifically, we were pleased to receive a grant from the FTA to implement new “wearable” technology that will provide bi-directional communication between employees operating the trains and employees working on the tracks. As I will discuss in more detail in a moment, Metro will complete work on schedule for installing the public radio system and activating cellular service in the tunnels as work is completed, with certain Blue/Orange and Red line segments coming online in 2017.

And on financial management, as I discussed, my budget proposes numerous steps to reduce expenses. These include eliminating positions and outsourcing functions. We will institute the Abilities-Ride pilot program for Maryland paratransit customers to demonstrate whether utilization of transportation service companies could provide cost savings as well as greater flexibility to the customer.

## **Safety and Financial Update**

I would like to take this opportunity to address some other safety and financial items that may be of interest to this Committee.

### *Federal Transit Administration (FTA) Financial Audit and Safety Recommendations*

Since FTA issued its Financial Management Oversight (FMO) report findings on June 10, 2014, WMATA has complied with all 45 recommendations and provided timely submittal of the required 65 Corrective Action Plans (CAPs) to address the findings. However, the FTA has explicitly stated that FMO recommendations will remain open until FTA performs follow-up reviews to formally close the items.

As of December 2016, FTA has closed 15 of the 20 Testing and Validation action items and is currently reviewing five action items submitted by WMATA. WMATA has also implemented numerous process improvements to address many of the system deficiencies identified in the FMO audit. To ensure ongoing compliance with those findings, WMATA's Office of Management Audits, Risk and Compliance (MARC), conducts independent, objective reviews and assessments of the system of internal control and underlying business processes. Reviews

include the evaluation of financial management controls and compliance with federal grant regulations.

In December 2016, FTA restored WMATA's Electronic Clearing House Operation (ECHO) reimbursement rights for grants awarded after July 1, 2015, following FTA's determination that WMATA has made substantial progress in addressing the financial and procurement weakness identified in the FMO review. Metro has drawn \$1.3 billion of FTA grant reimbursements since the ECHO restriction was imposed in March 2014.

In 2015, FTA WMATA Safety Oversight (FWSO) assumed direct oversight of WMATA, exercising its new authority under the Moving Ahead for Progress in the 21st Century Act (MAP-21). The same act (and subsequent rulemakings) also codifies a Safety Management System (SMS) framework for safety oversight of all public transit properties to be managed by each transit property's State Safety Oversight Agency. While awaiting establishment of a new State Safety Oversight Agency to replace the prior Tristate Oversight Committee (TOC), FWSO has acted as the regulatory authority over WMATA, and has issued a series of Safety and Special Directives requiring WMATA to develop CAPs in response.

WMATA uses the CAP process to drive the development of internal controls that promote compliance with regulatory requirements. These structured plans involve the completion of distinct actionable items according to an established schedule, approved by the regulating authority, and are focused on improving the safety and reliability of our operations, engineering and maintenance functions. WMATA provides internal review and verification of CAPs and actionable items in support of CAP closure. The following outlines FTA directives and required actions issued to WMATA and the response, including number of CAPs and actionable items (where approved).

To date, out of a total of 282 Corrective Action Plans, 50 CAPs have been closed (49 issued by FTA and one (1) by the NTSB), with 75 under review (70 issued by the FTA and 5 from the NTSB). Since January this year, an additional 20 FTA CAPs under the Safety Management Inspection (Safety Directive 15-1) and TOC Report (Safety Directive 16-2) have been closed. WMATA has closed, or submitted for review, nearly half of the required actions.

#### *National Transportation Safety Board (NTSB) Recommendations*

The NTSB has concluded its investigation following the January 2015, L'Enfant Plaza smoke and arcing incident. The NTSB official accident report contains 43 findings and 31 total recommendations; 24 to WMATA and the remainder to external agencies. To better manage the implementation of response to the 24 new recommendations, WMATA developed 24 CAPs for each recommendation. Of the current NTSB recommendations there are six (three prior to the L'Enfant incident and three early recommendations immediately after) remaining to be closed, making a total of 30 open NTSB recommendations.

WMATA has submitted five CAPs resulting from the L'Enfant Plaza incident to the NTSB for closure consideration.

