COMMONWEALTH of VIRGINIA

Office of the Governor

Aubrey L. Layne, Jr.
Secretary of Transportation

December 27, 2017

The Honorable S. Chris Jones
Chairman, House Appropriations Committee
Post Office Box 5059
Suffolk, Virginia 23435

The Honorable Ronald A. Villanueva
Chairman, House Transportation Committee
Post Office Box 61005
Virginia Beach, Virginia 23466

The Honorable Thomas K. Norment, Jr.
Co-Chairman, Senate Finance Committee
Post Office Box 6205
Williamsburg, Virginia 23188

The Honorable Emmett W. Hanger, Jr.
Co-Chairman, Senate Finance Committee
Post Office Box 2
Mount Solon, Virginia 22843

The Honorable Charles W. Carrico, Sr.
Chairman, Senate Transportation Committee
Post Office Box 1100
Galax, Virginia 24333

Dear Gentlemen:

Pursuant to Item 436 R of the 2016-2018 Biennial Budget, "the Secretary of Transportation shall initiate an objective review of the operating, governance and financial conditions at the Washington Metro Area Transit Authority (WMATA)." To fulfill this requirement, Governor McAuliffe commissioned former United States Secretary of Transportation Ray LaHood to conduct an independent and objective review of the operating, governance, and financial conditions at Metro. Secretary LaHood released this report earlier this month, and you will find a copy enclosed.

Additionally per Item 436 R, please find enclosed the WMATA accounting of assumed revenues generated and available by source and assumptions used regarding operating expenses to develop the capital improvement program. These items may be found in Chapters 1-3, pages 13-23, of the FY 2018 Approved budget.

Sincerely,

Aubrey L. Layne, Jr.

Enclosures

- Review of Operating, Governance, and Financial Conditions at the Washington Metropolitan Area Transit Authority: http://www.drpt.virginia.gov/media/2320/full-report.pdf

- FY 2018 Approved Budget: Washington Metropolitan Area Transit Authority: https://www.wmata.com/about/records/public_docs/upload/Approved-Budget-Final_v1.pdf

RAY LAHOOD

December 5, 2017

The Honorable Terence R. McAuliffe
Governor, Commonwealth of Virginia
Patrick Henry Building, 3rd Floor
1111 East Broad Street
Richmond VA 23219

Dear Governor McAuliffe:

In March, 2017 you asked me to undertake an independent review of the finances, management and operations of the Washington Metropolitan Area Transit Authority (WMATA). To carry this out, I spent the last eight months reviewing information about WMATA and meeting with regional stakeholders. This letter describes what I found and contains my recommendations.

In performing this review, I worked closely with a team from the global engineering firm WSP. They collected data on WMATA's costs, revenues and other key indicators to compare it to other large U.S. transit agencies. WSP's benchmarking and other analysis is presented in a report being released in conjunction with this letter.

My findings and recommendations are as follows.

- ***Finding #1: WMATA General Manager Paul Wiedefeld is performing well.*** Turning around a major organization of any kind, whether a public agency or a private business, begins with the leadership team. Since coming on board in late 2015, Mr. Wiedefeld has not shied away from taking on the problems that have plagued WMATA for years. When lines needed to be temporarily closed to assure they were safe and reliable, they were closed. When employees failed to perform up to expectations, they were terminated. When service needed to be reduced to manage costs and assure maintenance could be performed, it was reduced. He is the right person for the job at hand.

- ***Finding #2: The WMATA board structure is not what the agency needs.*** The agency's board is too large, too fractious, and too oriented toward interests of the region's individual jurisdictions rather than the needs of the region as a whole. This is not the fault of the people currently holding seats on the board; these issues pre-date them and will persist after they leave unless something is done. Perhaps a poorly-functioning board could be tolerated if everything else was going well, but that is not our situation. For the next several years the board will need to focus on one thing: making the system safe and reliable. This will require

tough decisions, and jockeying for position among the region's jurisdictions will need to take a back seat.

- ***Finding #3: WMATA's costs are mostly average.*** Much attention has been paid to the cost of running WMATA. This is as it should be; the agency provides a public service and it needs to be cost-effective. Our review found that WMATA's cost to deliver a unit of service is average for a large transit agency, and its wages are in line with the region's cost of living. Opportunities for improvement exist, several of which are pointed out in the report accompanying this letter. I hope WMATA's board and management will aggressively pursue them. WMATA has cost issues it can address, but they are similar to those at other agencies of its kind.

- ***Finding #4: Ridership has fallen, and this has financial consequences.*** The years of steady ridership growth came to an end after 2015. Transit ridership is down modestly nationwide, but the decline at WMATA is far greater. Lost ridership means lost revenue, and the decline in patronage has put a major hole in WMATA's operating budget that state and local funders have had to fill. WMATA's biggest funder is its customers, and doing what it takes to bring them back is vital.

- ***Finding #5: WMATA offers more service per rider than other large transit agencies.*** Even as ridership declined, WMATA continued to add service – more and longer trains, more early-morning and late-night hours, and new Silver Line service. This was convenient for riders, but it came with a cost. For both bus and rail, WMATA has offered at least twenty percent more service per rider than the average large transit agency, which leads to higher costs than in other metro areas.

- ***Finding #6. WMATA has no capital funds of its own, and the jurisdictions that fund its capital needs have not provided enough to keep the system in acceptable condition.*** The Metrorail system opened in 1976, and for many years it performed well because the tracks, stations and other key systems were mostly new. But the system is now 40 years old and much of it needs renewal or replacement. Unfortunately, the funders that pay for WMATA's capital program have grown accustomed to contributing at a level adequate for a new system, but far too low for an aging system.

- ***Finding #7: WMATA can be improved without opening the Interstate Compact that governs it.*** WMATA is unusual among transit agencies because it operates in multiple states. For this reason, it is governed by an Interstate Compact between D.C., Maryland and Virginia. Any changes to this agreement require legislative approval in all three jurisdictions and an Act of Congress signed by the President. This process can take years. I do not believe we can wait to reform WMATA, and so the recommendations I am offering can all be carried out without waiting for a change to the Compact.

Based on these findings, I propose the following actions to improve WMATA.

- ***Recommendation #1: Install a temporary Reform Board.*** For WMATA to succeed, its board needs to change. I propose the current 16-member board be temporarily replaced by a

five-member Reform Board. One member each would be appointed from D.C., Maryland, Virginia and the federal government, and the four appointing authorities would jointly agree on a fifth person to serve as Chair. These new appointees would be given a very clear mandate: bring WMATA back to what it once was, the best transit system in America. The findings in this letter and the accompanying report provide a roadmap to follow. I estimate it will take three years of sustained effort to assure WMATA is on the right path, and during this time the Reform Board would develop a recommendation for a transition to a new permanent board.

- ***Recommendation #2: Offer service that matches actual demand.*** For both bus and rail, WMATA has offered more service – more buses and train cars running more hours on more routes – than its peer transit agencies. With Metrorail, this mostly emerged over the last decade as ridership fell and service kept expanding. Mr. Wiedefeld has trimmed rail service for FY2018, and if rail ridership begins to grow again, a major re-think of rail service levels may not be needed. If rail ridership does not grow, more painful choices will need to be considered. The situation with Metrobus is different. Service levels have been high going back at least 15 years, and there is no indication bus ridership will grow to match the current level and pattern of service. For these and other reasons a major reset of the WMATA bus system is needed. This is discussed in further detail in the accompanying report. The idea is not simply to curtail low performing bus routes. Something much more comprehensive is needed. By re-examining the entire system of bus routes, schedules and operating practices, we can find opportunities for things like more efficient routing that save money and improve service. Other cities have reset their bus systems in this way in recent years, most notably Houston.

- ***Recommendation #3: Manage costs and increase productivity in the next labor contract.*** Although WMATA's pay, benefits and employment policies are similar to those at other large transit agencies, improvement is still possible. On average, WMATA's unionized workers contribute about three percent of pay toward pension, well below the national average for workers with similar pensions. WMATA workers count overtime earnings toward retirement pay with no cap; many other agencies either cap or prohibit this. The freedom for WMATA workers to pick their shifts should not extend to working excessive hours consecutively beyond what is safe. The next labor contract is an opportunity for reform in these and other areas.

- ***Recommendation #4: Reliably deliver a large capital program.*** WMATA needs to increase the pace of repairing aging infrastructure. This is beyond question. But those who are asked to fund this will hesitate if they doubt WMATA is capable of actually spending new money. Unfortunately, this has been a major shortfall in the past. For much of the last decade, WMATA was rarely able to spend more than 80 percent of the capital funds it budgeted for a given year. Performance has improved markedly under Mr. Wiedefeld; in FY2017 WMATA carried out more capital work than it had budgeted – a first – and invested significantly more than in any previous year. This is welcome news, but annual investment levels will need to continue rising for WMATA to have any hope of tackling its backlog of deteriorated assets.

- ***Recommendation #5: Give WMATA new, dedicated capital funding.*** WMATA's infrastructure is aging and needs renewal, and the funding it receives today is not enough to get this done. Not even close. Mr. Wiedefeld has estimated a need for $500 million per year in new capital funding; WSP's analysis produced a slightly higher estimate, $540 million per year, although it also identified areas for operating cost savings that could make up the difference. I think $500 million per year should be our target. WMATA's problems will never be solved without this new money.

  That said, the amount is not the only thing that matters. The major surge in capital spending that is needed will not be possible without WMATA taking on new debt, and this will be possible only if new funding is dedicated in a way that is accepted by the capital markets.

  The final question is how to raise these funds. I am not proposing a specific method because many different arrangements would work. A single uniform source across the region, such as a sales tax, has been used with success in other places. However, the complex jurisdictional structure in our region makes this very challenging. Each of WMATA's funding partners will need to play a role, and each can generate its share in a way that makes sense for them. The methods can be different so long as the key criteria are met: the total is sufficient, the funds are dedicated, and they arrive soon.

- ***Recommendation #6: Create a new dedicated source of capital funding for WMATA at the federal level.*** WMATA is unique among U.S. transit systems because of its relationship with the federal government. Nearly 40 percent of rush hour Metrorail riders are federal employees, and this gives the federal government a special responsibility to help WMATA succeed. In 2008, Congress authorized $1.5 billion in special WMATA funding over 10 years as part of the PRIIA legislation, to be matched by an equal amount of state and local funding. This raised the level of capital commitments to WMATA from all sources from roughly $500 million per year to around $800 million per year. It was a huge help, but $800 million per year is not nearly enough. More troubling still, PRIIA funding is set to expire and it is not clear if it will be renewed.

  Congress and the administration should create a successor program of dedicated WMATA funding to take over once PRIIA funding expires. If the state and local governments in the region increase their contributions to WMATA, so should the federal government. And just like any new state and local funds, if possible these federal funds should be legally dedicated to WMATA so they can be used to back bonds. In my discussions with members of the region's Congressional delegations I found essentially universal support for WMATA. They know it needs to succeed, and they're willing to help. Achieving an increase in federal funds will be difficult, but I trust that the members of the House and Senate that represent this region will do all they can to make it happen.

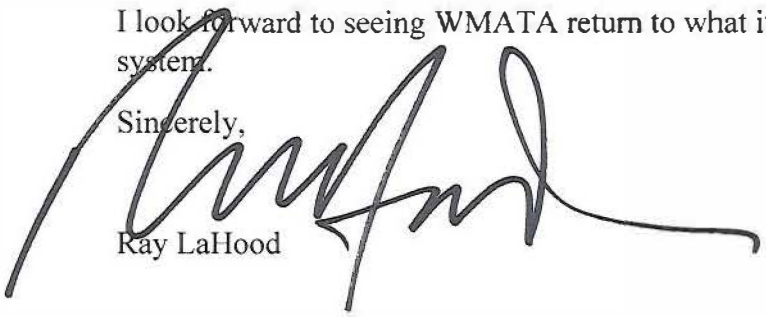
If these recommendations are followed, I am optimistic about WMATA's future. The Washington D.C. region is vibrant and growing, in part because of its transit infrastructure. Riders may not come back immediately, but if we make the system safe, reliable and convenient, they will come back eventually. However, if these recommendations are not followed, I cannot

be optimistic about the future. The last decade has not been a good time for WMATA, and we need to make major changes to its leadership, operations and funding to turn this around.

These changes will happen only if the region's leaders and the federal government take the difficult steps needed to put WMATA back on the right path. On this point, I would like to commend you, Governor McAuliffe, for the leadership you have shown in bringing attention to this issue. I am honored that you asked me to offer my perspective, and I hope you and others in Virginia will find it useful, just as I hope that leaders in Maryland, the District of Columbia and at the federal level will as well.

I look forward to seeing WMATA return to what it once was – America's number one transit system.

Sincerely,



Ray LaHood

Review of Operating, Governance and Financial Conditions

at the

Washington Metropolitan Area Transit Authority

2017

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EXECUTIVE SUMMARY

This report compares the Washington Metropolitan Area Transit Authority (WMATA) against other large transit agencies on a variety of indicators. Data reflects 2015 unless otherwise stated.

Cost Structure. By multiple measures, WMATA's cost structure is generally average for a large transit agency. All-in labor costs per hour, including salaries, wages and fringe benefits, are average. The unit cost to deliver service, as measured by total operating and maintenance (O&M) spending per hour of service delivered, is average for Metrobus and nine percent above average for Metrorail. Higher than average Metrorail O&M costs derive from rail maintenance spending that is 20 percent or more above average. Costs for rail operations are average.

Although WMATA's unit costs to deliver service are mostly average, it has delivered high levels of both bus and rail service considering the level of ridership. In FY2015, bus service hours per 10,000 passenger trips were 25 percent above average, and rail service hours per 10,000 passenger trips were 22 percent above average. Bus service levels per rider have been high going back at least 15 years. For rail, high service levels per rider emerged mostly after 2009, as service kept expanding while ridership fell. In 2017, WMATA reduced train frequencies significantly and this should bring rail service levels closer to average. Corresponding changes to bus service were more limited.

Two labor policies that contribute to cost were found to be outliers. On average, WMATA's hourly employees contribute 3.1 percent of wages to pension, where the national average among all workers in defined benefit plans is 7.1 percent. In addition, WMATA's unionized employees count overtime earnings in determining post-retirement pension payments. Changing these policies would generate savings, although it should be noted that WMATA's all-in labor costs per hour were average even with these policies in place.

Funds Paid by State and Local Governments in the Region. Under the WMATA compact, any costs not covered by federal grants, fares or other internally-generated revenues are paid by the region's jurisdictions. Even though WMATA's O&M costs are average for a large transit agency, these state and local payments have been growing rapidly, at nearly 10 percent per year. This steep increase in payments is caused almost entirely by four factors:

- The cost of buying new railcars;
- Increased spending on rehabilitating the WMATA rail system;
- Growth in WMATA's contributions to pension plans; and
- A large revenue decline due to falling ridership.

After accounting for these factors, all other WMATA costs grew at around three percent per year.

Board Operations. With 16 members, WMATA's board is large. The average transit agency board has nine members. The WMATA board has nine committees or subcommittees, tied for the highest number among large peer transit agencies. Recent efforts to streamline the committee structure have not been successful. The WMATA board also has many meetings – there were 85 board, board committee and board subcommittee meetings between June 1, 2016 and May 30, 2017.

WMATA's board includes elected officials, a trait it shares with 22 percent of transit agency boards. However, because of the way WMATA is funded, the elected officials on its board could be characterized as 'dual fiduciaries' – that is, accountable for the financial health of both WMATA and a local government that makes payments to WMATA. This arrangement is very rare at other large transit agencies, which are mostly supported with dedicated taxes.

Opportunities for Improved Financial Performance. This report estimates the effects of six measures to improve WMATA finances. In dollar terms, the largest is a return of rail ridership. Metrorail ridership declined 14 percent between FY2015 and FY2017, while other U.S. heavy rail systems saw a decline of just two percent. Returning to FY2015 levels (minus the effects of this broad national decline) would reduce the need for operating subsidies by as much as $57 million per year. WMATA's customers are its biggest funder.

The WMATA bus system is ripe for a major reset that would update where and when service is offered. The scenario analyzed for this report yields a subsidy reduction of as much as $38 million per year, through a combination of reduced costs and increased revenues. Bringing employee contributions to pension up to the national average could be expected to yield $25 million per year. Other changes – decreased fare evasion, more advertising, and lower absenteeism – could yield an additional $35 million per year combined.

Implementing these measures would take several years, and achieving full results on all fronts simultaneously would be difficult. Nonetheless, it is reasonable to estimate a possible reduction in expected operating subsidies of at least $40 million per year after several years. As described below, such a reduction in operating payments by the region's jurisdictions would allow for funds to be shifted to capital needs.

Need for Capital Investment. Metrorail opened in 1976, and many of its components began to reach their 30-year useful life around 2006. An increase in capital funding would have been appropriate at this point. Unfortunately, new federal funds under the Passenger Rail Investment and Improvement Act (PRIIA) were not approved by Congress until FY2009, and did not flow to WMATA until FY2011. It took even longer for WMATA to ramp-up spending. In FY2017, capital investment finally reached a level sufficient to stabilize the system, but the decade-long lag between growing need and lower-than-necessary investment helped create a backlog of deteriorated assets currently estimated at $7 billion. In addition, as each year passes additional assets wear out and must be renewed. From FY2018 to FY2026, this ongoing need is estimated at a further $1.1 billion per year.

To estimate the funding needed to cover all these state-of-good-repair needs, a financial model of WMATA's capital program was developed out to 2040. It estimates that WMATA would require additional capital funds of $540 million per year above current contributions from its federal, state and local funding partners. If savings to the operating budget of $40 million per year are achieved as stated above, this need could be met with $500 million per year in new capital funding. This funding would cover only WMATA's state-of-good-repair needs; any expenditures to enhance the system would require supplemental funding.

To eliminate its state-of-good-repair backlog in a timely manner, WMATA would need to pledge a large portion of new revenues to back new borrowing, estimated by the model at $5.9 billion. For this reason, new funding would need to be dedicated in a manner adequate to secure bonds.

ORIGIN AND METHODOLOGY

In February, 2017, the Commonwealth of Virginia enacted a requirement calling for "an objective review of the operating, governance and financial conditions" at WMATA. The review was required to "compare WMATA to other rail transit systems in the United States". (Conference Report for House Bill 1500, Item 436#3c, 2017.) The Virginia Department of Rail and Public Transportation then contracted with the global consulting and engineering firm WSP to perform the analysis. This report presents the results of this analysis.

The primary source of information used was the National Transit Database (NTD). This database is maintained by the U.S. Department of Transportation's Federal Transit Administration (FTA) and contains data reported by all transit agencies in the U.S. that receive federal funds. At the time this report was prepared, the latest year of NTD data for all agencies was 2015.

This report compares WMATA to eight other large transit systems: the New York Metropolitan Transit Authority (NYMTA); the Chicago Transit Authority (CTA); the Los Angeles County Metropolitan Transit Authority (LAMTA); the Massachusetts Bay Transportation Authority (MBTA); the Southeastern Pennsylvania Transportation Authority (SEPTA); New Jersey Transit (NJT); the San Francisco Bay Area Rapid Transit District (BART); and the Metropolitan Atlanta Rapid Transit Authority (MARTA). Unless otherwise noted, WMATA Metrorail is benchmarked against the heavy rail systems of seven of these eight agencies; NJT is excluded because it operates commuter rail and light rail but not heavy rail. WMATA Metrobus is also benchmarked against seven systems; BART is excluded because it has no bus system.

CONTENTS

PART 1. COMPARISON TO OTHER LARGE TRANSIT AGENCIES

Workforce

During its fiscal year 2017 (July 1, 2016 to June 30, 2017) WMATA had 13,032 authorized positions. Actual employment levels fluctuate below the authorized level during the year due to ebbs and flows in hiring, retirements and other factors. As shown in Figure 1, authorized staffing levels increased from FY2010 to FY2017, with some of this growth associated with the opening of the Silver Line Phase 1 in 2014. For FY2018, authorized staffing levels were reduced by 1,000, with some of the decrease coming from elimination of unfilled positions.

