



MBTA Fiscal and Management Control Board

REPORT #1: Baseline Analysis and Progress to Date

September 22, 2015

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MBTA Fiscal and Management Control Board

September 22, 2015

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This report fulfills the requirements of Section 207 of Chapter 46 of the Acts of 2015, which created a Fiscal and Management Control Board (FMCB) for the purposes of overseeing and improving the finances, management, and operations of the Massachusetts Bay Transportation Authority (MBTA).

This report, which comes 60 days after the establishment of the FMCB, provides a baseline view of the daunting challenges that must be met in order to get the MBTA back on track. The findings in this document largely confirm and reinforce the analysis presented in April by the Governor's Special Panel to Review the MBTA. If anything, the FMCB has found that some of the underlying problems at the MBTA are even more serious and deep-seated than that Panel was able to uncover.

For this baseline report, FMCB working groups identified two findings of particular concern that require immediate action by all MBTA stakeholders:

- **The MBTA's operating budget (including debt service) is unsustainable, with expenses increasing at nearly three times the rate of revenue growth.** Left unaddressed, the structural operating deficit of the MBTA will reach \$427 million in FY2020.
- **Annual capital spending on deferred maintenance and capital investment – the “state of good repair” backlog – has historically fallen substantially below the \$472 million annual spending needed to prevent the SGR backlog from growing greater.** That backlog has risen to \$7.3 billion, reflecting both this prolonged underspending as well improvements in the SGR data base. The SGR backlog does not, however, account for inflation. Other non-SGR needs, including safety and security, better accessibility, and improved capacity and modernization, add further pressure to the capital budget.

While this baseline assessment documents serious problems, it also reports that concerted efforts of the MBTA's new management team have produced results in several areas:

- The FMCB and MBTA management are increasingly utilizing performance metrics to improve MBTA operational practices and to expand transparency and accountability for the riding public.
- Capital spending increased to \$740 million in FY2015 and is budgeted at \$1.05 billion for FY2016. MBTA management and the FMCB are closely monitoring capital spending to ensure that all available funds are spent and that the MBTA remains on course to reduce the SGR backlog.
- The MBTA's Winter Resiliency Plan has prepared the system to better withstand major storms and extended periods of cold.
- The MBTA and Keolis Commuter Services have signed a Performance Improvement Plan to address identified shortfalls in commuter rail performance. On-time performance for the commuter rail system has improved since April.
- The FMCB and MBTA management are developing a strategy to improve MBTA contracting processes and to review all existing service contracts. Utilizing the contracting flexibility provided by the Legislature, the MBTA has issued a Request for Information for the private sector to provide service on some low- and moderate-ridership bus routes, some express bus routes, and late-night bus service.
- The FMCB and MBTA leadership are pursuing efforts to increase workforce productivity and to reduce absenteeism among MBTA staff, the leading cause of dropped trips on buses and the subway. The FMCB is committed to a positive employee engagement program, understanding that morale, a shared sense of mission, and workforce investments are essential ingredients of any successful organization.

This baseline analysis will be followed by other reports, including a first annual report due December 15. These reports will lay out a series of tough choices as we consider options to bring the MBTA's operations and assets up to the level that is expected and deserved by its riders, employees, and the tax-paying public.

We look forward to collaborating with you as we all work to achieve that goal.

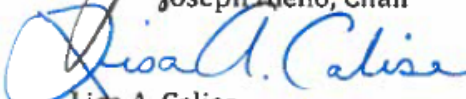
Respectfully submitted,



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MBTA Fiscal Management and Control Board Report #1:

Baseline findings and progress to date

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MBTA Fiscal Management and Control Board Report #1:

Baseline findings and progress to date

Summary

This report fulfills the requirements of Section 207 of Chapter 46 of the Acts of 2015, which created a Fiscal Management and Control Board (FMCB) for the purposes of overseeing and improving the finances, management, and operations of the Massachusetts Bay Transportation Authority (MBTA).

This report, which comes sixty days after the establishment of the FMCB and will be followed on December 15 by a more comprehensive review, is the first in a series of regular reports. It is intended to provide a baseline view of the daunting challenges that must be met in order to get the MBTA back on track. This report and others to follow will lay out a series of tough choices that face all of us as we consider the options for bringing the MBTA's operations and assets up to the level that is expected and deserved by its riders, employees, and the tax-paying public.