To provide a transparent accounting of our progress towards completion and closeout of actions taken in response to regulatory requirements and recommendations from the FTA and NTSB, WMATA maintains a public website where an overview of regulatory compliance actions and detailed trackers for each directive can be accessed. The following website contains links to each of the tracking mechanisms for these regulatory actions:

<https://www.wmata.com/about/leadership/general-manager/upload/Overview-of-Regulatory-Compliance-Actions.pdf>

## **Cellular and Radio Service**

As you know, PRIIA requires WMATA to ensure cellular phone service throughout the system, including the underground tunnels. WMATA and the wireless carriers worked together on the first phase of the project and currently all 91 Metrorail stations (including 47 underground stations) provide customers with access to cell phone service.

Under the agreement between WMATA and the wireless carriers, the project is being advanced using Metro-managed workers thereby yielding cost and efficiency benefits. Metro is installing the necessary cable for the cellular and radio systems at the same time, while prioritizing other safety-critical maintenance work for tracks, switches, signals and structures.

Following extensive engineering and project tests in the Glenmont tunnel section of the Red Line, WMATA rolled out a complete project schedule. However, at my direction, a third party review was conducted to validate the schedule before it was announced.

Recognizing that the carriers have ownership and installation responsibilities to initiate cell phone service, service is being activated by the wireless carriers as each tunnel segment is completed, meaning that riders will notice incremental improvements in coverage as the project moves forward.

I am pleased to inform you that WMATA met its first deadline to complete infrastructure installation in the tunnels between Potomac Avenue and Stadium Armory. The full installation schedule is provided below:

Activity	Line	Start Infrastructure Installation	Infrastructure Installation Complete	Cell Phone Availability	Radio Availability
Glenmont to Silver Spring	RD	1/2/16	3/31/17	4/28/17	8/21/18
Potomac Ave to Stadium Armory	BL/OR/SV	7/15/16	10/31/16	11/30/16	10/30/18
Metro Center to Potomac Ave	BL/OR/SV	4/1/17	8/8/17	9/8/17	10/30/18
Benning Rd to Largo Town Center	BL/SV	8/9/17	9/18/17	10/20/17	10/31/18
College Park to Gallery PI	GN/YL	9/19/17	4/17/18	5/31/18	12/31/18
Union Station to DuPont Circle	RD	4/18/18	7/2/18	8/31/18	4/8/19
Metro Center to Rosslyn	BL/OR/SV	7/3/18	8/16/18	9/30/18	5/2/19
Rosslyn to Ballston	OR/SV	8/17/18	11/11/18	12/30/18	7/26/19
Pentagon to King St	BL/YL	11/12/18	2/28/19	4/30/19	9/8/19
Gallery PI to Southern Ave & Suitland to Branch Ave	GL/YL	3/1/19	9/8/19	11/15/19	1/22/20
DuPont Circle to Medical Center & Grosvenor to White Flint	RD	9/9/19	5/4/20	6/30/20	10/30/20

## **Security**

Finally, security is a high priority. We have been working very closely with the FBI's Joint Terrorism Task Force and the Transportation Security Administration to share intelligence. The Metro Transit Police Department has increased police presence throughout the system with plain clothes and uniformed officers, and our 27 K-9 units have been deployed throughout the system. I would like to thank the police departments of our local jurisdictions that have stepped up their patrols in stations located in their jurisdictions.

Like the majority of mass transit systems in the United States, Metrorail is an "open" system, which creates unique challenges and requires security strategies that are complex and multi-layered. The federal government provides significant funding for these efforts – Metro has invested nearly \$172 million of federal Homeland Security funding into the system since September 11, 2001. These resources have helped us install thousands of new cameras, and supported our anti-terrorism team, bomb squad and K-9 units.

I will close by thanking Congress for providing PRIIA and federal formula funding, which WMATA has invested in a multi-year capital program that is making long-deferred improvements to the system. These safety and infrastructure improvements range from upgrades to our tracks, structures and signal systems, to the design of state-of-the-art railcars that exceed the latest safety standards. Already, these cars are providing improved safety and comfort to commuters and visitors to the National Capital Region.

Thank you and I look forward to answering your questions.



Testimony

Before the Subcommittee on  
Government Operations, Committee on  
Oversight and Government Reform,  
House of Representatives

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For Release on Delivery  
Expected at 2:00 p.m. ET  
Wednesday, March 29, 2017

**WASHINGTON  
METROPOLITAN AREA  
TRANSIT AUTHORITY**

**Improved Planning of  
Future Rehabilitation  
Projects Could Prevent  
Limitations Identified with  
SafeTrack**

Statement of Mark Goldstein, Director, Physical  
Infrastructure

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Mr. Chairman, Ranking Member, and Members of the Subcommittee:

Thank you for the opportunity to discuss our March 2017 report on the Washington Metropolitan Area Transit Authority's (WMATA) SafeTrack project.<sup>1</sup> Recent inquiries into WMATA's Metrorail system—the nation's second-busiest—have revealed a range of serious safety issues.<sup>2</sup> In response to some of these issues, as well as its backlog of track work, WMATA began SafeTrack in May 2016. According to WMATA, SafeTrack is a unique effort, designed to address urgent safety issues with railroad track infrastructure.