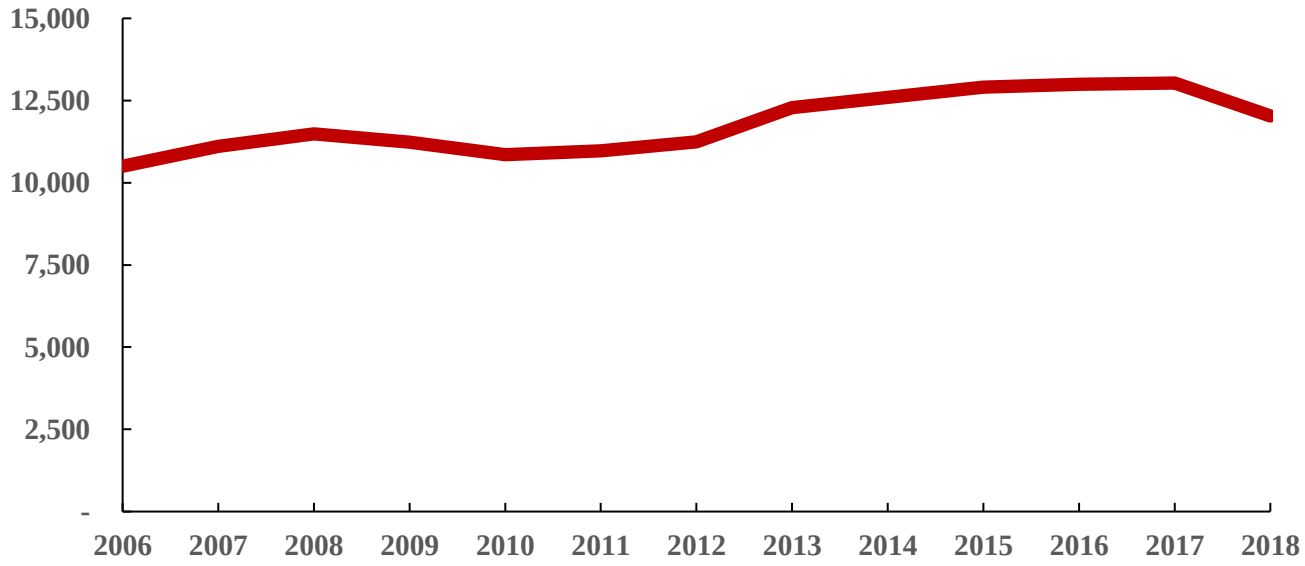

Figure 1. Total approved headcount for WMATA, FY2006 - FY2018. Source: WMATA.

Like most U.S. transit agencies, WMATA's labor force is heavily unionized; 82 percent of employees belong to a union and 18 percent do not. Union representation is divided among five union locals, the largest being the Amalgamated Transit Union (ATU) Local 689, representing 66 percent of WMATA employees.

Wages for WMATA's unionized employees are set through collective bargaining. The last two collective bargaining agreements with ATU Local 689 led to a slight increase in the value of wages. Between 2008 and 2017, ATU Local 689 employees were granted wage increases averaging 1.9 percent per year after accounting for employee contributions to pension. During this period, Washington DC area inflation averaged 1.4 percent per year. As a result, real wages for these employees grew at 0.5 percent per year on average, and in 2017 net wages were four percent higher than in 2008. Most of this net increase accrued between 2014 and 2017, a period when inflation was particularly low. Net annual wage increases granted in these years of low inflation were similar to increases granted in prior years.

Wage and salary levels heavily influence the agency's total cost in delivering service. Figure 2 (next page) compares the all-in cost of WMATA's workforce to its peer transit agencies on an hourly basis, including all salary, wage and fringe benefit costs for both labor and management. In some years WMATA's costs were slightly above the peer average, and in some years they were slightly below. Overall, WMATA's hourly labor costs have been consistently average or close to it.

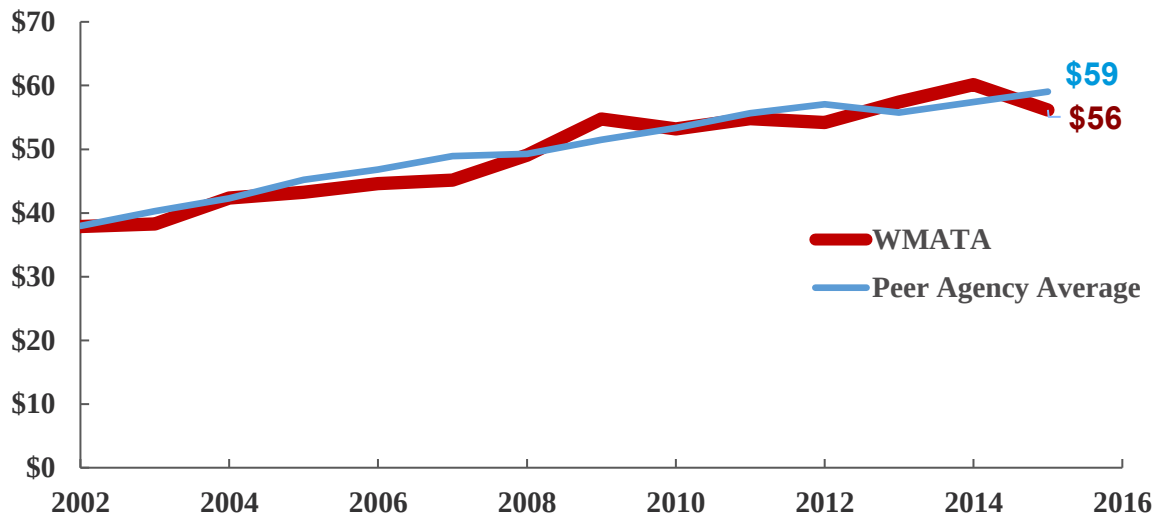

Figure 2. Total cost of wages, salaries and fringe benefits per hour worked, WMATA vs. large peer transit agencies. Source: NTD.

WMATA employees are not allowed to strike. Instead, union employees are subject to binding arbitration if labor and management cannot reach agreement. It has been suggested that a regime giving labor the right to strike and eliminating binding arbitration could lead to lower agency costs. To test this hypothesis, all-in labor costs per hour at agencies that allow strikes were compared to those same costs at no-strike agencies. No difference in labor costs between the two groups was found.

One additional method was used to assess personnel costs. Compensation at each agency, not including fringe benefits, was compared to its region's cost of living. (Cost of living was determined using the Economic Policy Institute's estimate of the cost for one adult and one child to "attain a modest yet adequate standard of living" in various regions of the country.) The average WMATA employee earns 106 percent of the DC region's cost of living, which makes WMATA average among peer transit agencies (Figure 3).

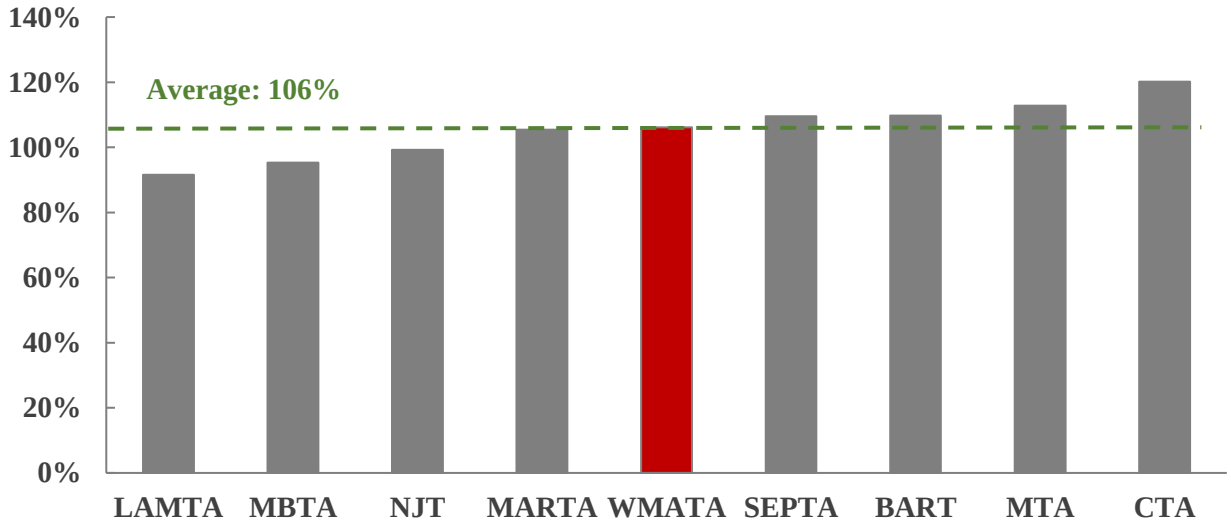

Figure 3. Average wage of transit employees as percent of a region's cost for one adult & one child "to attain a modest yet adequate standard of living", 2015. Sources: NTD; Economic Policy Institute.

WMATA maintains two notable labor policies that were found to be outliers. First, hourly employees contribute an average of 3.1 percent of wages to pension, where the national average reported by the Bureau of Labor Statistics for all workers in defined benefit plans is 7.1 percent. Second, WMATA's unionized employees count overtime earnings in determining post-retirement pension payments. Some public agencies allow this and some do not.

These two items should be viewed in context. First, even with these policies in place, WMATA's all-in labor costs per hour have been average among peer transit agencies. Second, WMATA's method of calculating base retirement payments is slightly less generous than an average of 20 selected local agencies. As shown in Figure 4, the WMATA retirement formula pays an employee retiring at age 62 with 30 years of service 55 percent of their final annual salary. The average paid by the 20 city and county governments shown in Figure 4 is 60 percent.

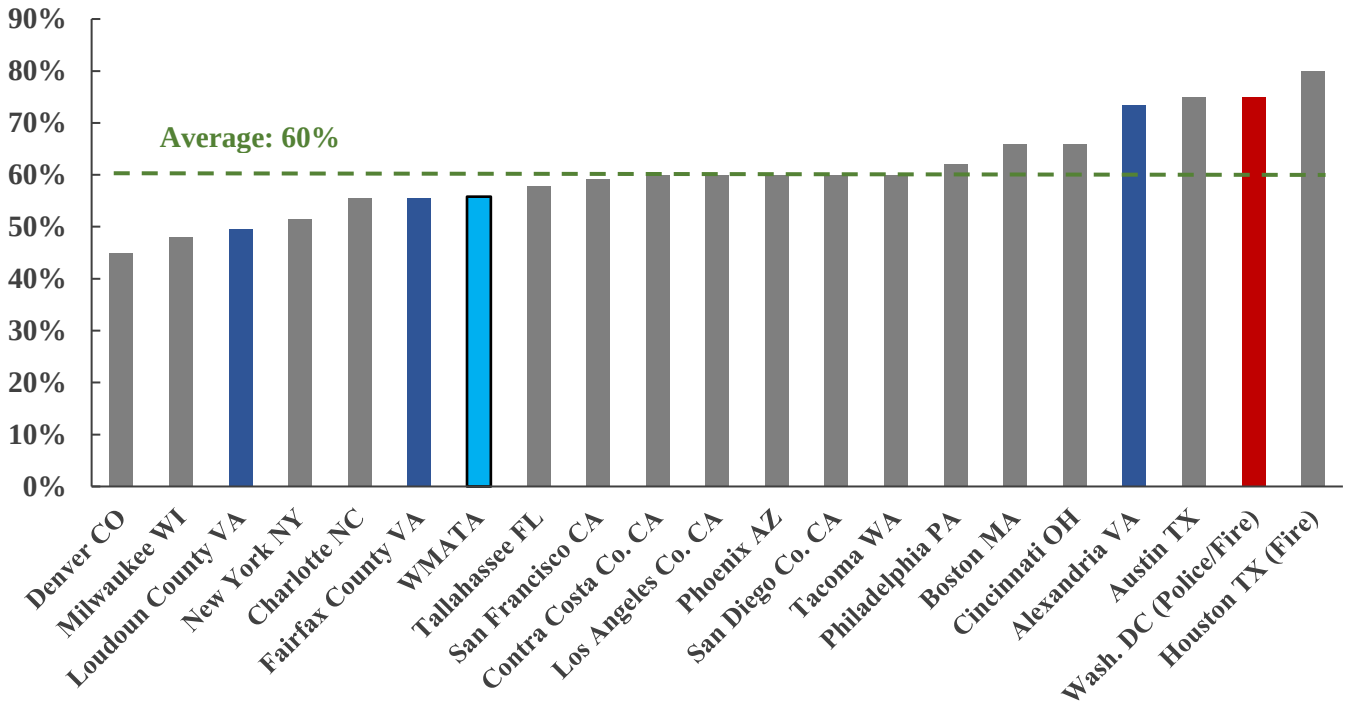

Figure 4. Retirement payments as a percent of final annual salary for an employee with 30 years of service retiring at age 62. Source: Center for State & Local Government Excellence; "Retirement Benefit Decisions by City and County Governments"; WMATA labor agreements.

Pensions

WMATA maintains defined benefit pension plans for most of its unionized employees. Under these plans, employees earn credit based on years of service and final annual salary, and receive benefits after they retire. WMATA management employees are in a defined contribution plan, similar to a 401(k).

Like most government agencies, in recent years WMATA has seen both pension liabilities and annual pension contribution amounts escalate. Several factors are at play.

- People are living longer and this leads to increasing pension liabilities. The expected lifespan of the average American adult has increased by around two years in the last 25 years, which represents more than a 15 percent increase in expected life span after the normal retirement age of 65.

- Most pension payouts to retirees are generated by investment returns on accumulated pension assets. When investment returns are strong, the burden on employers and employees to fund the pension is reduced. Inconsistent investment returns from early 2000s through the recent financial crisis led to increasing demands on employers to make pension contributions out of annual budgets.

One measure of pension health is the 'funding ratio', which represents the total expected value of a pension fund's assets compared to its total expected payouts. Ideally, pension funds should be 100 percent funded, but in practice this is not usually the case. Pensions tend to achieve a 100 percent funding ratio in periods of high investment returns, and fall below 100 percent when investment returns are weaker. As shown in Figure 5, WMATA's pensions were 77 percent funded on average in 2015. This placed them on par with -- or slightly above – both the national average for public pensions (75 percent funded) and major pensions in Maryland and Virginia. DC's two remaining defined benefit pensions were stronger.

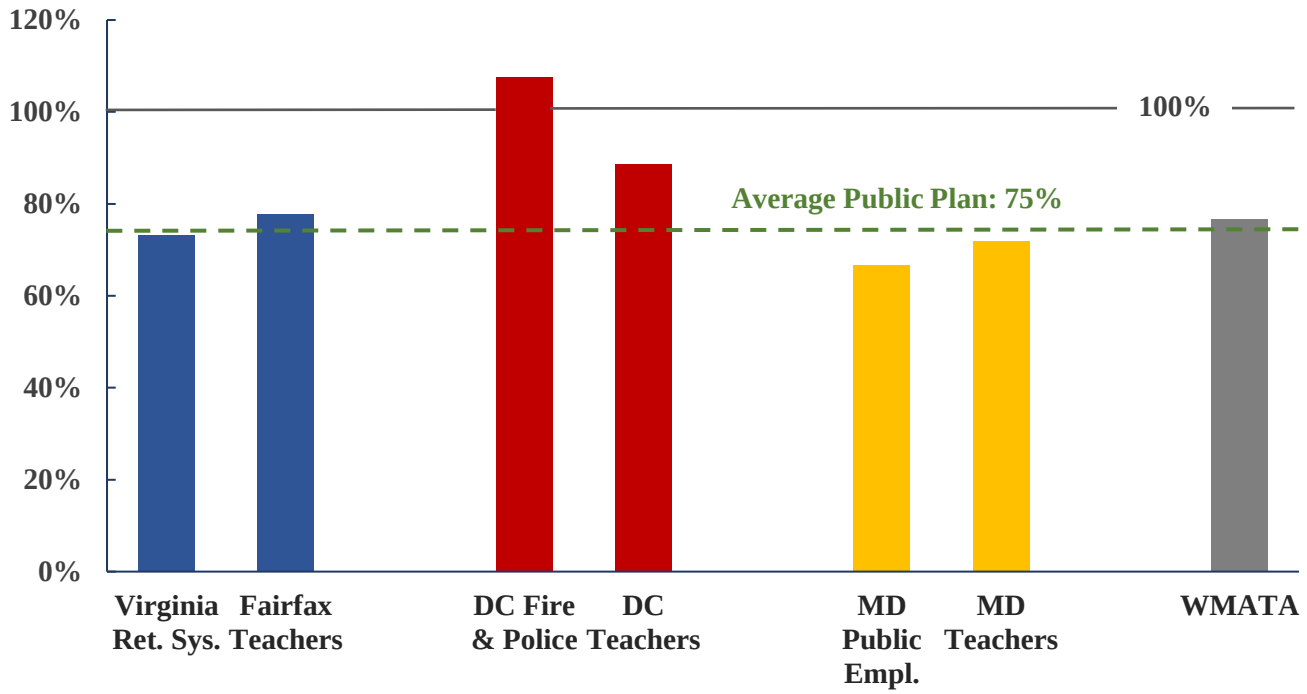

Figure 5. 2015 funding ratios for WMATA pension plans and selected DC, Maryland and Virginia plans. Source: Boston College Public Pension Plan Database; WMATA.

Although escalating contributions to pension have been a major cost item for WMATA in recent years, contribution amounts have stabilized since 2015. This is partly due to new employee contributions to pension arising from the last labor contract cycle, and partly due to stronger investment returns. Employee contributions to pensions dating from WMATA's founding were terminated as part of a labor agreement in the 1980s, and were finally restarted in 2015. In sum, although WMATA has pension problems, there is no evidence these problems are out of character with the similar challenges faced by many other public agencies.

Safety and Security

WMATA's performance on several measures of safety and security is presented in Figure 6.

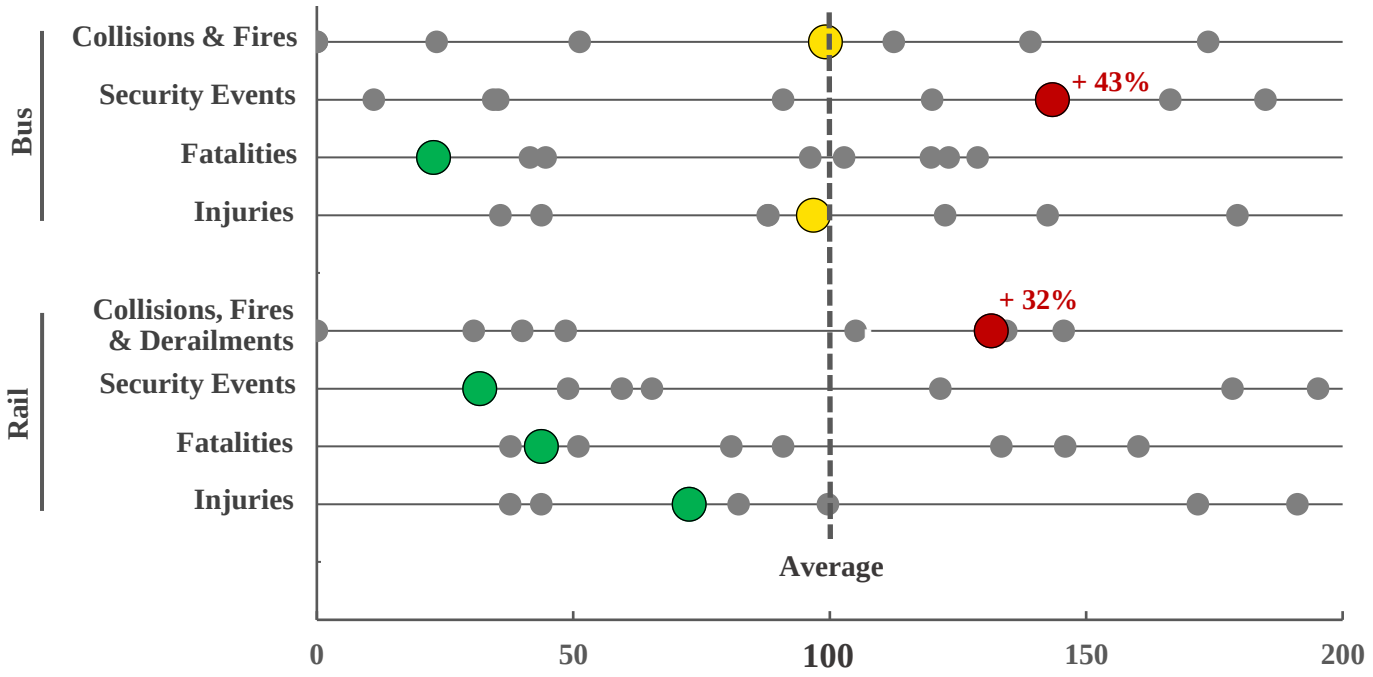

Figure 6. WMATA safety and security events compared to eight peer transit agencies, 2014-2015. Source: NTD.