Both the governance and management of the MBTA have seen significant changes in the past six months. The MBTA is now led by a General Manager and Chief Administrator who report directly to the Secretary of Transportation. The Authority's leadership – General Manager Frank DePaola, Chief Administrator Brian Shortsleeve, and Chief Operating Officer Jeff Gonneville – have all assumed their positions since last winter's meltdown. Since its first meeting just two months ago, the FMCB has taken a number of important steps to stabilize and strengthen the MBTA, even as the FMCB continues to identify and diagnose the fiscal, organizational, and operational challenges facing the system. In its short tenure, the FMCB has met eight times in public session and made two monthly reports to the Board of Directors of the Massachusetts Department of Transportation, as required by statute. Each of the five members of the FMCB chairs a topical working group and all of the members meet regularly with MBTA staff and other stakeholders to identify problems and understand their root causes to help shape possible actions. (See appendix for links to detailed presentations to the FMCB about topics in this report and for

other information about FMCB activities). The FMCB's work will continue and increase in intensity as FMCB members collect additional information and develop additional solutions to the MBTA's challenges. As detailed in this baseline report, the FMCB is well on its way to quantifying the challenges before it and developing actionable solutions. However, current data and projections may change; the FMCB will continue to fast-track its efforts to bring forward a transparent understanding of the problems at hand.

The preliminary findings of each of the FMCB's five working groups largely confirm and reinforce the analysis presented in April by the Governor's Special Panel to Review the MBTA. If anything, the FMCB has found that some of the underlying problems at the MBTA are even more serious and deep-seated than the Panel was able to uncover. The baseline findings of the FMCB's Operations Budget Stability and State of Good Repair/Capital Investment working groups are of particular concern and require immediate action:

- The MBTA's annual operating budget (including debt service) is unsustainable, with expenses increasing at nearly three times the rate of revenue growth. Left unaddressed, the structural operating deficit of the MBTA will reach \$427 million in FY2020. The FMCB is working with the Chief Administrator to build an operating budget model for the MBTA for FY2017-FY2020 that will lay out a set of detailed scenarios to address the structural operating deficit through aggressive operating cost containment and increased own-source revenue, which is revenue generated by the MBTA from sources including advertising, parking, and public-private real estate partnerships.
- Annual capital spending on deferred maintenance and capital investment – the “state of good repair” backlog – averaged \$378 million a year from FY2009 through FY2014. That amount is substantially below the \$472 million annual spending needed to prevent the SGR backlog from growing greater. (All figures are in 2015 dollars; inflation could significantly increase the amount of SGR spending required over the next 25 years). The historic pace of capital spending frequently fell below or barely above this critical spend rate for several reasons, including MassDOT/MBTA prioritization of investments other than state of good repair, chronic challenges with the timely and efficient execution of capital projects, and the use of capital funds for salaries and other operating costs. This prolonged underspending has caused the build-up in unmet SGR capital investment to rise to \$7.3 billion, greater than last reported. As the MBTA continues to update and populate its SGR database, the SGR backlog number could further increase. And maintaining

the current, more adequate level of SGR spending could face competition from other, non-SGR parts of the capital budget, such as accessibility and safety and the need to enhance system capacity.

With the new management team focused on ensuring that available capital funds are spent, the FMCB and MBTA leadership are committed to maintaining the MBTA system at a level that will prevent the backlog from further increasing while improving the overall condition of the system and its facilities over time by making SGR investments as expeditiously as possible. But the MBTA faces a variety of additional capital needs – including safety improvements such as Positive Train Control and system wide accessibility improvements – that are neither captured in the SGR backlog nor properly considered to be “expansion” projects. This will require the FMCB to look comprehensively at the MBTA’s capital needs rather than simply address the needs for SGR and expansion.