WMATA's Metrorail system has experienced a variety of serious safety incidents in recent years. On June 22, 2009, one Metrorail train struck the rear of a second train stopped near the Fort Totten station on the Red Line, resulting in nine deaths and over 50 injuries. The National Transportation Safety Board (NTSB) report on the incident found, among other things, evidence of an ineffective safety culture within WMATA.<sup>3</sup> More recently, WMATA has experienced smoke and fire incidents involving the electrical cables and other components supporting its third-rail system.<sup>4</sup> For example, on January 12, 2015, a Metrorail train stopped after encountering heavy smoke in the tunnel between the L'Enfant Plaza station and the Potomac River Bridge on the Yellow Line caused by an electrical issue, resulting in one passenger's death and numerous injuries. In a report on this incident, the NTSB again found a lack of a safety culture within WMATA.<sup>5</sup> In November 2015, WMATA's current

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<sup>1</sup> GAO, *Washington Metropolitan Area Transit Authority: Improved Planning of Future Rehabilitation Projects Could Prevent Limitations Identified with SafeTrack*, [GAO-17-348](#) (Washington, D.C.: March 14, 2017).

<sup>2</sup> According to the American Public Transportation Association, WMATA's Metrorail system had the second-highest average daily ridership in 2016.

<sup>3</sup> NTSB, *Collision of Two Washington Metropolitan Area Transit Authority Metrorail Trains Near Fort Totten Station*, NTSB/RAR-10/02. According to NTSB, organizations with effective safety cultures are generally described as having a commitment to safety that permeates the entire organization; that is, senior management demonstrates a commitment to safety and a concern for hazards that are shared by employees at all levels within the organization.

<sup>4</sup> The third rail is a high voltage rail bar along the track that carries electrical energy to run the trains on that track.

<sup>5</sup> NTSB, *Washington Metropolitan Area Transit Authority L'Enfant Plaza Station Electrical Arcing and Smoke Accident*, NTSB/RAR-16/01.

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General Manager began his tenure and initiated a variety of efforts to address WMATA's Metrorail safety issues.

On May 19, 2016, WMATA announced SafeTrack, a large-scale rehabilitation project to address safety issues and rehabilitate the Metrorail system on an accelerated basis by expanding all available maintenance windows.<sup>6</sup> The primary focus of SafeTrack is rehabilitating Metrorail's track infrastructure by replacing over 45,000 crossties, which are the wooden beams that lay across the railroad bed on above ground sections of the track, and 35,000 fasteners, which secure rails directly to concrete on underground or aerial sections of the track where wooden crossties are not used. SafeTrack is being carried out through a series of "surges" that involve intensive work on specific areas of track that are either shut down to normal traffic or have only one of the two tracks open, a type of operation known as "single tracking." According to WMATA's initial announcement, the project was designed to bring Metrorail's track infrastructure to a "state of good repair," which WMATA defines as the condition at which individual railroad assets can be sustained at ongoing, annual replacement rates under normal maintenance cycles. According a March 2017 report from the Federal Transit Administration (FTA), the total cost of SafeTrack is estimated to be over \$133 million.

My testimony today summarizes findings from our report that examined the planning and implementation of SafeTrack.<sup>7</sup> Accordingly, this testimony addresses the extent to which:

1. WMATA's planning of the SafeTrack project was consistent with leading project management practices, and
2. WMATA's implementation of SafeTrack was consistent with these practices.

In our report, we recommended that WMATA develop a policy that requires and includes relevant procedures specifying that certain actions be taken prior to starting future large-scale rehabilitation projects.

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<sup>6</sup> Throughout this statement, we refer to "large-scale rehabilitation projects" as projects that involve extended disruption to normal operating service for the maintenance or replacement of transit infrastructure.

<sup>7</sup> Our full report also discusses the steps taken by FTA to oversee SafeTrack, and we have work planned to examine FTA and Federal Railroad Administration safety oversight programs.