During 2014 and 2015, WMATA was average or better than average on six out of eight measures, and worse than average on two measures. The number of security events on Metrobus was higher than the average of peer agencies, as were collisions, fires and derailments on Metrorail.

Bus Operations and Maintenance

A common financial measure for transit service is the 'farebox recovery ratio', which measures how much of a service's ongoing operations and maintenance expense is being recovered through fares. In FY2015, fare box recovery for WMATA's Metrobus system was just 23 percent, well below WMATA's peer agencies, which recovered 32 percent of their bus O&M costs on average.

This poor farebox recovery is not due to high costs. WMATA's FY2015 cost to deliver an hour of bus service was average. The components that produce this unit cost are shown in Figure 7, including wages, fringe benefit costs, and the efficiency of both the operations and maintenance workforces.

Poor farebox recovery at Metrobus is due to two non-cost factors. The first is low fares. Until mid-2017, WMATA's bus fare was $1.75, low among its peer agencies. The base fare has since been raised to $2.00, closer to the peer average of $2.16. However, the cost of a weekly pass did not rise and is still $17.50. (Directly comparing real world bus fares between agencies is complicated by the different policies they use to price bus/rail transfers.) The second factor causing low farebox recovery is high service levels given ridership. Hours of bus service offered per 10,000 passenger trips were 25 percent above the peer average.

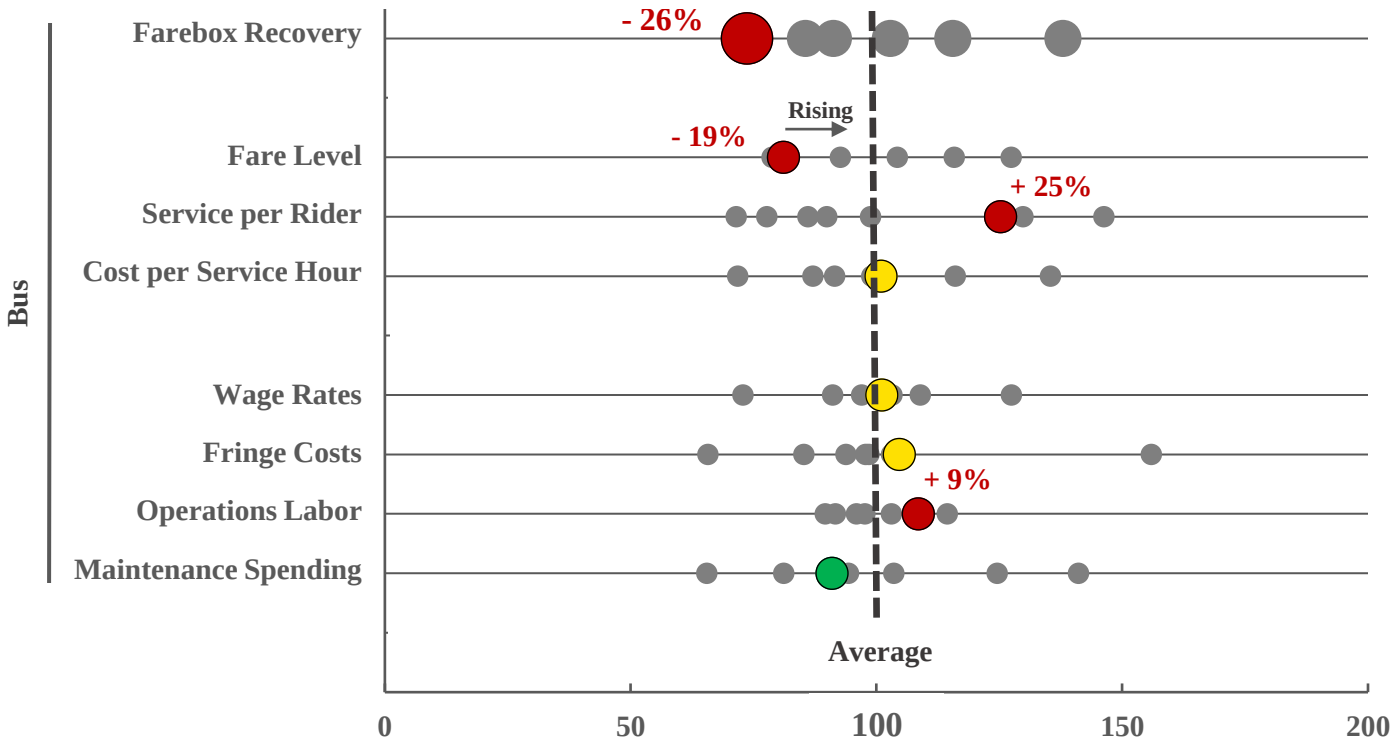

Figure 7. WMATA 2015 bus system performance vs. seven peer agencies. Source: NTD.

Low farebox recovery could be partly caused by fare evasion, but it is difficult to estimate the magnitude of this using publicly available data. Anecdotal evidence suggests that fare evasion has been rising. A consistent pattern of high service levels per rider and low fares on Metrobus has existed for many years. The recent increase to a base fare of $2.00 makes today's Metrobus base fare as high as it has ever been on an inflation-adjusted basis, but still below the average of peer transit agencies.

The indicator labeled 'Operations Labor' depicts the number of labor hours for bus operations and administration that are required to deliver one hour of bus service. The nine percent excess indicates that labor is being used somewhat less efficiently at Metrobus than at peer bus agencies. This is one of the factors supporting the 'bus reset' suggested in Part 2 of this report.

Rail Operations and Maintenance

In contrast to Metrobus, farebox recovery for Metrorail was higher than the peer average in 2015, although declining ridership since then has likely led this figure to drop closer to the peer average.

Higher than average farebox recovery was primarily due to high fare levels compared to other heavy rail systems (shown in Figure 8 as the average fare earned by WMATA per passenger mile of travel.) Service levels on Metrorail were also higher than average – in 2015 WMATA offered 22 percent more rail service per 10,000 passenger trips than the average peer agency heavy rail system. WMATA's operations and maintenance cost per hour of rail service delivered was nine percent above the peer average. This was due to higher than average maintenance spending. Other inputs to unit cost – wage costs, fringe benefit costs and overall operations costs – were average or below average.

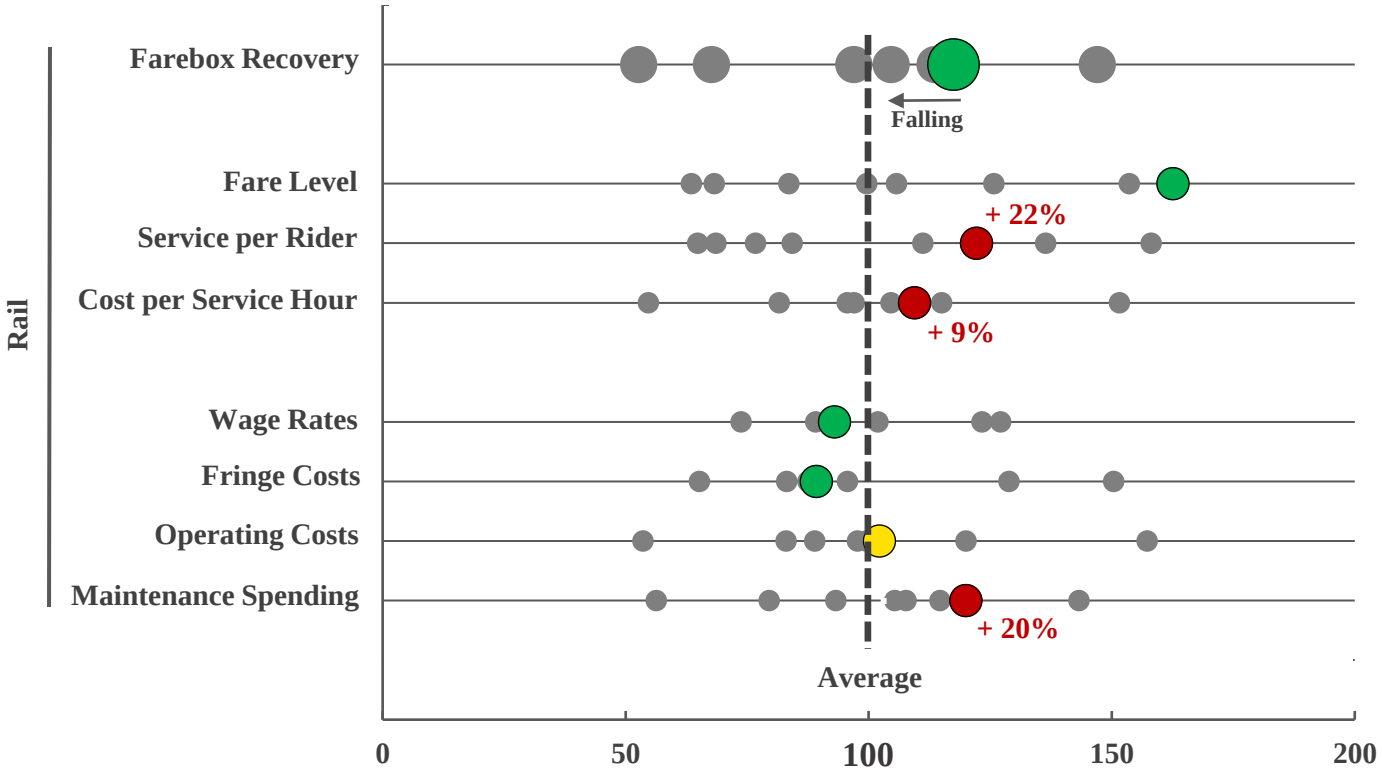

Figure 8. WMATA 2015 rail system performance vs. seven peer agencies. Source: NTD.

Unlike Metrobus, the higher than average level of Metrorail service per 10,000 passenger trips is a relatively recent phenomenon. In 2002, Metrorail's service levels per passenger were exactly average compared to peers. Between 2002 and 2009, both ridership and service levels grew. However, since then ridership has been mostly flat or declining, while service levels have continued to rise. The notable increase in service levels in 2015 shown in Figure 9 is mostly the result of the opening of Silver Line Phase 1.

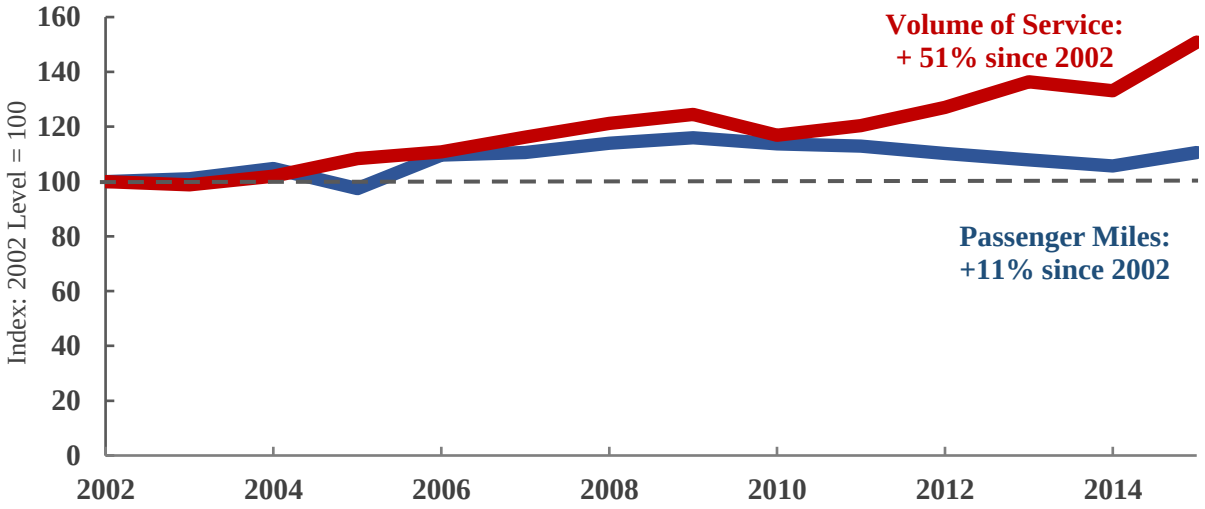

Figure 9. Change in hours of service and passenger miles travelled, WMATA Metrorail. Source: NTD.

Capital Program

WMATA's need for capital investment is determined by the age and condition of its assets. Each asset, from railcars to escalators, has a useful life. Once this useful life is exceeded, the agency must plan to reconstruct or replace the asset. Different types of assets have very different useful lives, but a general rule of thumb is to assume an average useful life of 30 years.

The Metrorail system opened in 1976 and quickly expanded, as shown in Figure 10. In its first 10 years of operation the system grew to roughly 70 miles in length, and today it is over 117 miles long. The original segments of the system began turning 30 in 2006, and today over half the length of the rail system is beyond its theoretical 30-year useful life.

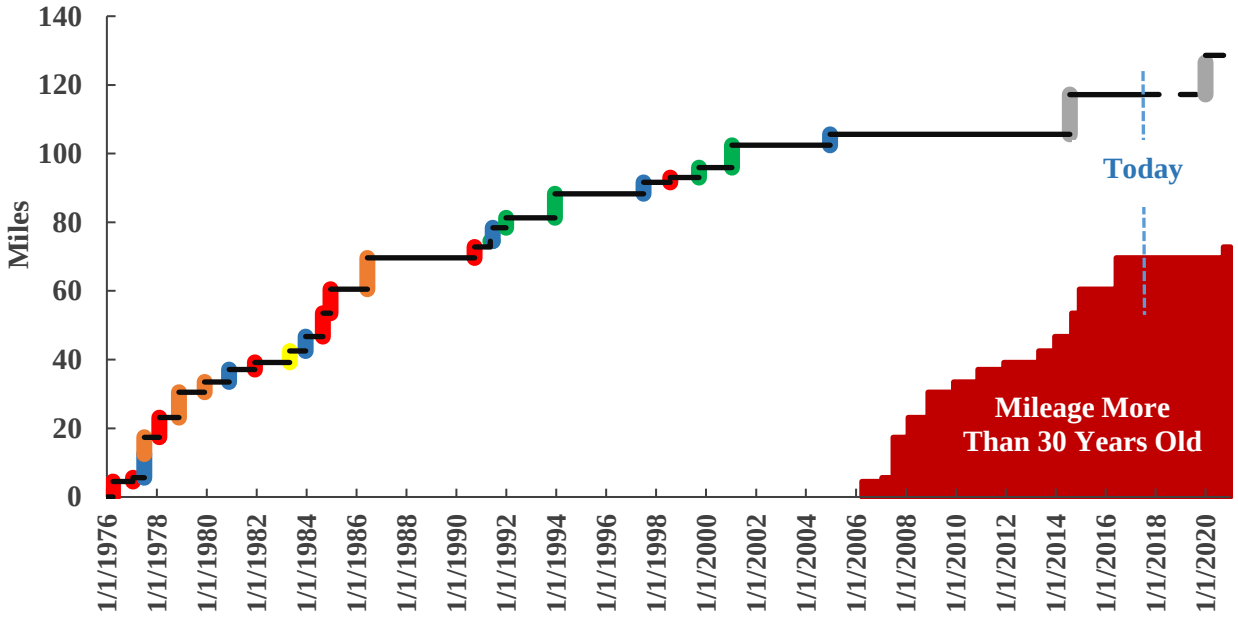

Figure 10. Growth of the Metrorail system since 1976. Source: WMATA.

To address this, an increase in capital investment to a level sufficient to reconstruct or replace assets as they wore out would have been appropriate around 2006. Although it is difficult to determine a correct theoretical investment level, a rough estimate can be made. A recent assessment by WMATA reported the total value of its asset base to be $39 billion. Assuming a 30-year useful life for an average asset, the agency could expect to replace roughly three percent of its asset base each year at a cost of somewhere around $1.2 billion per year.

As shown in Figure 11 (next page), in FY2017 WMATA achieved approximately this level of capital investment and plans to do so again in FY2018. However, this level was only recently achieved. The gap between necessary investment and actual investment in the preceding decade is a major reason for WMATA's backlog of deteriorated assets with an estimated cost of $7 billion.

During this period, efforts were being made to increase capital funding. As far back as 2005 the need was identified, and in 2008 Congress passed PRIIA, which authorized $150 million per year in new federal capital funds to be matched by an equal amount of new state and local funds. Unfortunately, for various reasons WMATA did not begin receiving these funds until FY2011, and even then had significant difficulty

in ramping up spending to utilize the new revenue. The result was a long period of sustained underinvestment.

Although current investment levels are a major improvement over prior years, it is important to note that the levels achieved since FY2016 are not sustainable given current capital funding provided to WMATA by its federal, state and local funding partners. The current baseline of capital contributions by these funders is approximately $800 million per year, well below today's level of actual spending. In FY2016, WMATA drew down unexpended funds from prior years to make up most of the difference, but in FY2017 and FY2018 the capital budget has been sustained by taking on new debt.

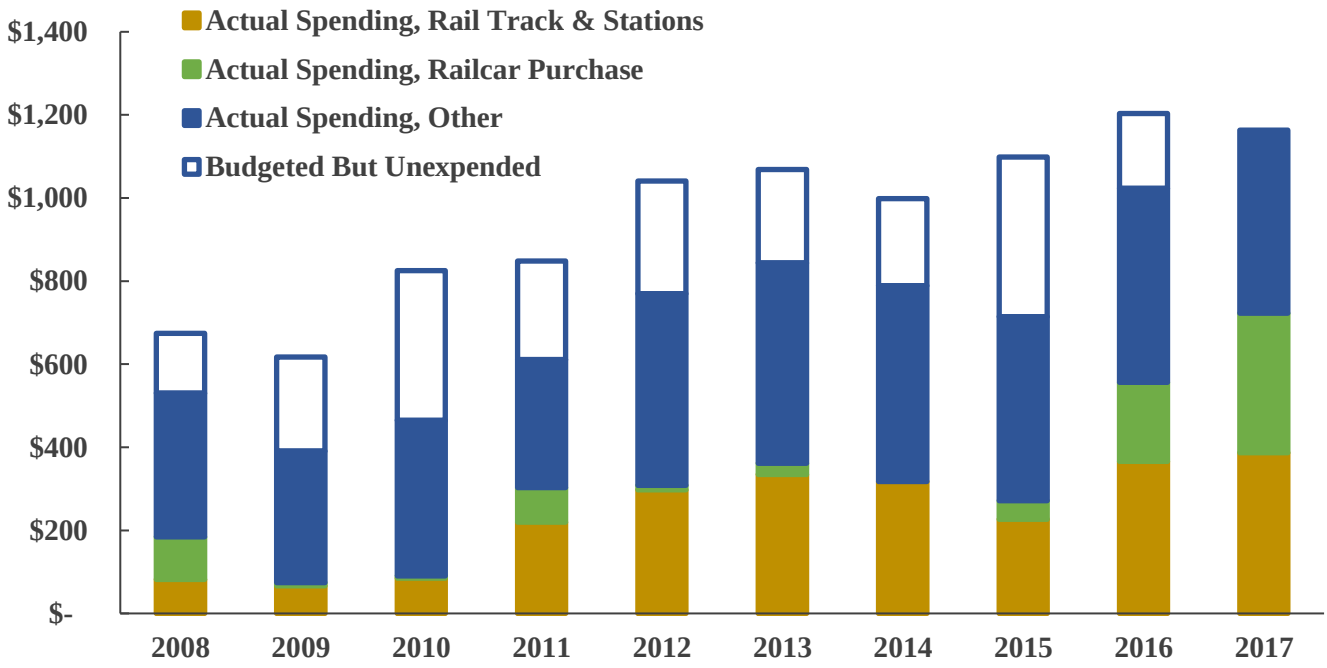

Figure 11. WMATA capital investment, millions of dollars, FY2008 to FY2017. Source: WMATA; WSP calculations.

It will not be possible for WMATA to reduce its backlog of deteriorated assets, or even sustain its current level of investment, without a major commitment of new resources from its funding partners.

Long Term Financial Sustainability

Although WMATA's service delivery costs are generally average for large transit agencies, the level of funds required annually from its state and local funding partners has been growing rapidly, rising at nearly 10 percent per year. As shown in Figure 12, these increases can be traced directly back to four main factors.