Some progress can be reported:

- Capital spending increased to \$740 million in FY2015 and is budgeted to be \$1.05 billion in FY2016. MBTA management and the FMCB are closely monitoring the FY2016 capital spending rate to ensure that all available funds are spent and that the MBTA remains on track to reduce the SGR backlog.
- The MBTA planned, designed, and is executing a Winter Resiliency Plan to better prepare the system to withstand major storms and extended periods of cold. This work, which is described in more detail in this report, will enable the MBTA to avoid the type of system wide failures that paralyzed the region last winter.
- With direction from the FMCB, the MBTA and Keolis Commuter Services have signed a Performance Improvement Plan and are working to address identified shortfalls in performance. A monitoring system is in place to ensure that contractual obligations are met and that commuter rail passengers see real service improvements. On-time performance for the commuter rail system has improved since April.

- As directed by the requirements of Section 207, the FMCB and MBTA management are developing a strategy to make improvements in the procurement and contracting processes and to review all existing service contracts. As a first effort to utilize the contracting flexibility provided by the Legislature, the MBTA has issued a Request for Information for the private-sector provision of service on some low- and moderate-ridership bus routes, some express bus routes, and late-night bus service. The FMCB and MBTA management are reviewing all other existing service contracts and spending on outside services, materials and supplies, and are working to modernize the materials management and procurement systems.
- The FMCB and MBTA management are focusing on the power of performance metrics to drive improvement in MBTA operational practices and to expand transparency and accountability with the riding public. Improvements are already being made and others will launch in coming months.

The FMCB and MBTA leadership are also pursuing efforts to increase workforce productivity and to reduce absenteeism among MBTA staff, the leading cause of dropped trips on buses and the subway. MBTA leadership has engaged a Leave Management consulting firm to train 700 supervisors and time-keepers in the appropriate management of employee leave. The first-ever audit of FMLA eligibility among MBTA employees has also begun, and the MBTA is now working on a Request for Proposals for a third-party administrator to manage the leave program. The FCMB is committed to a positive employee engagement program, understanding that morale, sense of mission, clear management and decision-making structures, and workforce investments are all necessary ingredients for any successful organization.

This baseline report sets the stage for the work that the FMCB will need to do over the next three or more years to more fully address the significant operational, fiscal, and management challenges facing the MBTA. The work of the FMCB has just begun but it is already clear that new management and new governance have led to a better understanding of the MBTA's problems and an intense focus on framing both those problems and their potential solutions.