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To conduct this work, we examined documentation and interviewed WMATA officials on how WMATA planned SafeTrack, including the alternative plans it developed, as well as how it carried out work for SafeTrack. We also examined WMATA documentation on the quality control and quality assurance frameworks in place for SafeTrack as well as the results of WMATA's own SafeTrack quality reviews. We also reviewed recent investigations and studies regarding WMATA, including those from the Department of Transportation's (DOT) Office of Inspector General (OIG), NTSB, and WMATA's OIG. We also interviewed officials from the DOT's OIG, FTA, NTSB, and WMATA's OIG about their work with WMATA and perspectives on SafeTrack. Additionally, we interviewed officials from local jurisdictions (the District of Columbia; Montgomery County, Maryland; and Fairfax County, Virginia) about the coordination and communication between them and WMATA officials concerning SafeTrack. We also compared WMATA's planning and implementation of SafeTrack to leading project management practices identified by the Project Management Institute (PMI) in its *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*,<sup>8</sup> and by the Transit Cooperative Research Program (TCRP) in its *Report 157*, which focuses on rehabilitation of transit assets.<sup>9</sup> Further details on our scope and methodology are included in our report. The work on which this statement is based was performed in accordance with generally accepted government auditing standards.

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<sup>8</sup> Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Fifth Edition, 2013. *PMBOK* is a trademark of Project Management Institute, Inc. PMI is a not-for-profit association that provides global standards for, among other things, project and program management. These standards are utilized worldwide and provide guidance on how to manage various aspects of projects, programs, and portfolios.

<sup>9</sup> TCRP, *State of Good Repair: Prioritizing the Rehabilitation and Replacement of Existing Capital Assets and Evaluating the Implications for Transit, Report 157* (Washington, D.C.: 2012). The FTA sponsored this report.

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## WMATA Did Not Fully Follow Leading Practices When Planning SafeTrack

In our March 2017 report, we found that WMATA's planning of SafeTrack did not fully align with leading project management practices.<sup>10</sup> While WMATA generally followed leading practices to coordinate with stakeholders, it did not comprehensively collect and use data on the condition of its assets, analyze project alternatives, and develop a project management plan before starting work. WMATA did not follow these practices because it believed it needed to start work immediately to address critical safety issues. Further, WMATA does not have a policy that requires, and includes relevant procedures for how to carry out, these planning activities for large-scale rehabilitation projects. More specifically:

- *WMATA's Collection and Use of Data in Planning SafeTrack Did Not Align with Leading Practices.* Leading management practices for transit rehabilitation projects state that transit agencies should collect and use data on assets when planning projects.<sup>11</sup> Although WMATA inspected its track assets when planning SafeTrack, those inspections were not comprehensive and did not collect detailed data on the condition of all track infrastructure, such as all interlockings, where trains cross from one track to another, or of all track power systems, including the electrical cables that power the third rail system. According to WMATA officials we spoke with, electrical cables were not included in the inspections leading up to SafeTrack because the Track and Structures department that lead the inspections is not responsible for the maintenance of the third rail system. In addition, serious safety incidents continued to occur on the Metrorail system during SafeTrack on assets that were not being addressed in the project. For example, on July 29, 2016, a train derailed near the East Falls Church station. This derailment occurred on an interlocking, which while part of the Track and Structures department's responsibilities, was not scheduled at that time for rehabilitation under SafeTrack. As a result of this incident, WMATA's decision makers may not have used sufficient information to develop project objectives and to properly prioritize SafeTrack work.
- *WMATA's Analysis of Alternatives for Improving the State of Repair of the Track Did Not Align with Leading Practices.* Leading management practices for transit rehabilitation projects state that transit agencies should have a policy in place for evaluating project alternatives.<sup>12</sup>

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<sup>10</sup> See [GAO-17-348](#) for a full discussion of the leading project management practices.

<sup>11</sup> TCRP, 2012.

<sup>12</sup> TCRP, 2012.

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Though WMATA developed three alternatives for SafeTrack—including options for 8, 10, and 22-month work schedules—it did not determine the costs and impacts of each alternative, or assess them to determine which approach may have resulted in greater efficiencies, lower costs, or less disruption for riders and local jurisdictions. Moving forward, WMATA plans to spend over \$56 million a year on track rehabilitation projects alone starting in fiscal year 2018. By not having a policy and procedures in place requiring analysis of alternatives prior to starting future large-scale rehabilitation projects, WMATA lacks a framework to comprehensively plan such projects to meet their objectives.