- Purchase of new railcars. WMATA is currently replacing a large share of its rail fleet, and expenditures on new railcars rose from zero in FY2014 to over $330 million in FY2017.
- Increased spending on rail system rehabilitation. Investment in the rail system grew by nearly $320 million per year from FY2009 to FY2017.

- Growth in contributions to pension plans. WMATA's contributions to pension have grown by more than $150 million per year since FY2007. After growing rapidly for a decade, contribution levels have stabilized since FY2015.
- A large revenue decline due to falling ridership. Revenue from ridership has fallen by $140 million per year.

Aside from these factors, WMATA's other costs have grown at a relatively reasonable three percent per year for the last dozen years.

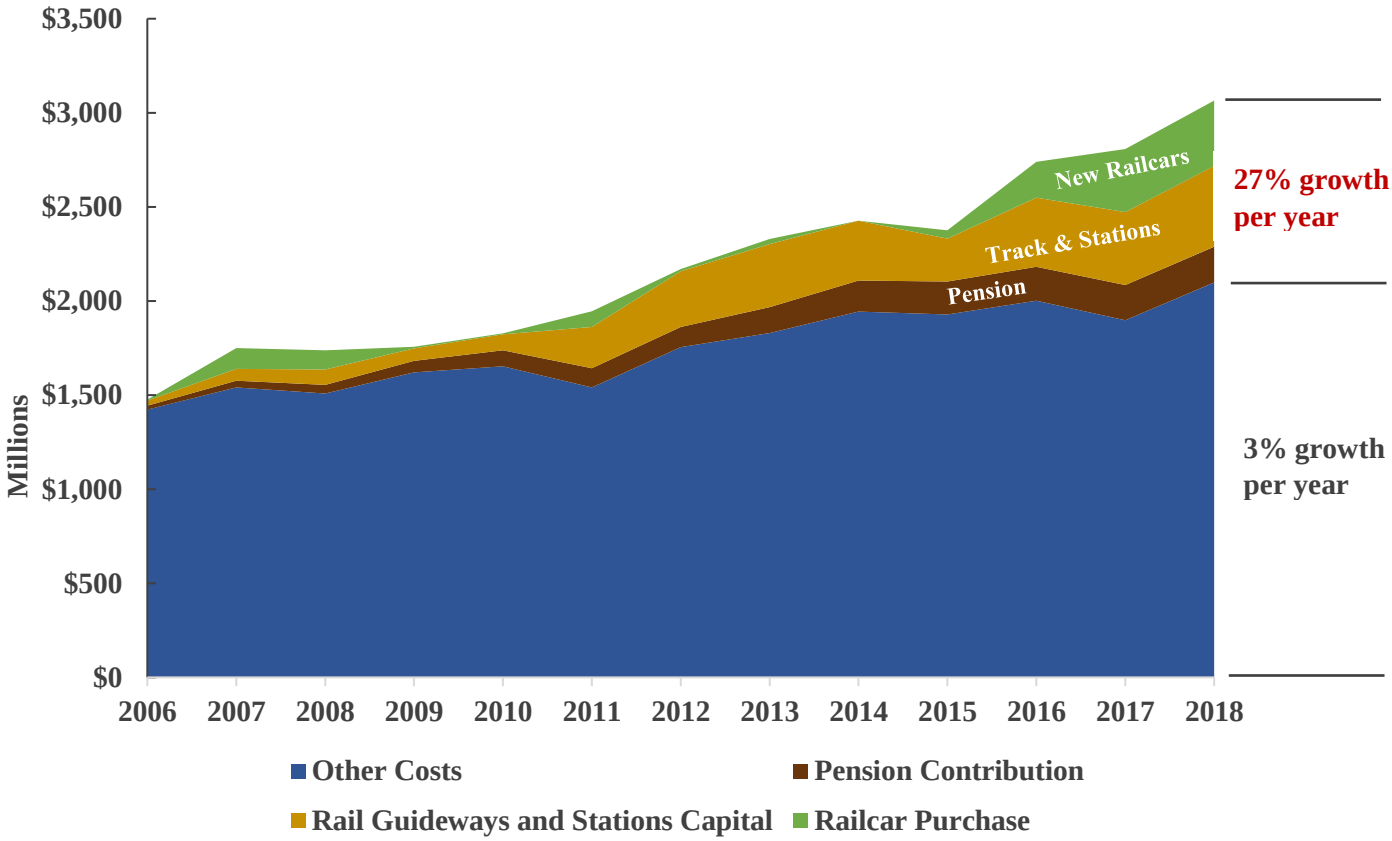

Figure 12. WMATA growth in spending in three major categories vs. all other spending, FY2006 to FY2018. Source: WMATA; WSP calculations.

Within its operating and maintenance budget, WMATA appears to be financially sustainable going forward, although improvements are possible. Several strategies to improve financial outcomes in the O&M budget are described in Part 2 of this report. Under WMATA's proposed budget for FY2019, jurisdictional contributions for operations and maintenance would rise by just three percent. No fare increases are proposed.

Within WMATA's capital budget, spending has risen but must rise even further for the system to achieve a state of good repair. This will not be possible without a substantial increase in the level of capital funding provided to WMATA.

Governance

WMATA's board currently consists of 16 members, eight Principal Members and eight Alternate Members. As shown in Figure 13, WMATA's board is larger than all but one peer agency. The average transit agency board has nine members. No peer agency board has alternate members.

WMATA's board currently has nine board committees and subcommittees, which ties it for the largest number among peer agencies. The WMATA board and its committees and subcommittees meet often. Between June 1, 2016 and May 30, 2017, there were 85 such meetings.

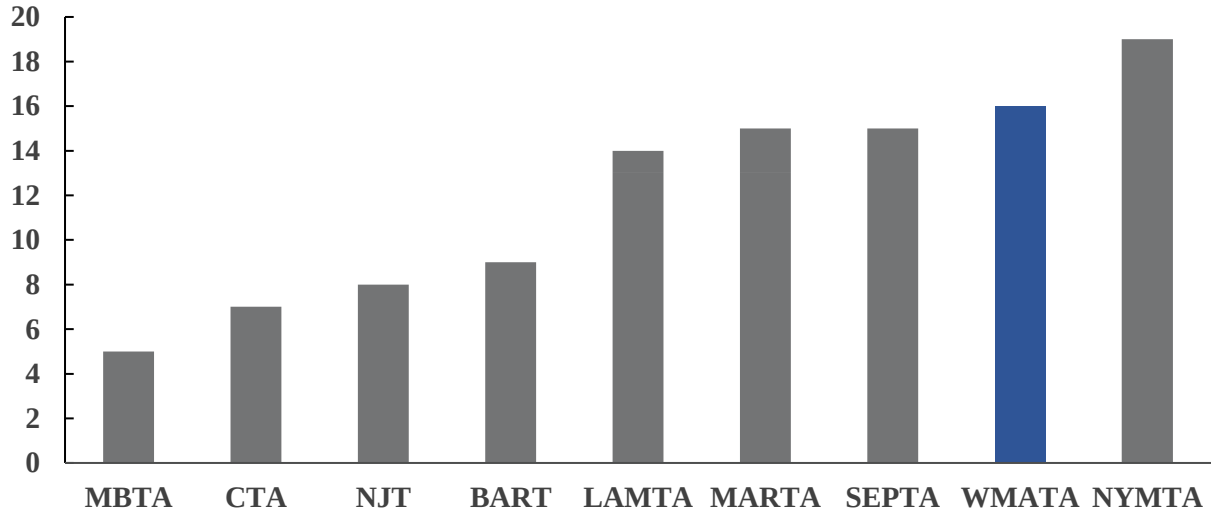

Figure 13. WMATA board size vs. boards at peer agencies. Sources: multiple.

WMATA is unique among peer agencies in giving each board contingents representing one of the three signatory jurisdictions – DC, Maryland and Virginia – a veto over major agency actions. The veto is not exercised often, but anecdotal evidence suggests that its presence nonetheless affects the dynamics of the board. Although none of the peer transit agencies allow a jurisdictional veto, this feature exists at the three other transit agencies in the U.S. that operate under Interstate Compacts: the Port Authority of New York and New Jersey, the Delaware River Port Authority in the Philadelphia region, and the Bi-State Development Agency in the St. Louis region.

WMATA's board includes local elected officials from the region, currently four of the 16 members. Arrangements of this type exist in 22 percent of transit agencies. However, in most of these cases there is a key difference. Where a transit agency is supported directly by dedicated taxes, any elected officials on the board can avoid the awkward position of both requesting funds on behalf of the transit agency and responding to this request on behalf of their home jurisdiction. This so-called 'dual fiduciary' status exists for WMATA's elected official board members. Among peer agencies, only one board member at one other agency has a similar status.

These features of the WMATA board present governance challenges over and above those faced by other transit agencies. With members often appointed to the board with the explicit understanding they will represent their home jurisdiction's policy, operational and financial preferences, WMATA faces major challenges in sustaining both a unified vision for the agency and clear parameters under which management can pursue such a vision.

PART 2. RECOMMENDATIONS

Measures to Reduce Operating Deficits

Figure 14 shows upper bound estimates for the possible financial impact of selected operating deficit reduction measures WMATA could pursue over the next several years. Each measure is described below.

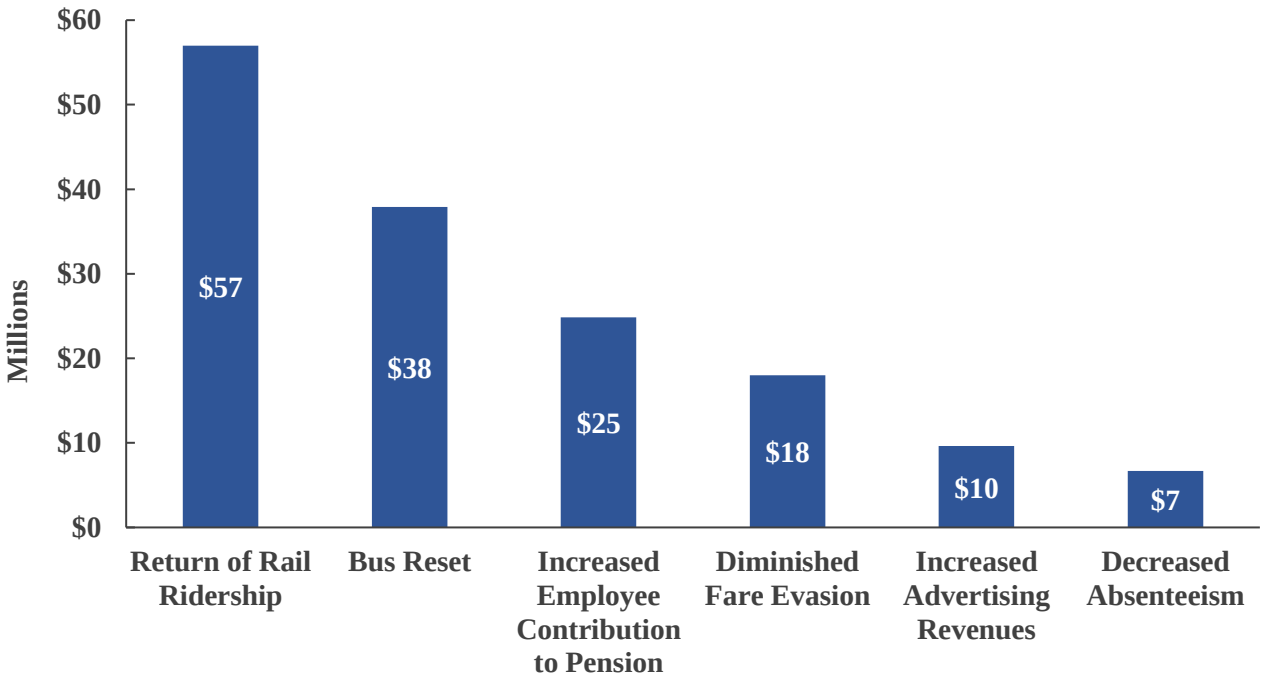

Figure 14. Upper bound estimates for the value of measures to reduce WMATA operating subsidies, in millions of dollars per year at full phase-in. Source: WMATA budget data and WSP analysis.

– *Return of Rail Ridership.* In FY2017 Metrorail ridership was 14.3 percent below FY2015 levels. During this same period, ridership at other U.S. heavy rail systems was also down, but by just 1.9 percent. With WMATA's SafeTrack program of rail system closures now concluded, service reliability is expected to improve, and this opens the possibility that riders who fled the system may begin to return. The scenario depicted here shows the financial effect of Metrorail ridership rising back to a level that is 1.9 percent below the FY2015 level. This is estimated to produce $76 million in new fare revenue and generate $19 million in new costs to run more frequent trains to carry the returning riders. The net benefit to the WMATA O&M budget would be $57 million per year.

  WMATA cannot compel riders to return, and if they do return of their own volition a recovery would likely take several years. Ridership is influenced by many factors, including gasoline prices and the regional economy, but service reliability was a major factor in the loss of riders and will have a large effect on their return. The point of showing this scenario is to focus attention on the how large the effects of changes in ridership can be on agency finances. WMATA's customers are its biggest funder.

– *Bus Reset.* WMATA is among the many transit systems experiencing flat or declining bus ridership, but its difficulties go beyond this. As shown in Figure 7, bus service levels per unit of ridership at WMATA were 25 percent higher than the peer average in 2015. There are several possible explanations for this.

WMATA could be running service on low-performing routes; its bus garages could be in locations that result in long hauls where no passengers are carried; its route structure could be out of date given changing patterns of demand; fare evasion could be masking the actual level of ridership. Each of these could play a role, or all could, but the depth of analysis necessary to understand the source of WMATA's difficulties was not possible for this report.

Nevertheless, a rough estimate was made of the possible financial consequences of a more efficient Metrobus system. The scenario presented here includes several elements. It assumes that bus fares are raised by 10 cents to $2.10, closer to but still below the average base fare among WMATA's peer agencies. In addition, the scenario assumes that WMATA can achieve a five percent reduction in Metrobus operating costs through more efficient routing or other service adjustments or operating practices. In total, this scenario could result in a reduced need for operating subsidies of $38 million per year once fully phased in. The analysis assumes that higher fares and adjusted service could trigger some reduction in bus patronage, but the goal should be the opposite – more efficient operations that both benefit riders and reduce WMATA's need for operating subsidies.

This analysis is presented not to endorse specific bus service changes, but to illustrate the magnitude of the issue. Determining exactly how to adjust Metrobus service will require detailed analysis, so WMATA should consider undertaking a 'bus reset'; that is, a comprehensive bus service study looking at routing, schedules, bus garage locations, work practices and the other major attributes of the bus system. As this report was being finalized, WMATA announced it would be undertaking "a study to overhaul its bus network" that appears similar to what is recommended here.

- *Increased Employee Contribution to Pension*. According to the Bureau of Labor Statistics, the average U.S. worker in a defined benefit pension plan contributes 7.1 percent of their salary to pension. The average member of WMATA's unionized workforce contributes 3.1 percent of salary. (Most contribute three percent, but Transit Police, who operate under their own contract, contribute 7.3 percent.) Raising employee contribution levels to the national average would reduce WMATA's need for operating subsidies by $25 million per year. Pension contribution amounts are set contractually between management and unions, and so making this change would require a change to current WMATA contracts either through negotiation or arbitration.

- *Diminished Fare Evasion.* Very little reliable information exists about the extent of fare evasion at WMATA. Nevertheless, a rough estimate of its fiscal impact was made. This scenario assumes that fare evasion deprives WMATA of five percent of potential revenues from bus and rail fares, and that stricter enforcement and other measures could cut this loss by 50 percent. An estimate of the incremental cost of undertaking such enforcement measures was not made. Under this scenario WMATA could reduce its required O&M subsidies by $18 million per year.

- *Increasing Advertising Revenues.* In 2015, WMATA's advertising revenues were proportionally the lowest among the large transit agencies studied. Advertising revenues were highest at the Chicago Transit Authority (CTA) at 1.84 percent of total O&M costs, while WMATA's advertising revenue was equal to only 1.32 percent of O&M costs. Were WMATA to increase advertising revenues to CTA's level, roughly $10 million per year in additional funds could be generated.

- *Decreased Absenteeism.* When a worker fails to show up for their shift, someone else must be found to perform the work. This often leads to replacements working more than eight hours in a day or more than 40 hours in a week, which triggers overtime pay. In 2016, approximately 940,000 labor hours were missed due to three categories of absenteeism – sick leave, unpaid leave and absent without leave. The scenario depicted in Figure 14 shows the cost savings to WMATA due to lower overtime costs if absenteeism due to sick leave were reduced by 20 percent from 2016 levels and the other two categories were reduced by 15 percent. Savings are estimated to be $7 million per year.

Implementing these measures could be expected to take several years, and achieving full results on any of them, let alone all simultaneously, would be difficult. Nonetheless, it seems reasonable to expect that a reduction in expected operating subsidies of at least $40 million per year could be achieved after several years. If operating subsidies from the region's jurisdictions can be reduced by this amount, this would allow for a corresponding increase in capita payments to WMATA that could be used to address the agency's large capital backlog.

Additional Capital Funding

To assess the adequacy of WMATA's current sources of capital funding, a model of WMATA's state-of-good-repair needs and capital funding sources was developed out to 2040. This model projects that current pledged capital revenues from federal, state and local sources will average approximately $830 million per year between FY2018 to FY2026, assuming Federal PRIIA funding continues at the current level. This baseline of current capital funding is shown in dark blue in Figure 15 (next page).

Limiting WMATA's capital program to this level would have dire consequences. Capital investment would fall from the $1.16 billion achieved in FY2017 to a level too low to even cover the new annual needs that will arise each year in the future, let alone tackle the large backlog of need accumulated from past years. If WMATA's capital spending is constrained at the level of current funding commitments, the system's condition will get worse, not better.

The next task was to estimate the level of additional capital funding required to avoid this outcome. The scenario shown in Figure 15 is designed to achieve three goals: 1) fund WMATA's ongoing state-of-good-repair needs in future years as they arise; 2) fully eliminate WMATA's backlog of deteriorated assets as quickly as possible; and 3) pay any debt serivce generated by new borrowing. In performing this analysis the following assumptions were used:

- Only state-of-good-repair costs were considered; any system enhancements would require other funds. (WMATA's 2016 Capital Needs Inventory shows $10 billion in potential capital projects that are over and above the agency's state-of-good-repair needs.)
- The pace at which work can be accomplished was estimated for five different types of investment: vehicles, guideway, stations, facilities, and systems. For example, it was assumed that spending on vehicle purchases could ramp up quickly once new funding arrives, while work on guideway and stations would be more constrained due to the need to continue carrying passengers.
- New funding was assumed to start on January 1, 2019.
- Federal PRIIA funds were assumed to continue at $150 million per year.
- Federal transit formula grants were assumed to grow at 1.5 percent per year.
- Construction costs and tax revenues were both assumed to grow at two percent per year.