I. FMCB scope and status

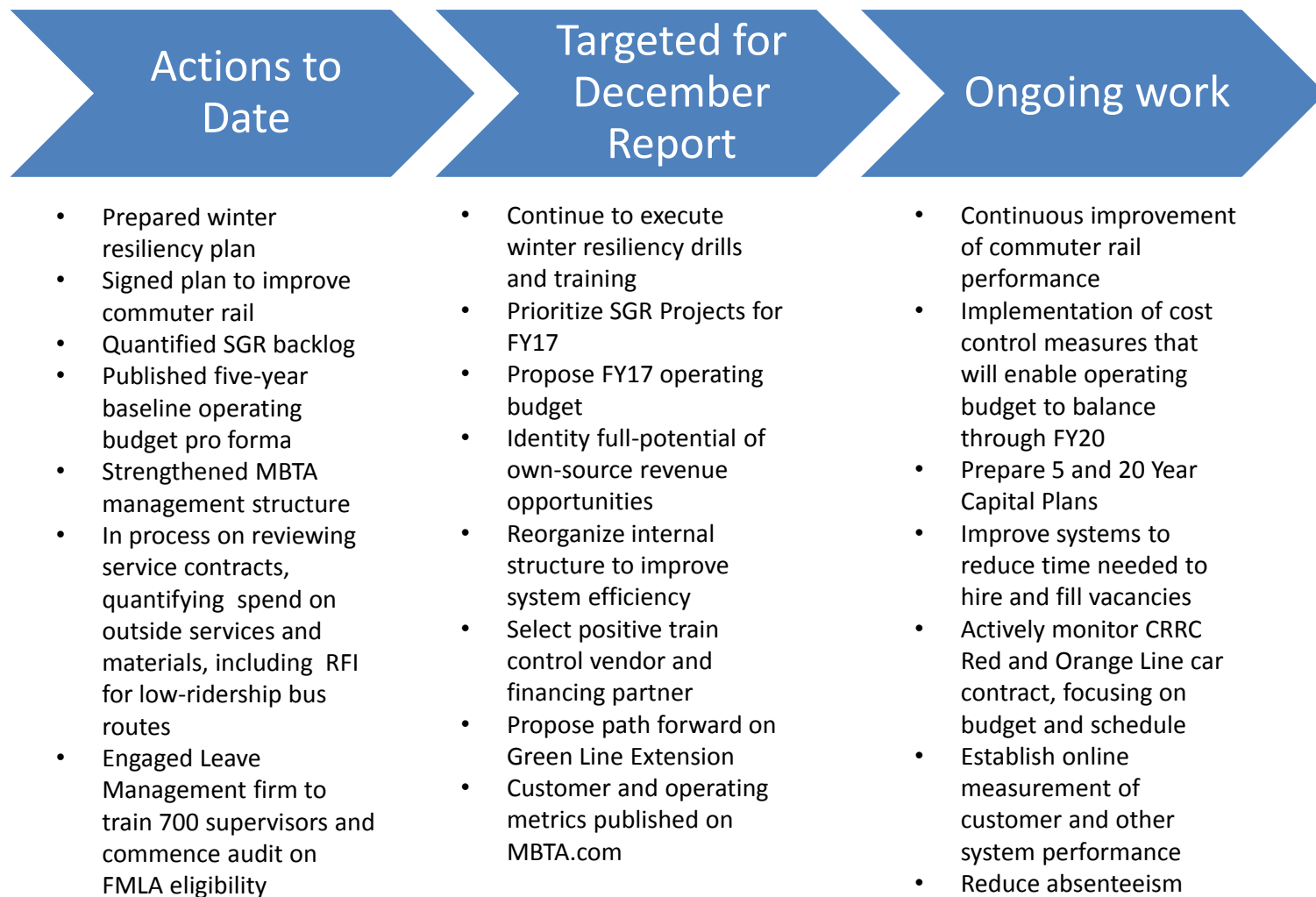
The FMCB was charged with developing a detailed strategy and implementation plan for these fiscal, managerial and operational areas of the MBTA:

1. Capital planning
2. Separation of capital and operating budgets
3. Own-source revenue
4. Expansion proposals
5. Procurement and contracting improvements
6. Emergency preparedness
7. Internal reorganization
8. Customer-oriented performance management
9. Best practices for workplace productivity
10. Reduction of employee absenteeism
11. Public-private partnerships
12. Sale and lease of real estate assets
13. Development of performance metrics across organization

The FMCB is also charged with:

14. Developing one- and five- year operating budgets, beginning with FY2017, balanced primarily through own-source revenue and cost control, which will facilitate the transfer of capital employees to the operating budget
15. Establishing five- and 20-year capital plans
16. Establishing a performance management system
17. Reviewing any service contract
18. Changing fares consistent with statute
19. Reorganizing the internal structure of the MBTA (pending MassDOT board approval)

FMCB actions taken and in process as of 9/20/2015



This report will be submitted to the Secretaries of the Executive Office of Administration and Finance and the Massachusetts Department of Transportation and the General Court and will be made available to the public. It is the first in a series of reports from the FMCB as it develops a foundational understanding of the MBTA and begins to implement a program of systemic, agency-wide improvement. In its next report due December 15, 2015, the FMCB will provide an overview of its evolving recommendations for the MBTA, including the legislatively mandated requirements for one- and five-year operating budgets, ongoing capital planning, and a transparent system of performance management.

Current and future work of the FMCB and new MBTA management will move the MBTA system toward stronger, more focused governance and more customer-centric performance. This report offers a diagnostic baseline and outlines actions already taken or planned in two major categories: fiscal (operating and capital budgets) and operations (management and strategy). It begins with a summary of efforts to make the MBTA system more customer-centric.

II. Making the MBTA more customer-centric

The FMCB has launched several efforts to develop and apply performance metrics to allow staff to better manage the operations of the MBTA and to keep the public better informed about the system's daily performance. Key performance metrics include:

- On-time performance
- Ridership
- Revenue targets (from fares, advertising, parking, etc.)
- Cost targets (year-on-year operating expense reduction or growth)
- Capital spending
- Workforce productivity

The FMCB's goal is for these metrics to be live on the MBTA website as soon as possible. A new, weekly MBTA scorecard that will soon be available will offer key performance indicators with the greatest impact on customers. Initial focus is on on-time performance, broken out by peak and off-peak periods for the Red, Orange, and Blue Lines, MBTA bus routes, and commuter rail service by lines. Near-term additions will include dropped trips, canceled commuter rail trains, and Green Line performance.