- *SafeTrack Work Began Before Key Elements of a Project Management Plan Were in Place.* Leading project management practices emphasize the importance of developing project management plans.<sup>13</sup> Federal law requires that recipients of federal financial assistance for a major capital project related to public transportation prepare a project management plan approved by the Secretary of Transportation, and carry out the project in accordance with the project management plan.<sup>14</sup> Before WMATA began SafeTrack, it lacked a comprehensive project management plan, which is a key tool to ensure a project is completed on-time, within-budget, and according to quality standards.<sup>15</sup> WMATA officials told us that they implemented SafeTrack to respond to a critical safety situation and that they could not postpone this track work to develop a project management plan. SafeTrack, though, involves an unprecedented amount of track work performed over an extended period, significantly disrupts ridership, and is estimated to cost well over \$100 million. WMATA currently lacks a policy and procedures

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<sup>13</sup> PMI, 2013. The PMI PMBOK® Guide notes that the content of such plans can vary depending upon the application area and complexity of the project.

<sup>14</sup> 49 U.S.C. § 5327(a). However, FTA officials told us that, based on discretion provided in agency regulations, a project management plan is not necessarily required prior to the start of a major capital project. 49 C.F.R. § 633.21. Major capital projects include, among other things, projects that involve the rehabilitation or modernization of an existing fixed guideway with a total project cost in excess of \$100 million. 49 C.F.R. § 633.5.

<sup>15</sup> FTA found that SafeTrack met the \$100-million criteria for a major capital project when it approved an additional \$20 million in safety-related federal funding for the project in mid-June 2016, during the first surge. WMATA submitted a project management plan to FTA in September 2016. FTA initially found the plan lacked sufficient detail, but after WMATA made subsequent revisions, according to FTA, it conditionally approved the plan in March 2017. FTA also requested additional changes to the plan, such as further explanation of risk management.

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requiring the development of a project management plan prior to starting large-scale rehabilitation projects like SafeTrack, according to WMATA officials, regardless of whether the work is to be completed in response to an emergency situation or within WMATA's normal state of good repair efforts.

We concluded in our report that, without a policy requiring planning processes that are more consistent with leading project management practices, WMATA's ability to effectively address future infrastructure challenges may be limited. This situation is particularly true for future large-scale rehabilitation projects that may not be subject to FTA's project management oversight authority, but which could still benefit from having a project management plan in place before beginning the project, consistent with leading practices.<sup>16</sup> To ensure future large-scale rehabilitation projects are in line with leading project management practices, we recommended that WMATA develop a policy that requires, and includes relevant procedures specifying, that it, prior to starting large-scale projects, (1) use detailed asset data to develop project objectives; (2) analyze alternatives; and (3) develop a project management plan for those projects that may not be designated as major capital projects. WMATA agreed with our findings and conclusions, and said that it is working to address the recommendations.

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## WMATA Is Using Several Leading Practices to Implement SafeTrack and Improve the Quality of Completed Work

In our March 2017 report, we found that WMATA's implementation of SafeTrack generally aligned with leading project management practices.<sup>17</sup> Specifically, WMATA officials collected information on the work performed and the condition of assets repaired during SafeTrack. WMATA officials also collect lessons learned during and after each surge, and use those lessons during subsequent maintenance and planning efforts. Additionally, WMATA developed a new organization-wide quality control and assurance framework and is implementing it for the first time through SafeTrack.

We concluded in our report that, through SafeTrack, WMATA has accomplished a substantial amount of repair work to bring its track

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<sup>16</sup> FTA's project management oversight authority includes monitoring a major capital project's progress to determine whether a project is on time, within budget, and in conformance with design criteria, and whether it is constructed to approved plans and specifications, and is efficiently and effectively implemented. 49 C.F.R. § 633.5.

<sup>17</sup> See [GAO-17-348](#).

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infrastructure closer to a state of good repair. WMATA is also learning some important lessons in implementing SafeTrack that could better equip it to identify and address issues in future large-scale rehabilitation projects. Perhaps more importantly, SafeTrack indicates that WMATA is now committed to preventative maintenance, including the repairing of track assets before they break and cause more cost and safety impacts on Metrorail riders.

Mr. Chairman, Ranking Member, and Members of the Subcommittee, this concludes my statement. I would be pleased to respond to any questions you or other Members of the Subcommittee may have.

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## GAO Contact and Staff Acknowledgments

For questions about this statement, please contact Mark Goldstein at (202) 512-2834 or [goldsteinm@gao.gov](mailto:goldsteinm@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals making key contributions to this testimony were Matt Barranca, Jason Blake, Kyle Browning, Lacey Coppage, Hannah Laufe, Sara Ann Moessbauer, and Michelle Weathers.

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