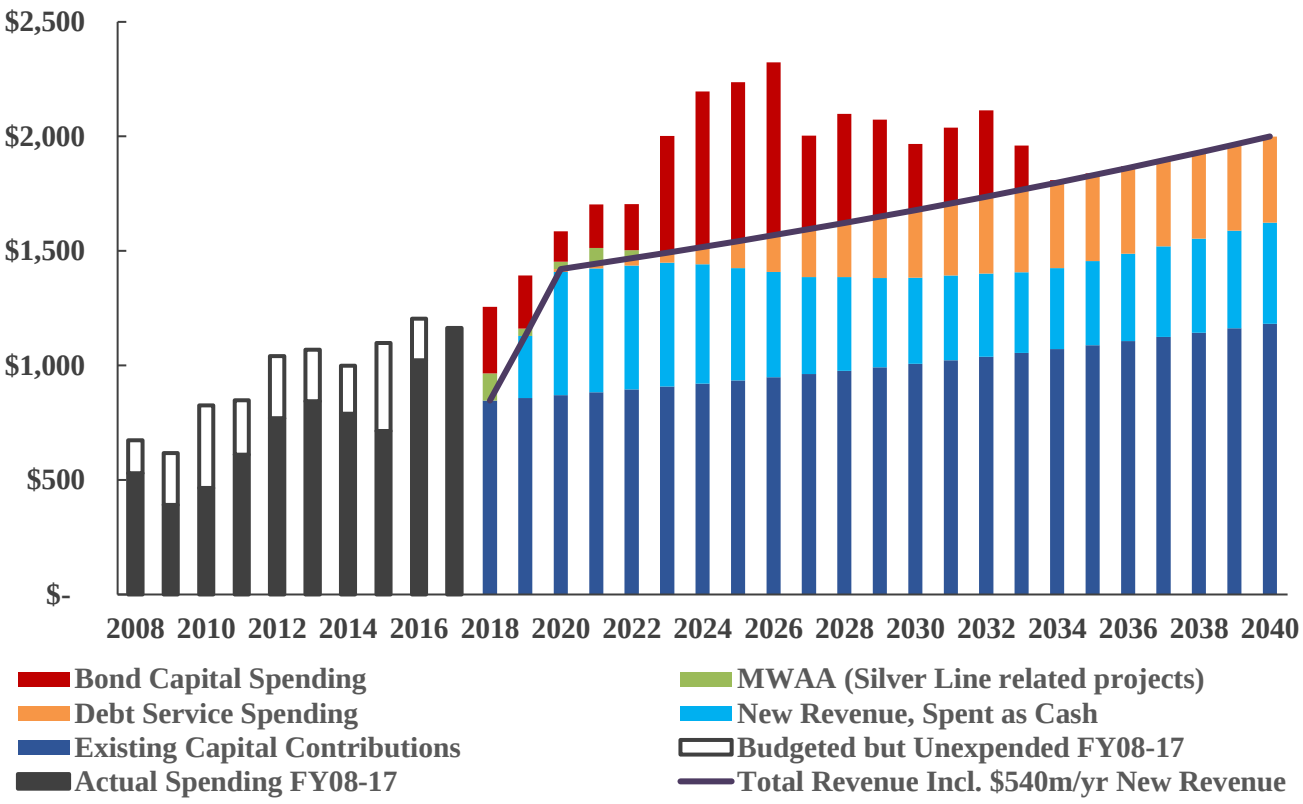

Figure 15. Model of WMATA capital spending with additional revenues, millions of dollars. Source: WSP.

Based on these parameters, it was determined that $540 million per year in new capital funding (dark line in Figure 15) would be needed. Some of the new funds would be spent as cash on a pay-as-you-go basis (light blue) while some would be used to support new borrowing. Bond proceeds expended each year are shown in red, and debt service on this borrowing is shown in orange. Spending would be highest in the FY2024 to FY2026 period as a new round of vehicle replacements takes place; after this it would decline slightly as backlog projects for guideway and other areas of need where spending is most constrained are completed. The state-of-good-repair backlog would be fully retired in FY2033, and thereafter WMATA would have sufficient funds to prevent a new backlog from developing and pay required debt service.

Strategies that could reduce WMATA's operating subsidies by $40 million per year were described in the previous section, and shifting these payments from WMATA's operating budget to its capital budget would allow the agency to achieve a state of good repair with a new funding source that generates $500 million per year starting in 2019.

To eliminate the state-of-good-repair backlog on this schedule, WMATA would need to borrow an estimated $5.9 billion over and above its current indebtedness. Issuing 30-year bonds would incur debt service costs that peak at approximately $375 million per year, and so most or all of a new revenue source of $500 million per year would need to consist of dedicated funding that can be pledged to secure bonds in a manner acceptable to bond rating agencies and bond purchasers.

MEMORANDUM

TO: The Hon. Ray H. LaHood

FROM: DLA Piper LLP (US)

DATE: December 4, 2017

RE: WMATA Reform Board Plan

This memorandum concerns the Board of Directors for the Washington Area Metropolitan Transit Authority ("WMATA"). Maryland, Virginia, and the District of Columbia are each signatories to the WMATA Compact. Established in 1967 with the consent of Congress, "WMATA was created by the Signatories to plan, develop, finance and caused to be operated a comprehensive mass transit system for the Washington Metropolitan Area."[1] Currently, WMATA is governed by a 16-member Board of Directors (the "WMATA Board"), with four appointees each (two voting members and two non-voting members) from Maryland, Virginia, the District of Columbia, and the federal government.[2]

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[1] *Metro Compact Annotated, as amended through August 2009*, Foreword, WMATA, https://www.wmata.com/about/board/upload/Compact_Annotated_2009_final.pdf (last visited Dec. 3, 2017).

[2] Md. Code Ann., State Gov't § 10-204(5)(a); Va. Code Ann. § 33.2-3100(5)(a); D.C. Code Ann. § 9-1107.01(5)(a).

The WMATA signatories are considering a plan to temporarily reduce the number of directors on the WMATA Board from 16 to five. Under this "Reform Board" plan, Maryland, Virginia, the District of Columbia, and the federal government would each appoint one director; these four appointees would then unanimously select a fifth director to chair the Reform Board. This Reform Board plan would maintain the Compact's requirements for a quorum[3] and would not require an amendment to the Compact.

You have asked for a summary of the legal framework for the Reform Board plan under the laws of Maryland, Virginia, and the District of Columbia. That summary follows. In short, the authorities with the power to appoint directors to the WMATA Board would install a Reform Board in two steps: First, the appointing authorities for Maryland, Virginia, the District of Columbia, and the federal government would suspend the appointments of the 16 current directors of the WMATA Board. Then, to form a five-member Reform Board, the Governor of Maryland, the Governor of Virginia, the Mayor and Council of the District of Columbia, and the U.S. Secretary of Transportation would each choose one new director. Once selected by these four new directors, the chair would join the Reform Board by an appointment from the authority for the jurisdiction where the chair resides.[4]

[3] There is a quorum of the WMATA Board when there are four directors with at least one director from Maryland, Virginia, and the District of Columbia. Any majority voting in favor of a Board action must include at least one director from Maryland, Virginia, and the District of Columbia. Md. Code Ann., Transp. § 10-204(8)(a); Va. Code Ann. § 33.2-3100(8)(a); D.C. Code Ann. § 9-1107.01(8)(a).

[4] Depending on where the chair resides, he or she would be appointed by the Governor of Maryland, the Governor of Virginia, or the Mayor and Council of the District of Columbia.

I. Overview: Authorities with Power to Appoint Directors to the WMATA Board

The WMATA Compact vests one authority for each signatory with the power to appoint directors on the WMATA Board. For the District of Columbia, the Council of the District of Columbia has the power to select the District of Columbia's four directors.[5] For the federal government, the U.S. Secretary of Transportation has the appointment authority.[6]

For Maryland, the WMATA Compact names the Washington Suburban Transit Commission (the "WSTC") as the appointing authority.[7] In practice, however, because of the laws governing the WSTC, the Governor of Maryland has the ultimate authority to select Maryland's two voting directors, while the Montgomery County Executive and the Prince George's County Executive each appoint a non-voting director. Under parallel provisions of the Montgomery County Code and the Prince George's County Code, the Governor of Maryland, the County Executive of Montgomery County, and the County Executive of Prince George's County each appoint two commissioners to the WSTC.[8] "Each [WSTC] commissioner serves at the pleasure of the respective appointing official."[9] The Governor has the power to appoint Maryland's voting directors to the

[5] D.C. Code Ann. § 9-1107.1(5). By tradition, however, the Council has split the appointments with the Mayor.

[6] Md. Code Ann., Transp. § 10-204(8)(a); Va. Code Ann. § 33.2-3100(5)(a); D.C. Code Ann. § 9-1107.01(5)(a).

[7] Md. Code Ann., Transp. § 10-204(5)(a).

[8] Montgomery County Code § 87-5; Prince George's County Code, Wash. Suburban Transit Commission § 5. The Maryland Secretary of Transportation acts as the seventh commissioner on the WSTC.

[9] Montgomery County Code § 87-5(a)(9); Prince George's County Code, Wash. Suburban Transit Commission § 5(a)(9).

WMATA Board because, under the Montgomery County Code and the Prince William County Code, the Governor's appointees to the WSTC "shall serve as the [WSTC's] appointees to be principal members of the [WMATA] Board of Directors."[10]

For Virginia, while the WMATA Compact vests the Northern Virginia Transportation Commission (the "NVTC") with the appointment power for Virginia's directors on the WMATA Board,[11] Virginia's WMATA Board appointments are actually split between the NVTC and the Virginia Secretary of Transportation. Under the Code of Virginia, the Virginia Secretary of Transportation or his designee is automatically a commissioner on the NVTC;[12] he or she is also automatically one of the NVTC's two appointments to the WMATA Board.[13] So the Virginia Secretary of Transportation (who reports to the Governor of Virginia) appoints one of Virginia's voting directors to the WMATA Board while the NVTC appoints Virginia's other voting WMATA director and the two non-voting directors.

II. Step One: Suspend the Appointments of the 16 Current WMATA Directors

The first step to installing a Reform Board would be for the authorities with appointment power for Maryland, Virginia, the District of Columbia, and the federal government to simultaneously suspend the appointments of the current WMATA

[10] Montgomery County Code § 87-5(a)(4)(iii); Prince George's County Code, Wash. Suburban Transit Commission § 5(a)(4)(iii).

[11] Va. Code Ann. § 33.2-3100(5)(a).

[12] Va. Code Ann. § 33.2-1907(B).

[13] *Id.*

directors.[14] To avoid any confusion over the powers of non-voting directors when there are no voting directors on the Board, the appointing authorities should suspend both voting and non-voting directors.

To that end, the Mayor and Council of the District of Columbia Council would suspend the four directors from the District of Columbia and the U.S. Secretary of Transportation would suspend the four federally appointed directors. For Maryland, the Governor would suspend the appointments of Maryland's two voting directors by suspending their appointment to both the WSTC and the WMATA Board; the Montgomery County Executive and the Prince George's County Executive would each do the same for Maryland's two non-voting directors. For Virginia, the Virginia Secretary of Transportation would suspend his chosen WMATA director by suspending his or her appointment to the NVTC and the WMATA Board; the NVTC would suspend Virginia's remaining voting director and its two non-voting directors.

These suspensions, if made simultaneously by all appointing authorities, would bring the number of WMATA Board members from 16 to zero. At that point, the way would be clear for a Reform Board.

III. Step Two: Appoint Five New Directors to Form the Reform Board

A Reform Board would be comprised of five directors—one greater than the number required for a quorum under the WMATA Compact.[15] Four of the Reform Board

[14] In the absence of a codified procedure for suspending a director's appointment to the WMATA Board, the suspension would be effectuated by a letter from the appointing authority informing the director that his or her appointment has been suspended.

[15] Md. Code Ann., Transp. § 10-204(8)(a); Va. Code Ann. § 33.2-3100(8)(a); D.C. Code Ann. § 9-1107.01(8)(a).

appointments would come from appointing authorities for Maryland, Virginia, the District of Columbia, and the federal government, respectively. These four directors would unanimously select a fifth director to chair the Reform Board. The appointing authority in either Maryland, Virginia, or the District of Columbia would then formally appoint the chair, depending on where he or she resided.

For the District of Columbia, the Council (and, by tradition, the Mayor) has authority to appoint directors to the WMATA Board,[16] and so the Mayor and Council would name one District resident to be their appointee to the Reform Board. For the federal government, the U.S. Secretary of Transportation would appoint a Reform Board director who is a resident of either Maryland, Virginia, or the District of Columbia.[17]

For Maryland, the Governor has the authority to select Maryland's appointee to the Reform Board because under the statutes governing the WSTC, the Governor's appointees to the WSTC are Maryland's voting directors on the WMATA Board.[18] Accordingly, the Governor would fill one of his two seats on the WSTC, and that appointee would join the Reform Board.[19]

Similarly, in Virginia, the power to appoint Virginia's representative on the Reform Board belongs to the Virginia Secretary of Transportation and, by extension, to the

[16] *See supra* n. 5.

[17] Md. Code Ann., Transp. § 10-204(8)(a); Va. Code Ann. § 33.2-3100(5)(a); D.C. Code Ann. § 9-1107.01(5)(a).

[18] "The Governor's appointees shall serve as the [WSTC's] appointees to be principal members of the [WMATA] Board of Directors." Montgomery County Code § 87-5(a)(4)(iii); Prince George's County Code, Wash. Suburban Transit Commission § 5(a)(4)(iii).

[19] Maryland's appointee to the Reform Board cannot be an elected official. *See* Montgomery County Code § 87-5; Prince George's County Code, Wash. Suburban Transit Commission § 5.

Governor. Under the Code of Virginia, the Virginia Secretary of Transportation or his designee is automatically a voting member on the WMATA Board.[20] So, to make an appointment to the Reform Board, the Governor—through the Virginia Secretary of Transportation—would name a new commissioner to the NVTC, who would then become Virginia's director on the WMATA Reform Board. Finally, once the four Reform Board directors have chosen a chair, that chair would be formally installed on the Reform Board by the appointing authority for the jurisdiction where he or she resides: either the Governor of Maryland, the Governor of Virginia,[21] or the Mayor and Council of the District of Columbia.

In addition to satisfying residency requirements for their respective jurisdictions, the appointees to the Reform Board would have to meet the minimum requirements for a WMATA director under parallel provisions of the Transportation Code of Maryland, the Code of Virginia, and the Code of the District of Columbia. Namely, he or she:

- Must reside in an area served by WMATA;
- Cannot have been a WMATA employee within the last year;
- Must be a regular patron of WMATA;
- Must have experience in a relevant area of expertise.[22]

[20] Va. Code Ann. § 33.2-1907(B).

[21] If the chair were a Virginia resident, the appointment would be made through the Northern Virginia Transportation Commission, as it has the formal authority to appoint Virginia's second voting director.

[22] These areas include: transit planning, transportation planning, or land use planning; transit management, transportation management, or other public sector management; engineering; finance; public safety; homeland security; human resources; or law. Alternatively, a WMATA Director can have "[k]nowledge of the region's transportation issues derived from working on regional transportation issues."

IV. Conclusion

Installing a Reform Board would require several different federal, state, and local government officials working together to jointly execute a series of coordinated actions with unity of purpose. If properly executed, however, this plan would make it possible to replace the current 16-member WMATA Board of Directors with a smaller, five-member Reform Board without amending the WMATA Compact.

Va. Code Ann. § 33.2-1907(B); D.C. Code Ann. § 9-1108.11(a)(2); Montgomery County Code § 87-5(a)(5)(iii); Prince George's County Code, Wash. Suburban Transit Commission § 5(a)(5)(iii).

Review of Operating, Governance and Financial Conditions

at the

Washington Metropolitan Area Transit Authority

2017

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EXECUTIVE SUMMARY

This report compares the Washington Metropolitan Area Transit Authority (WMATA) against other large transit agencies on a variety of indicators. Data reflects 2015 unless otherwise stated.

Cost Structure. By multiple measures, WMATA's cost structure is generally average for a large transit agency. All-in labor costs per hour, including salaries, wages and fringe benefits, are average. The unit cost to deliver service, as measured by total operating and maintenance (O&M) spending per hour of service delivered, is average for Metrobus and nine percent above average for Metrorail. Higher than average Metrorail O&M costs derive from rail maintenance spending that is 20 percent or more above average. Costs for rail operations are average.

Although WMATA's unit costs to deliver service are mostly average, it has delivered high levels of both bus and rail service considering the level of ridership. In FY2015, bus service hours per 10,000 passenger trips were 25 percent above average, and rail service hours per 10,000 passenger trips were 22 percent above average. Bus service levels per rider have been high going back at least 15 years. For rail, high service levels per rider emerged mostly after 2009, as service kept expanding while ridership fell. In 2017, WMATA reduced train frequencies significantly and this should bring rail service levels closer to average. Corresponding changes to bus service were more limited.

Two labor policies that contribute to cost were found to be outliers. On average, WMATA's hourly employees contribute 3.1 percent of wages to pension, where the national average among all workers in defined benefit plans is 7.1 percent. In addition, WMATA's unionized employees count overtime earnings in determining post-retirement pension payments. Changing these policies would generate savings, although it should be noted that WMATA's all-in labor costs per hour were average even with these policies in place.

Funds Paid by State and Local Governments in the Region. Under the WMATA compact, any costs not covered by federal grants, fares or other internally-generated revenues are paid by the region's jurisdictions. Even though WMATA's O&M costs are average for a large transit agency, these state and local payments have been growing rapidly, at nearly 10 percent per year. This steep increase in payments is caused almost entirely by four factors:

- The cost of buying new railcars;
- Increased spending on rehabilitating the WMATA rail system;
- Growth in WMATA's contributions to pension plans; and
- A large revenue decline due to falling ridership.

After accounting for these factors, all other WMATA costs grew at around three percent per year.

Board Operations. With 16 members, WMATA's board is large. The average transit agency board has nine members. The WMATA board has nine committees or subcommittees, tied for the highest number among large peer transit agencies. Recent efforts to streamline the committee structure have not been successful. The WMATA board also has many meetings – there were 85 board, board committee and board subcommittee meetings between June 1, 2016 and May 30, 2017.

WMATA's board includes elected officials, a trait it shares with 22 percent of transit agency boards. However, because of the way WMATA is funded, the elected officials on its board could be characterized as 'dual fiduciaries' – that is, accountable for the financial health of both WMATA and a local government that makes payments to WMATA. This arrangement is very rare at other large transit agencies, which are mostly supported with dedicated taxes.

Opportunities for Improved Financial Performance. This report estimates the effects of six measures to improve WMATA finances. In dollar terms, the largest is a return of rail ridership. Metrorail ridership declined 14 percent between FY2015 and FY2017, while other U.S. heavy rail systems saw a decline of just two percent. Returning to FY2015 levels (minus the effects of this broad national decline) would reduce the need for operating subsidies by as much as $57 million per year. WMATA's customers are its biggest funder.

The WMATA bus system is ripe for a major reset that would update where and when service is offered. The scenario analyzed for this report yields a subsidy reduction of as much as $38 million per year, through a combination of reduced costs and increased revenues. Bringing employee contributions to pension up to the national average could be expected to yield $25 million per year. Other changes – decreased fare evasion, more advertising, and lower absenteeism – could yield an additional $35 million per year combined.

Implementing these measures would take several years, and achieving full results on all fronts simultaneously would be difficult. Nonetheless, it is reasonable to estimate a possible reduction in expected operating subsidies of at least $40 million per year after several years. As described below, such a reduction in operating payments by the region's jurisdictions would allow for funds to be shifted to capital needs.

Need for Capital Investment. Metrorail opened in 1976, and many of its components began to reach their 30-year useful life around 2006. An increase in capital funding would have been appropriate at this point. Unfortunately, new federal funds under the Passenger Rail Investment and Improvement Act (PRIIA) were not approved by Congress until FY2009, and did not flow to WMATA until FY2011. It took even longer for WMATA to ramp-up spending. In FY2017, capital investment finally reached a level sufficient to stabilize the system, but the decade-long lag between growing need and lower-than-necessary investment helped create a backlog of deteriorated assets currently estimated at $7 billion. In addition, as each year passes additional assets wear out and must be renewed. From FY2018 to FY2026, this ongoing need is estimated at a further $1.1 billion per year.

To estimate the funding needed to cover all these state-of-good-repair needs, a financial model of WMATA's capital program was developed out to 2040. It estimates that WMATA would require additional capital funds of $540 million per year above current contributions from its federal, state and local funding partners. If savings to the operating budget of $40 million per year are achieved as stated above, this need could be met with $500 million per year in new capital funding. This funding would cover only WMATA's state-of-good-repair needs; any expenditures to enhance the system would require supplemental funding.

To eliminate its state-of-good-repair backlog in a timely manner, WMATA would need to pledge a large portion of new revenues to back new borrowing, estimated by the model at $5.9 billion. For this reason, new funding would need to be dedicated in a manner adequate to secure bonds.

ORIGIN AND METHODOLOGY

In February, 2017, the Commonwealth of Virginia enacted a requirement calling for "an objective review of the operating, governance and financial conditions" at WMATA. The review was required to "compare WMATA to other rail transit systems in the United States". (Conference Report for House Bill 1500, Item 436#3c, 2017.) The Virginia Department of Rail and Public Transportation then contracted with the global consulting and engineering firm WSP to perform the analysis. This report presents the results of this analysis.

The primary source of information used was the National Transit Database (NTD). This database is maintained by the U.S. Department of Transportation's Federal Transit Administration (FTA) and contains data reported by all transit agencies in the U.S. that receive federal funds. At the time this report was prepared, the latest year of NTD data for all agencies was 2015.

This report compares WMATA to eight other large transit systems: the New York Metropolitan Transit Authority (NYMTA); the Chicago Transit Authority (CTA); the Los Angeles County Metropolitan Transit Authority (LAMTA); the Massachusetts Bay Transportation Authority (MBTA); the Southeastern Pennsylvania Transportation Authority (SEPTA); New Jersey Transit (NJT); the San Francisco Bay Area Rapid Transit District (BART); and the Metropolitan Atlanta Rapid Transit Authority (MARTA). Unless otherwise noted, WMATA Metrorail is benchmarked against the heavy rail systems of seven of these eight agencies; NJT is excluded because it operates commuter rail and light rail but not heavy rail. WMATA Metrobus is also benchmarked against seven systems; BART is excluded because it has no bus system.

CONTENTS

PART 1. COMPARISON TO OTHER LARGE TRANSIT AGENCIES

Workforce

During its fiscal year 2017 (July 1, 2016 to June 30, 2017) WMATA had 13,032 authorized positions. Actual employment levels fluctuate below the authorized level during the year due to ebbs and flows in hiring, retirements and other factors. As shown in Figure 1, authorized staffing levels increased from FY2010 to FY2017, with some of this growth associated with the opening of the Silver Line Phase 1 in 2014. For FY2018, authorized staffing levels were reduced by 1,000, with some of the decrease coming from elimination of unfilled positions.

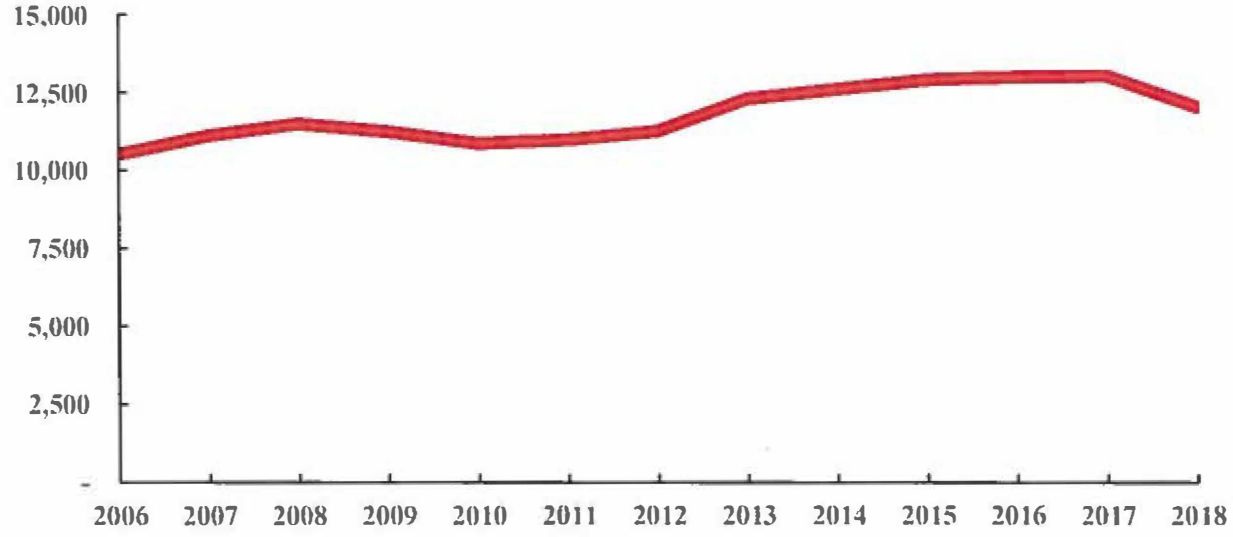

Figure 1. Total approved headcount for WMATA, FY2006 - FY2018. Source: WMATA.

Like most U.S. transit agencies, WMATA's labor force is heavily unionized; 82 percent of employees belong to a union and 18 percent do not. Union representation is divided among five union locals, the largest being the Amalgamated Transit Union (ATU) Local 689, representing 66 percent of WMATA employees.

Wages for WMATA's unionized employees are set through collective bargaining. The last two collective bargaining agreements with ATU Local 689 led to a slight increase in the value of wages. Between 2008 and 2017, ATU Local 689 employees were granted wage increases averaging 1.9 percent per year after accounting for employee contributions to pension. During this period, Washington DC area inflation averaged 1.4 percent per year. As a result, real wages for these employees grew at 0.5 percent per year on average, and in 2017 net wages were four percent higher than in 2008. Most of this net increase accrued between 2014 and 2017, a period when inflation was particularly low. Net annual wage increases granted in these years of low inflation were similar to increases granted in prior years.

Wage and salary levels heavily influence the agency's total cost in delivering service. Figure 2 (next page) compares the all-in cost of WMATA's workforce to its peer transit agencies on an hourly basis, including all salary, wage and fringe benefit costs for both labor and management. In some years WMATA's costs were slightly above the peer average, and in some years they were slightly below. Overall, WMATA's hourly labor costs have been consistently average or close to it.

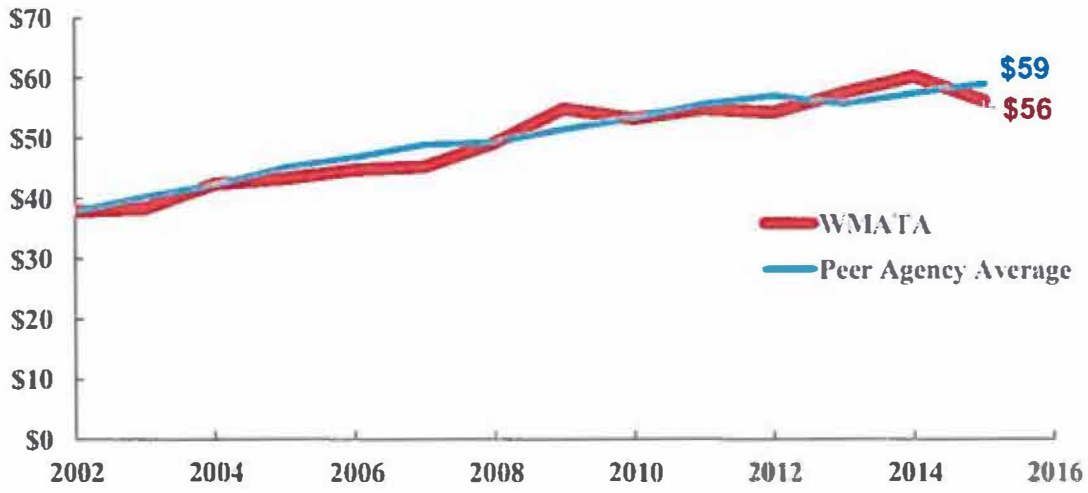

Figure 2. Total cost of wages, salaries and fringe benefits per hour worked, WMATA vs. large peer transit agencies. Source: NTD.

WMATA employees are not allowed to strike. Instead, union employees are subject to binding arbitration if labor and management cannot reach agreement. It has been suggested that a regime giving labor the right to strike and eliminating binding arbitration could lead to lower agency costs. To test this hypothesis, all-in labor costs per hour at agencies that allow strikes were compared to those same costs at no-strike agencies. No difference in labor costs between the two groups was found.

One additional method was used to assess personnel costs. Compensation at each agency, not including fringe benefits, was compared to its region's cost of living. (Cost of living was determined using the Economic Policy Institute's estimate of the cost for one adult and one child to "attain a modest yet adequate standard of living" in various regions of the country.) The average WMATA employee earns 106 percent of the DC region's cost of living, which makes WMATA average among peer transit agencies (Figure 3).

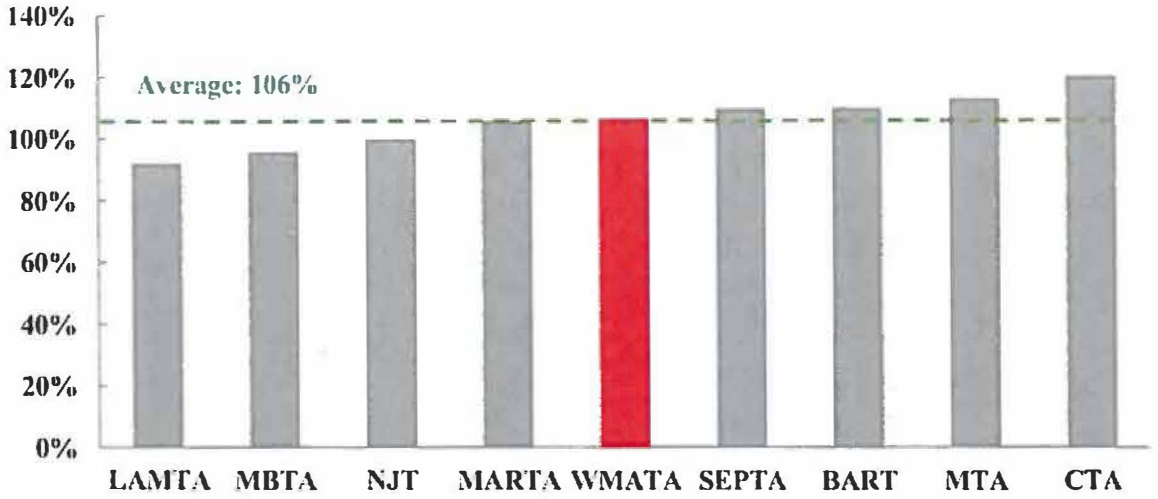

Figure 3. Average wage of transit employees as percent of a region's cost for one adult & one child "to attain a modest yet adequate standard of living", 2015. Sources: NTD; Economic Policy Institute.

WMATA maintains two notable labor policies that were found to be outliers. First, hourly employees contribute an average of 3.1 percent of wages to pension, where the national average reported by the Bureau of Labor Statistics for all workers in defined benefit plans is 7.1 percent. Second, WMATA's unionized employees count overtime earnings in determining post-retirement pension payments. Some public agencies allow this and some do not.

These two items should be viewed in context. First, even with these policies in place, WMATA's all-in labor costs per hour have been average among peer transit agencies. Second, WMATA's method of calculating base retirement payments is slightly less generous than an average of 20 selected local agencies. As shown in Figure 4, the WMATA retirement formula pays an employee retiring at age 62 with 30 years of service 55 percent of their final annual salary. The average paid by the 20 city and county governments shown in Figure 4 is 60 percent.

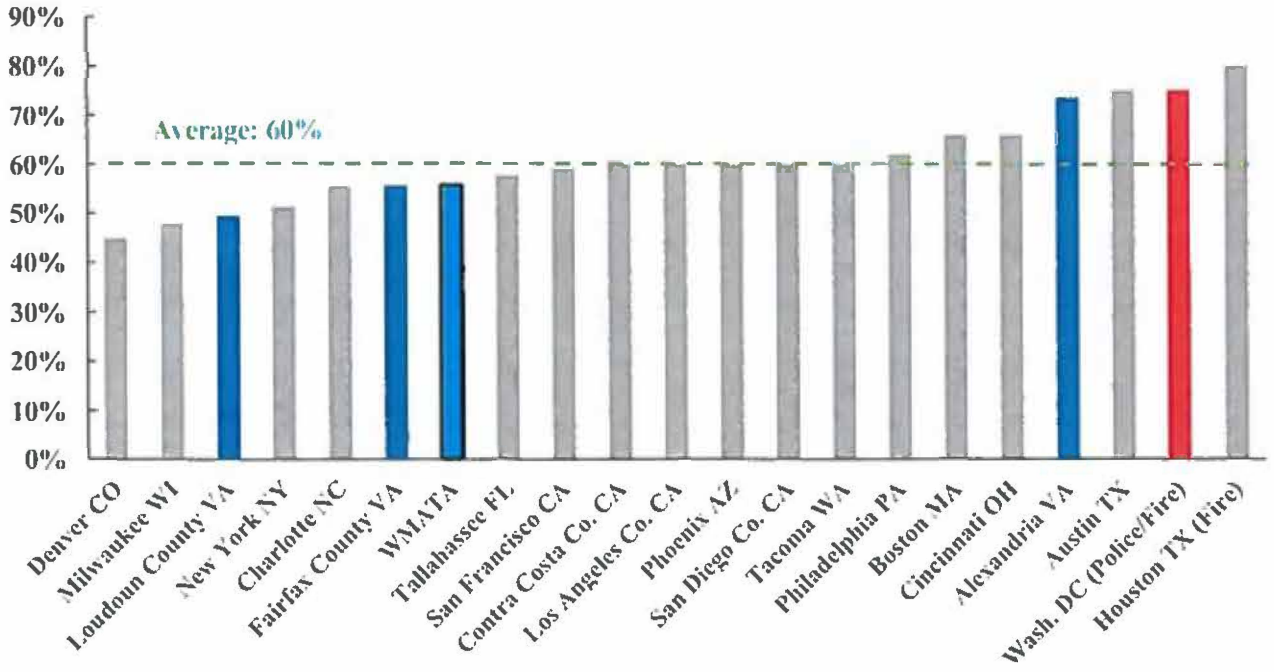

Figure 4. Retirement payments as a percent of final annual salary for an employee with 30 years of service retiring at age 62. Source: Center for State & Local Government Excellence; "Retirement Benefit Decisions by City and County Governments"; WMATA labor agreements.

Pensions

WMATA maintains defined benefit pension plans for most of its unionized employees. Under these plans, employees earn credit based on years of service and final annual salary, and receive benefits after they retire. WMATA management employees are in a defined contribution plan, similar to a 401(k).

Like most government agencies, in recent years WMATA has seen both pension liabilities and annual pension contribution amounts escalate. Several factors are at play.

- People are living longer and this leads to increasing pension liabilities. The expected lifespan of the average American adult has increased by around two years in the last 25 years, which represents more than a 15 percent increase in expected life span after the normal retirement age of 65.

- Most pension payouts to retirees are generated by investment returns on accumulated pension assets. When investment returns are strong, the burden on employers and employees to fund the pension is reduced. Inconsistent investment returns from early 2000s through the recent financial crisis led to increasing demands on employers to make pension contributions out of annual budgets.

One measure of pension health is the 'funding ratio', which represents the total expected value of a pension fund's assets compared to its total expected payouts. Ideally, pension funds should be 100 percent funded, but in practice this is not usually the case. Pensions tend to achieve a 100 percent funding ratio in periods of high investment returns, and fall below 100 percent when investment returns are weaker. As shown in Figure 5, WMATA's pensions were 77 percent funded on average in 2015. This placed them on par with -- or slightly above – both the national average for public pensions (75 percent funded) and major pensions in Maryland and Virginia. DC's two remaining defined benefit pensions were stronger.

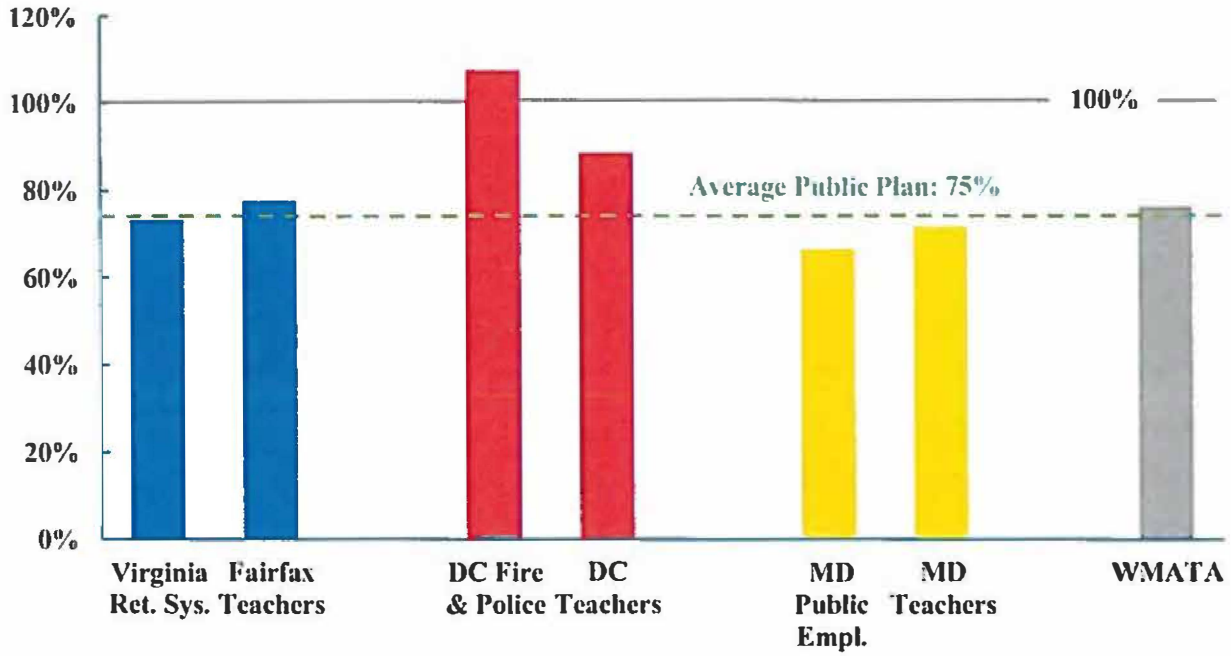

Figure 5. 2015 funding ratios for WMATA pension plans and selected DC, Maryland and Virginia plans. Source: Boston College Public Pension Plan Database; WMATA.

Although escalating contributions to pension have been a major cost item for WMATA in recent years, contribution amounts have stabilized since 2015. This is partly due to new employee contributions to pension arising from the last labor contract cycle, and partly due to stronger investment returns. Employee contributions to pensions dating from WMATA's founding were terminated as part of a labor agreement in the 1980s, and were finally restarted in 2015. In sum, although WMATA has pension problems, there is no evidence these problems are out of character with the similar challenges faced by many other public agencies.

Safety and Security

WMATA's performance on several measures of safety and security is presented in Figure 6.

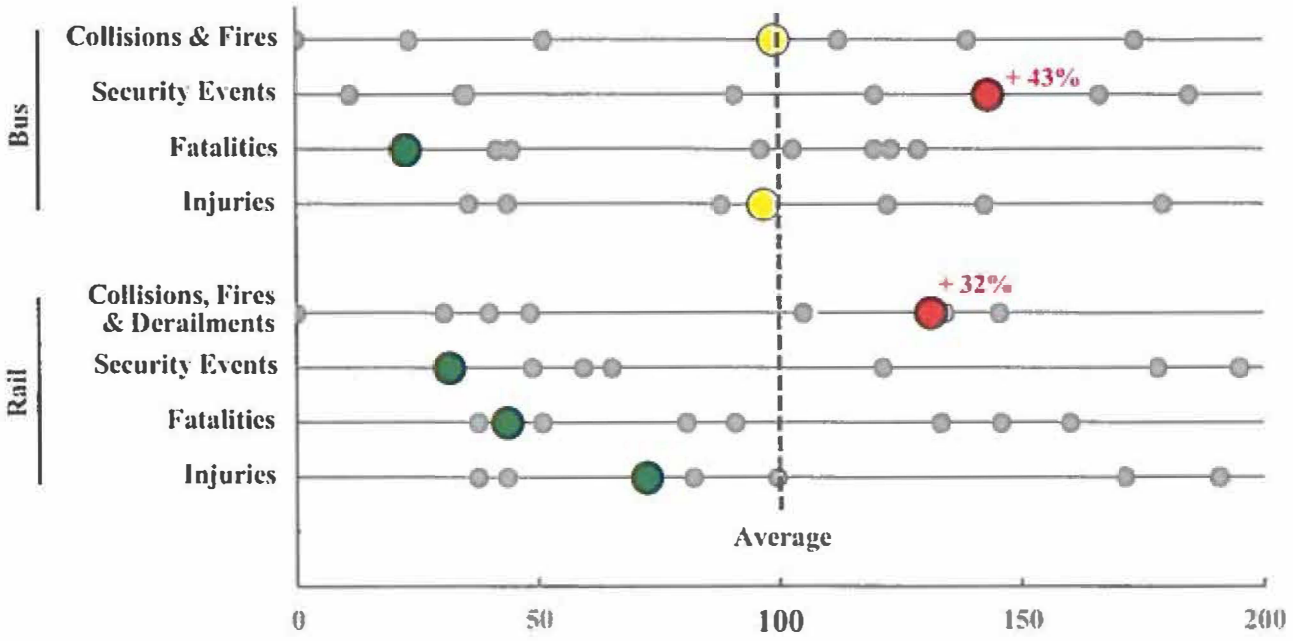

Figure 6. WMATA safety and security events compared to eight peer transit agencies, 2014-2015. Source: NTD.

During 2014 and 2015, WMATA was average or better than average on six out of eight measures, and worse than average on two measures. The number of security events on Metrobus was higher than the average of peer agencies, as were collisions, fires and derailments on Metrorail.

Bus Operations and Maintenance

A common financial measure for transit service is the 'farebox recovery ratio', which measures how much of a service's ongoing operations and maintenance expense is being recovered through fares. In FY2015, fare box recovery for WMATA's Metrobus system was just 23 percent, well below WMATA's peer agencies, which recovered 32 percent of their bus O&M costs on average.

This poor farebox recovery is not due to high costs. WMATA's FY2015 cost to deliver an hour of bus service was average. The components that produce this unit cost are shown in Figure 7, including wages, fringe benefit costs, and the efficiency of both the operations and maintenance workforces.

Poor farebox recovery at Metrobus is due to two non-cost factors. The first is low fares. Until mid-2017, WMATA's bus fare was $1.75, low among its peer agencies. The base fare has since been raised to $2.00, closer to the peer average of $2.16. However, the cost of a weekly pass did not rise and is still $17.50. (Directly comparing real world bus fares between agencies is complicated by the different policies they use to price bus/rail transfers.) The second factor causing low farebox recovery is high service levels given ridership. Hours of bus service offered per 10,000 passenger trips were 25 percent above the peer average.

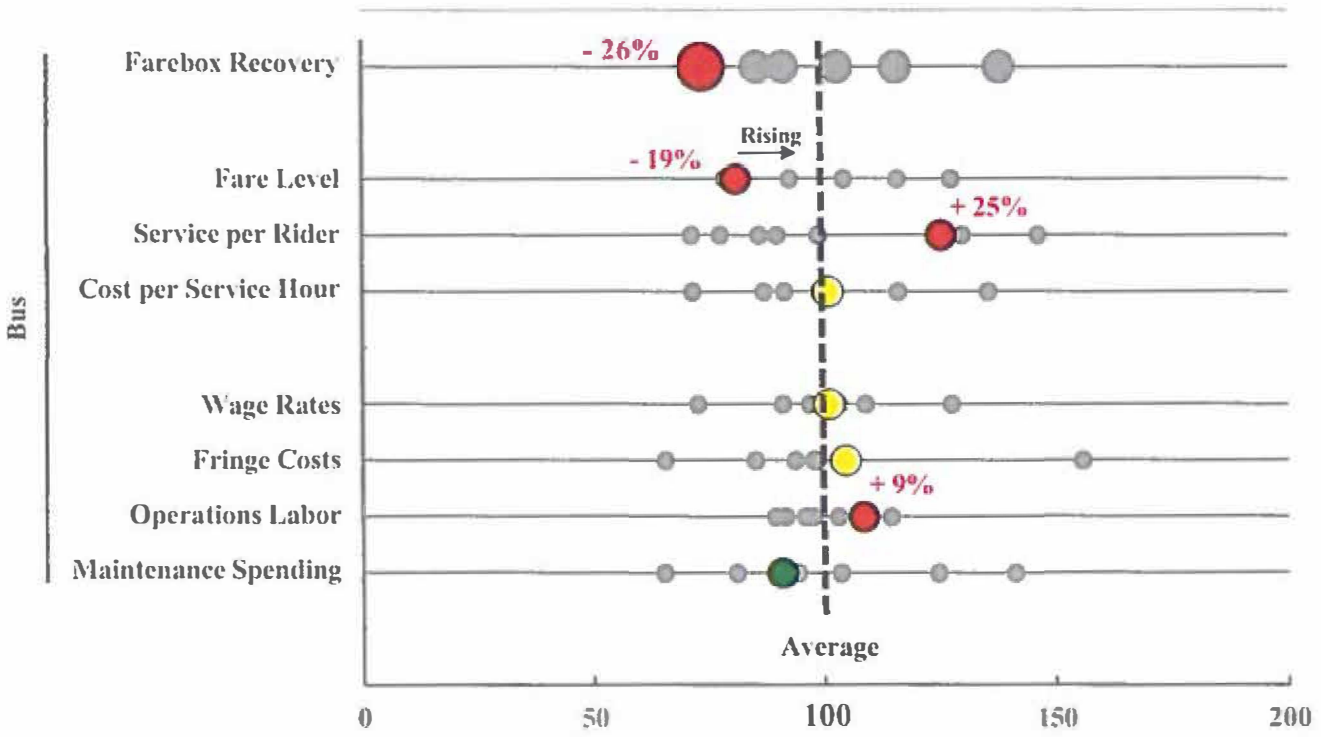

Figure 7. WMATA 2015 bus system performance vs. seven peer agencies. Source: NTD.

Low farebox recovery could be partly caused by fare evasion, but it is difficult to estimate the magnitude of this using publicly available data. Anecdotal evidence suggests that fare evasion has been rising. A consistent pattern of high service levels per rider and low fares on Metrobus has existed for many years. The recent increase to a base fare of $2.00 makes today's Metrobus base fare as high as it has ever been on an inflation-adjusted basis, but still below the average of peer transit agencies.

The indicator labeled 'Operations Labor' depicts the number of labor hours for bus operations and administration that are required to deliver one hour of bus service. The nine percent excess indicates that labor is being used somewhat less efficiently at Metrobus than at peer bus agencies. This is one of the factors supporting the 'bus reset' suggested in Part 2 of this report.

Rail Operations and Maintenance

In contrast to Metrobus, farebox recovery for Metrorail was higher than the peer average in 2015, although declining ridership since then has likely led this figure to drop closer to the peer average.

Higher than average farebox recovery was primarily due to high fare levels compared to other heavy rail systems (shown in Figure 8 as the average fare earned by WMATA per passenger mile of travel.) Service levels on Metrorail were also higher than average – in 2015 WMATA offered 22 percent more rail service per 10,000 passenger trips than the average peer agency heavy rail system. WMATA's operations and maintenance cost per hour of rail service delivered was nine percent above the peer average. This was due to higher than average maintenance spending. Other inputs to unit cost – wage costs, fringe benefit costs and overall operations costs – were average or below average.

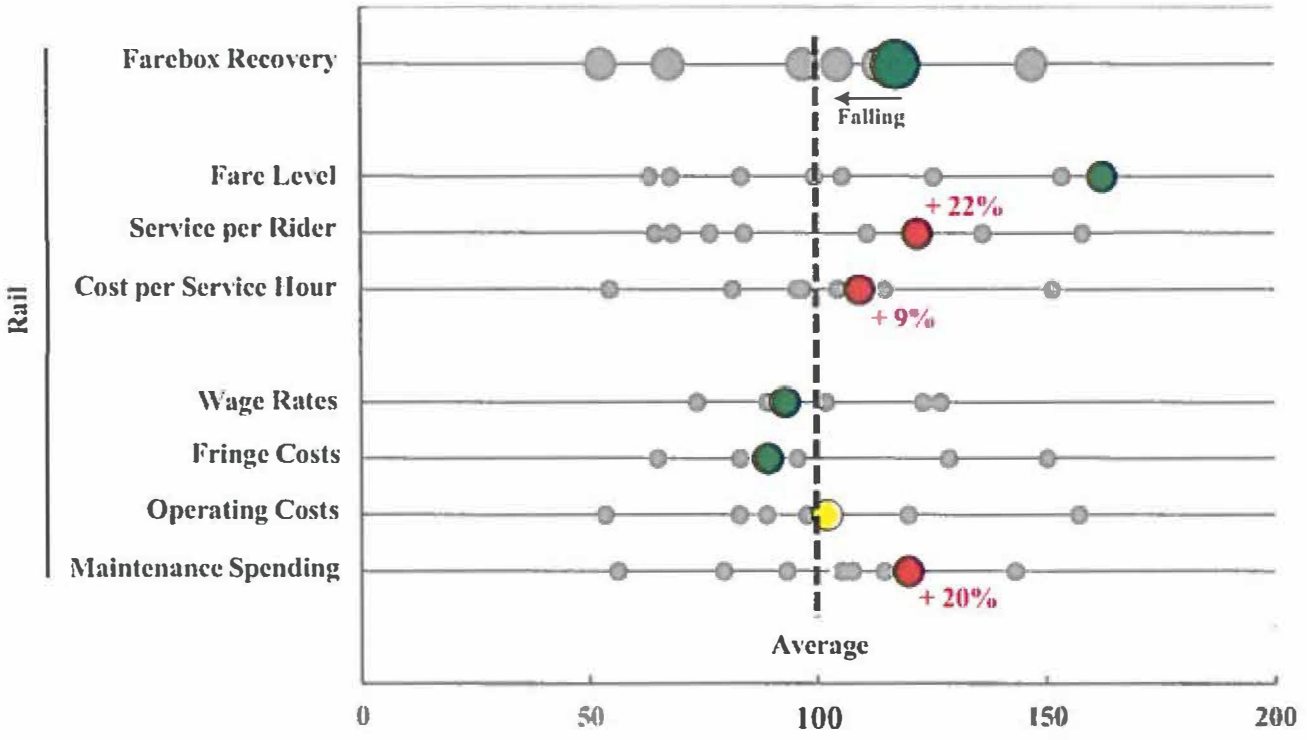

Figure 8. WMATA 2015 rail system performance vs. seven peer agencies. Source: NTD.

Unlike Metrobus, the higher than average level of Metrorail service per 10,000 passenger trips is a relatively recent phenomenon. In 2002, Metrorail's service levels per passenger were exactly average compared to peers. Between 2002 and 2009, both ridership and service levels grew. However, since then ridership has been mostly flat or declining, while service levels have continued to rise. The notable increase in service levels in 2015 shown in Figure 9 is mostly the result of the opening of Silver Line Phase 1.

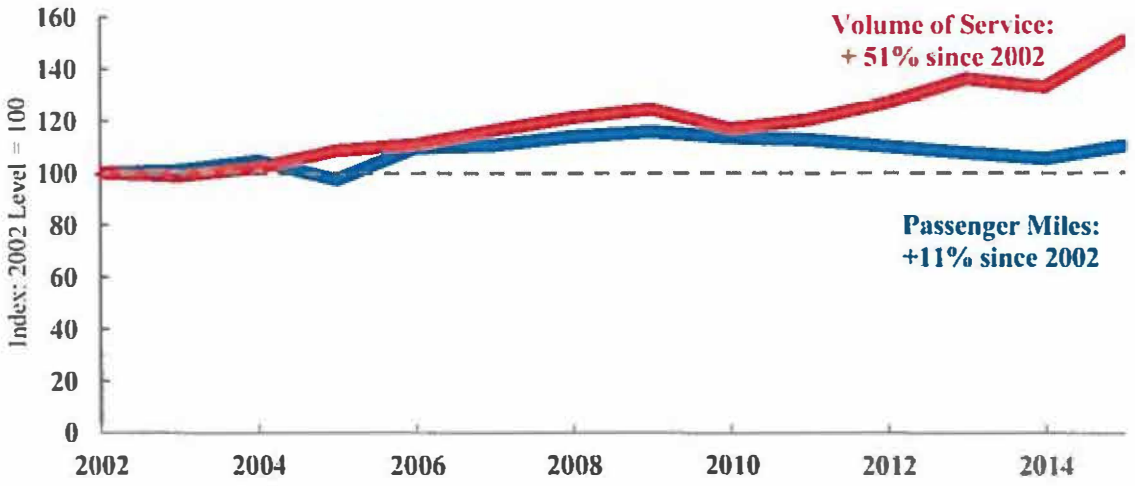

Figure 9. Change in hours of service and passenger miles travelled, WMATA Metrorail. Source: NTD.

Capital Program

WMATA's need for capital investment is determined by the age and condition of its assets. Each asset, from railcars to escalators, has a useful life. Once this useful life is exceeded, the agency must plan to reconstruct or replace the asset. Different types of assets have very different useful lives, but a general rule of thumb is to assume an average useful life of 30 years.

The Metrorail system opened in 1976 and quickly expanded, as shown in Figure 10. In its first 10 years of operation the system grew to roughly 70 miles in length, and today it is over 117 miles long. The original segments of the system began turning 30 in 2006, and today over half the length of the rail system is beyond its theoretical 30-year useful life.

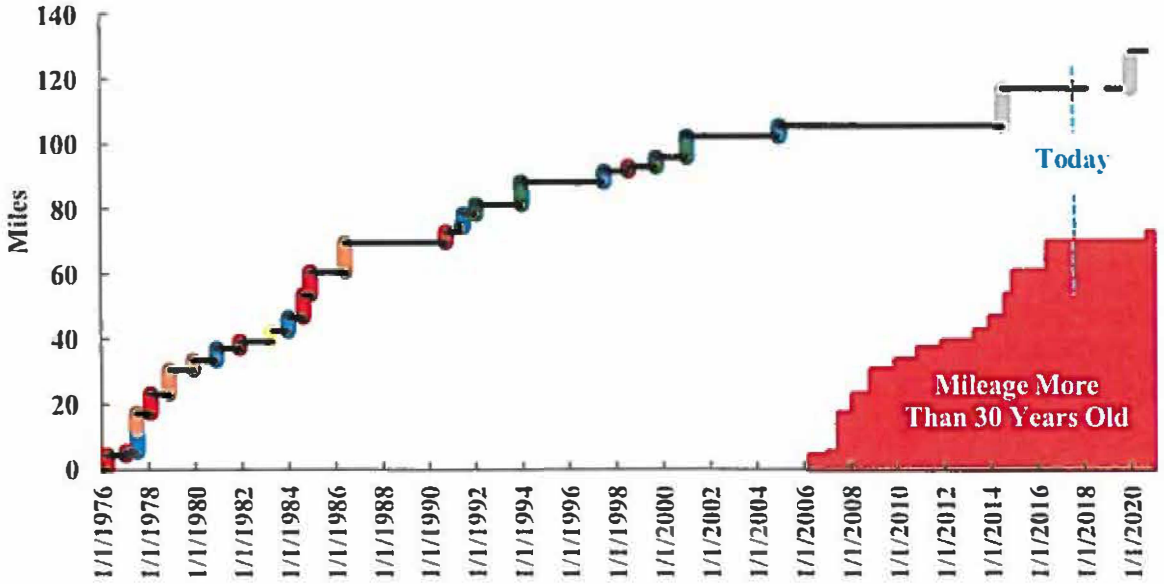

Figure 10. Growth of the Metrorail system since 1976. Source: WMATA.

To address this, an increase in capital investment to a level sufficient to reconstruct or replace assets as they wore out would have been appropriate around 2006. Although it is difficult to determine a correct theoretical investment level, a rough estimate can be made. A recent assessment by WMATA reported the total value of its asset base to be $39 billion. Assuming a 30-year useful life for an average asset, the agency could expect to replace roughly three percent of its asset base each year at a cost of somewhere around $1.2 billion per year.

As shown in Figure 11 (next page), in FY2017 WMATA achieved approximately this level of capital investment and plans to do so again in FY2018. However, this level was only recently achieved. The gap between necessary investment and actual investment in the preceding decade is a major reason for WMATA's backlog of deteriorated assets with an estimated cost of $7 billion.

During this period, efforts were being made to increase capital funding. As far back as 2005 the need was identified, and in 2008 Congress passed PRIIA, which authorized $150 million per year in new federal capital funds to be matched by an equal amount of new state and local funds. Unfortunately, for various reasons WMATA did not begin receiving these funds until FY2011, and even then had significant difficulty

in ramping up spending to utilize the new revenue. The result was a long period of sustained underinvestment.

Although current investment levels are a major improvement over prior years, it is important to note that the levels achieved since FY2016 are not sustainable given current capital funding provided to WMATA by its federal, state and local funding partners. The current baseline of capital contributions by these funders is approximately $800 million per year, well below today's level of actual spending. In FY2016, WMATA drew down unexpended funds from prior years to make up most of the difference, but in FY2017 and FY2018 the capital budget has been sustained by taking on new debt.

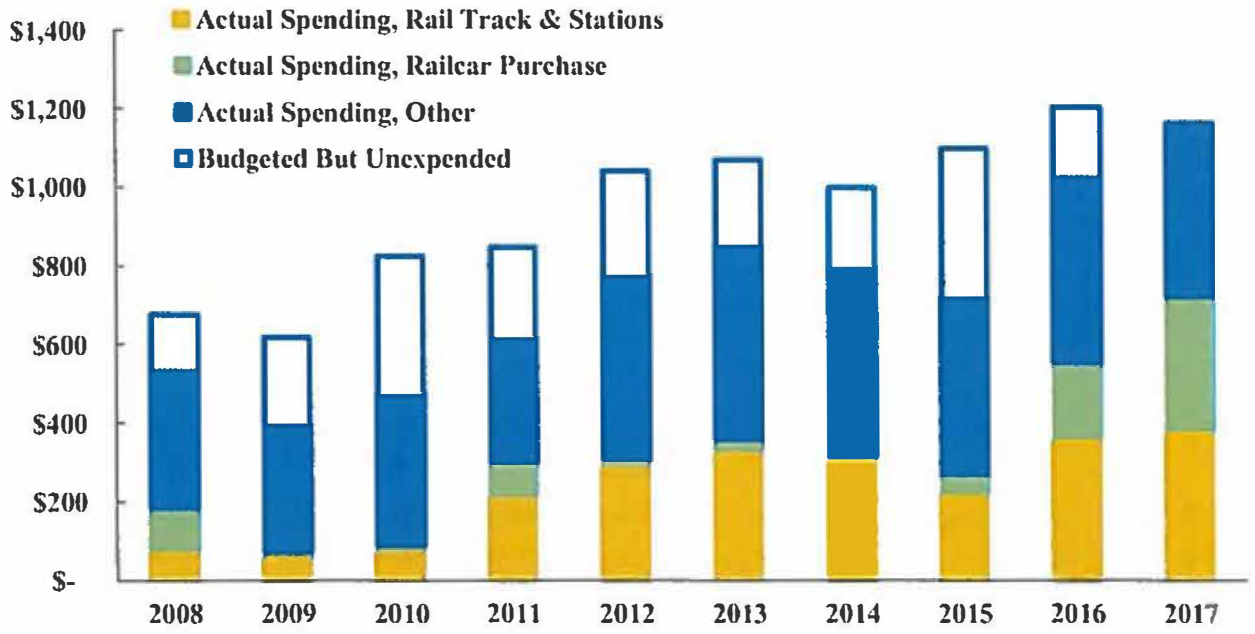

Figure 11. WMATA capital investment, millions of dollars, FY2008 to FY2017. Source: WMATA; WSP calculations.

It will not be possible for WMATA to reduce its backlog of deteriorated assets, or even sustain its current level of investment, without a major commitment of new resources from its funding partners.

Long Term Financial Sustainability

Although WMATA's service delivery costs are generally average for large transit agencies, the level of funds required annually from its state and local funding partners has been growing rapidly, rising at nearly 10 percent per year. As shown in Figure 12, these increases can be traced directly back to four main factors.

- Purchase of new railcars. WMATA is currently replacing a large share of its rail fleet, and expenditures on new railcars rose from zero in FY2014 to over $330 million in FY2017.
- Increased spending on rail system rehabilitation. Investment in the rail system grew by nearly $320 million per year from FY2009 to FY2017.

- Growth in contributions to pension plans. WMATA's contributions to pension have grown by more than $150 million per year since FY2007. After growing rapidly for a decade, contribution levels have stabilized since FY2015.
- A large revenue decline due to falling ridership. Revenue from ridership has fallen by $140 million per year.

Aside from these factors, WMATA's other costs have grown at a relatively reasonable three percent per year for the last dozen years.

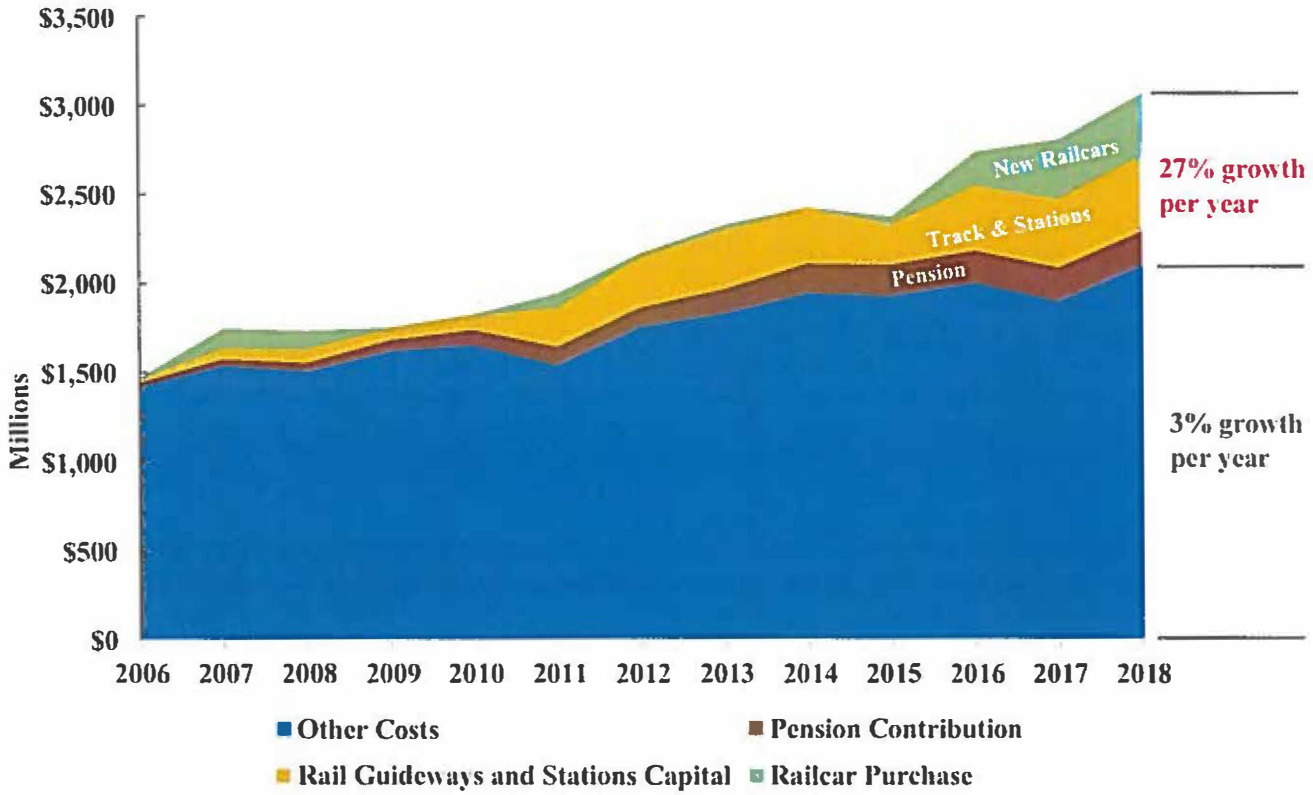

Figure 12. WMATA growth in spending in three major categories vs. all other spending, FY2006 to FY2018. Source: WMATA; WSP calculations.

Within its operating and maintenance budget, WMATA appears to be financially sustainable going forward, although improvements are possible. Several strategies to improve financial outcomes in the O&M budget are described in Part 2 of this report. Under WMATA's proposed budget for FY2019, jurisdictional contributions for operations and maintenance would rise by just three percent. No fare increases are proposed.

Within WMATA's capital budget, spending has risen but must rise even further for the system to achieve a state of good repair. This will not be possible without a substantial increase in the level of capital funding provided to WMATA.

Governance

WMATA's board currently consists of 16 members, eight Principal Members and eight Alternate Members. As shown in Figure 13, WMATA's board is larger than all but one peer agency. The average transit agency board has nine members. No peer agency board has alternate members.

WMATA's board currently has nine board committees and subcommittees, which ties it for the largest number among peer agencies. The WMATA board and its committees and subcommittees meet often. Between June 1, 2016 and May 30, 2017, there were 85 such meetings.

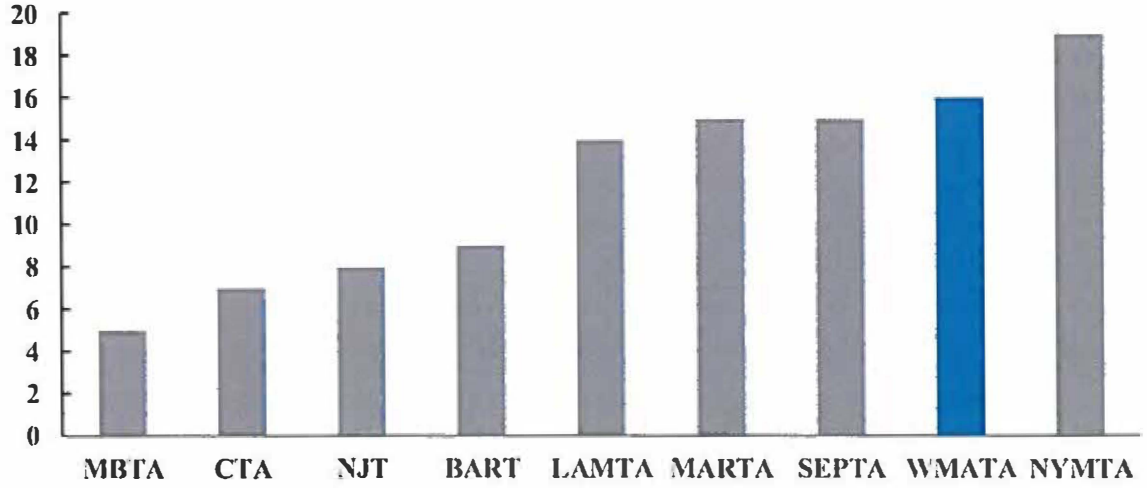

Figure 13. WMATA board size vs. boards at peer agencies. Sources: multiple.

WMATA is unique among peer agencies in giving each board contingents representing one of the three signatory jurisdictions – DC, Maryland and Virginia – a veto over major agency actions. The veto is not exercised often, but anecdotal evidence suggests that its presence nonetheless affects the dynamics of the board. Although none of the peer transit agencies allow a jurisdictional veto, this feature exists at the three other transit agencies in the U.S. that operate under Interstate Compacts: the Port Authority of New York and New Jersey, the Delaware River Port Authority in the Philadelphia region, and the Bi-State Development Agency in the St. Louis region.

WMATA's board includes local elected officials from the region, currently four of the 16 members. Arrangements of this type exist in 22 percent of transit agencies. However, in most of these cases there is a key difference. Where a transit agency is supported directly by dedicated taxes, any elected officials on the board can avoid the awkward position of both requesting funds on behalf of the transit agency and responding to this request on behalf of their home jurisdiction. This so-called 'dual fiduciary' status exists for WMATA's elected official board members. Among peer agencies, only one board member at one other agency has a similar status.

These features of the WMATA board present governance challenges over and above those faced by other transit agencies. With members often appointed to the board with the explicit understanding they will represent their home jurisdiction's policy, operational and financial preferences, WMATA faces major challenges in sustaining both a unified vision for the agency and clear parameters under which management can pursue such a vision.

PART 2. RECOMMENDATIONS

Measures to Reduce Operating Deficits

Figure 14 shows upper bound estimates for the possible financial impact of selected operating deficit reduction measures WMATA could pursue over the next several years. Each measure is described below.

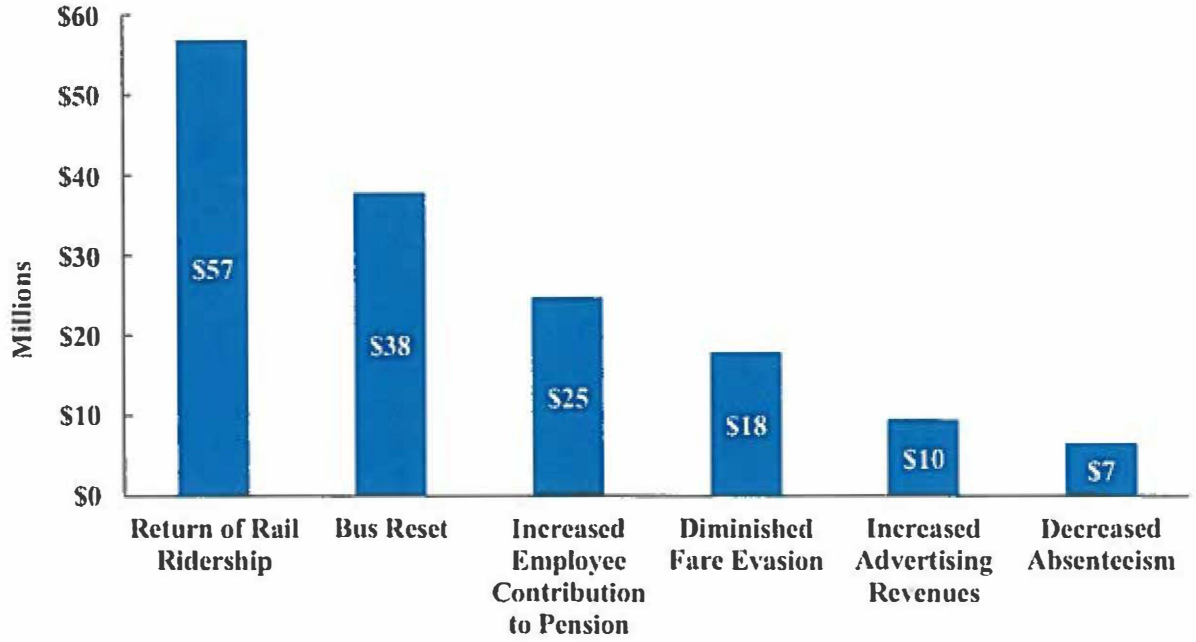

Figure 14. Upper bound estimates for the value of measures to reduce WMATA operating subsidies, in millions of dollars per year at full phase-in. Source: WMATA budget data and WSP analysis.

- *Return of Rail Ridership.* In FY2017 Metrorail ridership was 14.3 percent below FY2015 levels. During this same period, ridership at other U.S. heavy rail systems was also down, but by just 1.9 percent. With WMATA's SafeTrack program of rail system closures now concluded, service reliability is expected to improve, and this opens the possibility that riders who fled the system may begin to return. The scenario depicted here shows the financial effect of Metrorail ridership rising back to a level that is 1.9 percent below the FY2015 level. This is estimated to produce $76 million in new fare revenue and generate $19 million in new costs to run more frequent trains to carry the returning riders. The net benefit to the WMATA O&M budget would be $57 million per year.

  WMATA cannot compel riders to return, and if they do return of their own volition a recovery would likely take several years. Ridership is influenced by many factors, including gasoline prices and the regional economy, but service reliability was a major factor in the loss of riders and will have a large effect on their return. The point of showing this scenario is to focus attention on the how large the effects of changes in ridership can be on agency finances. WMATA's customers are its biggest funder.

- *Bus Reset.* WMATA is among the many transit systems experiencing flat or declining bus ridership, but its difficulties go beyond this. As shown in Figure 7, bus service levels per unit of ridership at WMATA were 25 percent higher than the peer average in 2015. There are several possible explanations for this.

WMATA could be running service on low-performing routes; its bus garages could be in locations that result in long hauls where no passengers are carried; its route structure could be out of date given changing patterns of demand; fare evasion could be masking the actual level of ridership. Each of these could play a role, or all could, but the depth of analysis necessary to understand the source of WMATA's difficulties was not possible for this report.

Nevertheless, a rough estimate was made of the possible financial consequences of a more efficient Metrobus system. The scenario presented here includes several elements. It assumes that bus fares are raised by 10 cents to $2.10, closer to but still below the average base fare among WMATA's peer agencies. In addition, the scenario assumes that WMATA can achieve a five percent reduction in Metrobus operating costs through more efficient routing or other service adjustments or operating practices. In total, this scenario could result in a reduced need for operating subsidies of $38 million per year once fully phased in. The analysis assumes that higher fares and adjusted service could trigger some reduction in bus patronage, but the goal should be the opposite – more efficient operations that both benefit riders and reduce WMATA's need for operating subsidies.

This analysis is presented not to endorse specific bus service changes, but to illustrate the magnitude of the issue. Determining exactly how to adjust Metrobus service will require detailed analysis, so WMATA should consider undertaking a 'bus reset'; that is, a comprehensive bus service study looking at routing, schedules, bus garage locations, work practices and the other major attributes of the bus system. As this report was being finalized, WMATA announced it would be undertaking "a study to overhaul its bus network" that appears similar to what is recommended here.

- *Increased Employee Contribution to Pension.* According to the Bureau of Labor Statistics, the average U.S. worker in a defined benefit pension plan contributes 7.1 percent of their salary to pension. The average member of WMATA's unionized workforce contributes 3.1 percent of salary. (Most contribute three percent, but Transit Police, who operate under their own contract, contribute 7.3 percent.) Raising employee contribution levels to the national average would reduce WMATA's need for operating subsidies by $25 million per year. Pension contribution amounts are set contractually between management and unions, and so making this change would require a change to current WMATA contracts either through negotiation or arbitration.

- *Diminished Fare Evasion.* Very little reliable information exists about the extent of fare evasion at WMATA. Nevertheless, a rough estimate of its fiscal impact was made. This scenario assumes that fare evasion deprives WMATA of five percent of potential revenues from bus and rail fares, and that stricter enforcement and other measures could cut this loss by 50 percent. An estimate of the incremental cost of undertaking such enforcement measures was not made. Under this scenario WMATA could reduce its required O&M subsidies by $18 million per year.

- *Increasing Advertising Revenues.* In 2015, WMATA's advertising revenues were proportionally the lowest among the large transit agencies studied. Advertising revenues were highest at the Chicago Transit Authority (CTA) at 1.84 percent of total O&M costs, while WMATA's advertising revenue was equal to only 1.32 percent of O&M costs. Were WMATA to increase advertising revenues to CTA's level, roughly $10 million per year in additional funds could be generated.

- *Decreased Absenteeism.* When a worker fails to show up for their shift, someone else must be found to perform the work. This often leads to replacements working more than eight hours in a day or more than 40 hours in a week, which triggers overtime pay. In 2016, approximately 940,000 labor hours were missed due to three categories of absenteeism – sick leave, unpaid leave and absent without leave. The scenario depicted in Figure 14 shows the cost savings to WMATA due to lower overtime costs if absenteeism due to sick leave were reduced by 20 percent from 2016 levels and the other two categories were reduced by 15 percent. Savings are estimated to be $7 million per year.

Implementing these measures could be expected to take several years, and achieving full results on any of them, let alone all simultaneously, would be difficult. Nonetheless, it seems reasonable to expect that a reduction in expected operating subsidies of at least $40 million per year could be achieved after several years. If operating subsidies from the region's jurisdictions can be reduced by this amount, this would allow for a corresponding increase in capita payments to WMATA that could be used to address the agency's large capital backlog.

Additional Capital Funding

To assess the adequacy of WMATA's current sources of capital funding, a model of WMATA's state-of-good-repair needs and capital funding sources was developed out to 2040. This model projects that current pledged capital revenues from federal, state and local sources will average approximately $830 million per year between FY2018 to FY2026, assuming Federal PRIIA funding continues at the current level. This baseline of current capital funding is shown in dark blue in Figure 15 (next page).

Limiting WMATA's capital program to this level would have dire consequences. Capital investment would fall from the $1.16 billion achieved in FY2017 to a level too low to even cover the new annual needs that will arise each year in the future, let alone tackle the large backlog of need accumulated from past years. If WMATA's capital spending is constrained at the level of current funding commitments, the system's condition will get worse, not better.

The next task was to estimate the level of additional capital funding required to avoid this outcome. The scenario shown in Figure 15 is designed to achieve three goals: 1) fund WMATA's ongoing state-of-good-repair needs in future years as they arise; 2) fully eliminate WMATA's backlog of deteriorated assets as quickly as possible; and 3) pay any debt serivce generated by new borrowing. In performing this analysis the following assumptions were used:

- Only state-of-good-repair costs were considered; any system enhancements would require other funds. (WMATA's 2016 Capital Needs Inventory shows $10 billion in potential capital projects that are over and above the agency's state-of-good-repair needs.)
- The pace at which work can be accomplished was estimated for five different types of investment: vehicles, guideway, stations, facilities, and systems. For example, it was assumed that spending on vehicle purchases could ramp up quickly once new funding arrives, while work on guideway and stations would be more constrained due to the need to continue carrying passengers.
- New funding was assumed to start on January 1, 2019.
- Federal PRIIA funds were assumed to continue at $150 million per year.
- Federal transit formula grants were assumed to grow at 1.5 percent per year.
- Construction costs and tax revenues were both assumed to grow at two percent per year.

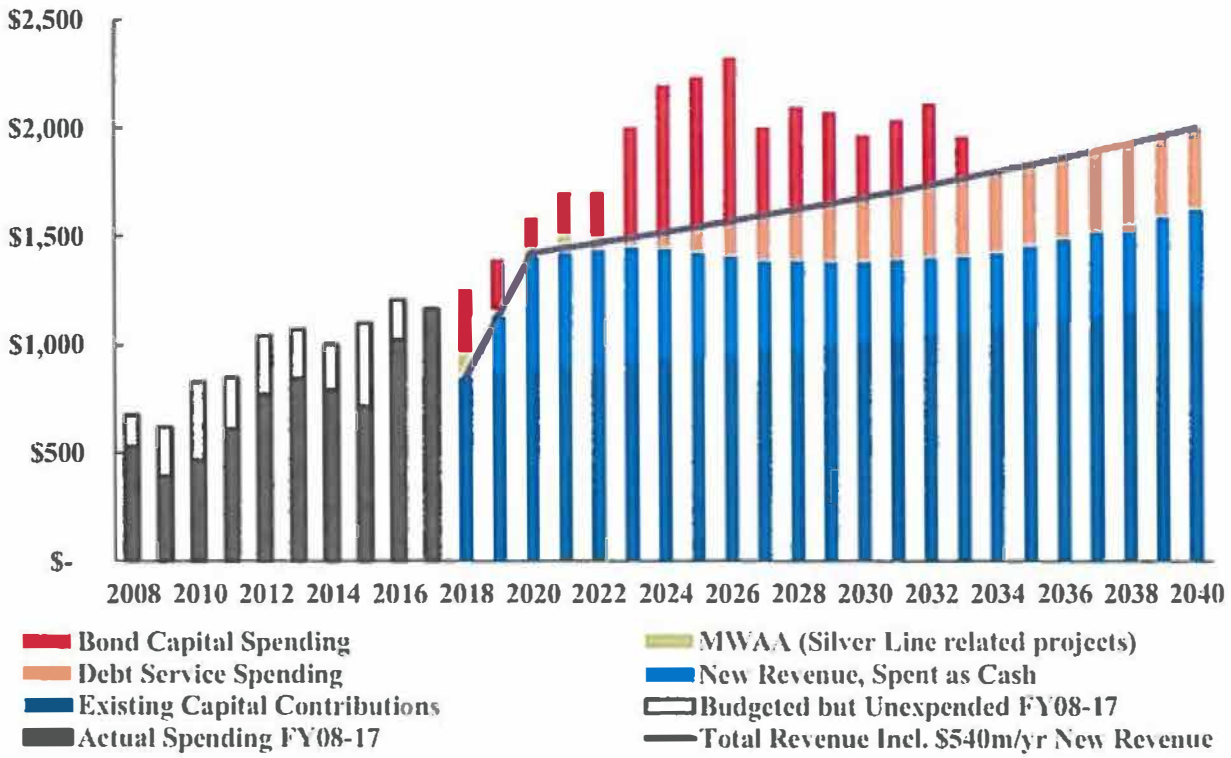

Figure 15. Model of WMATA capital spending with additional revenues, millions of dollars. Source: WSP.

Based on these parameters, it was determined that $540 million per year in new capital funding (dark line in Figure 15) would be needed. Some of the new funds would be spent as cash on a pay-as-you-go basis (light blue) while some would be used to support new borrowing. Bond proceeds expended each year are shown in red, and debt service on this borrowing is shown in orange. Spending would be highest in the FY2024 to FY2026 period as a new round of vehicle replacements takes place; after this it would decline slightly as backlog projects for guideway and other areas of need where spending is most constrained are completed. The state-of-good-repair backlog would be fully retired in FY2033, and thereafter WMATA would have sufficient funds to prevent a new backlog from developing and pay required debt service.

Strategies that could reduce WMATA's operating subsidies by $40 million per year were described in the previous section, and shifting these payments from WMATA's operating budget to its capital budget would allow the agency to achieve a state of good repair with a new funding source that generates $500 million per year starting in 2019.

To eliminate the state-of-good-repair backlog on this schedule, WMATA would need to borrow an estimated $5.9 billion over and above its current indebtedness. Issuing 30-year bonds would incur debt service costs that peak at approximately $375 million per year, and so most or all of a new revenue source of $500 million per year would need to consist of dedicated funding that can be pledged to secure bonds in a manner acceptable to bond rating agencies and bond purchasers.