In addition, a weekly scorecard will soon be launched with measures such as ridership, customer satisfaction, and information on other modes included. Each scorecard will have additional metrics added as data becomes available.

Performance metrics have a variety of audiences – riders, internal managers, policymakers, and others. The FMCB seeks to develop measures that are responsive to each group's interests. Further, it also seeks to continually update its measures to insure that performance measurement does not stagnate and is a source of ongoing improvement.

III. Key fiscal findings and issues

Building upon the work of the Special Panel, the FMCB is developing a clearer picture of the MBTA's operating and capital budgets. The initial findings are sobering:

- ***The MBTA's structural budget is broken, with the rate of growth in operating expenses and debt service continuing to exceed revenue growth.***
- ***MBTA capital investment and planning require significant improvement and a system wide focus on achieving a State of Good Repair while also meeting important safety, accessibility, capacity and modernization needs.***

Operating Budget: Without prompt action, operating deficit will continue to grow.

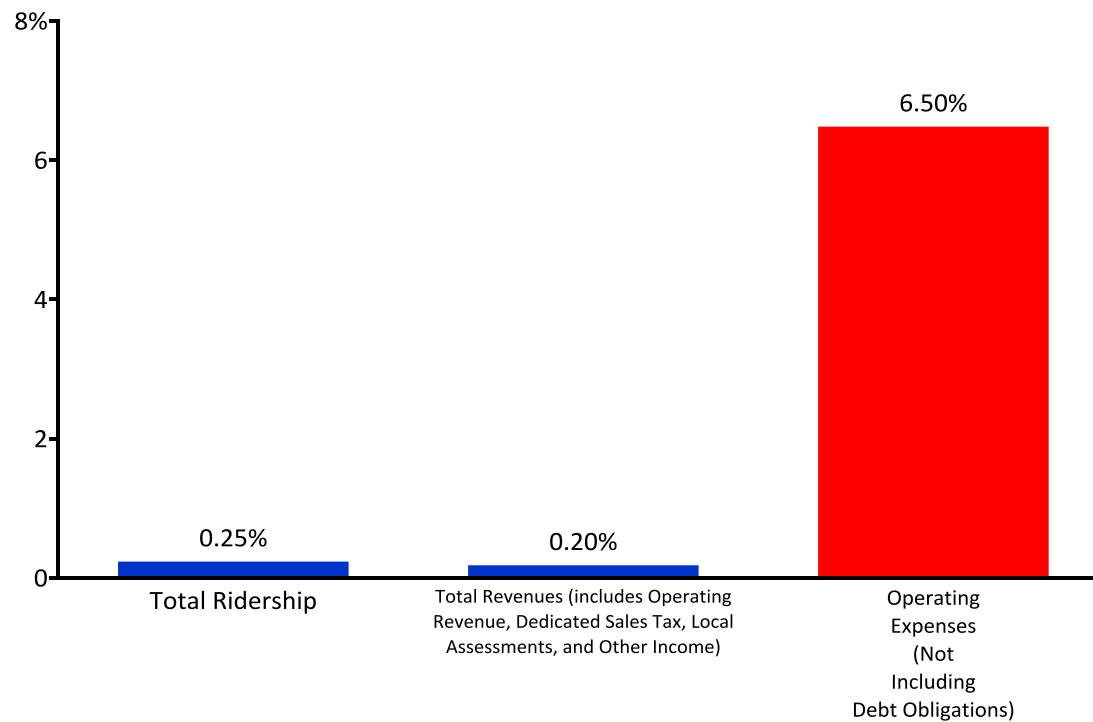
The current course of the MBTA's operating budget is unsustainable. Without action to control costs and increase revenues, the MBTA's structural operating deficit – defined as the gap between revenues (including the base-revenue amount, local assessments, fares and other operating revenues, not including additional state assistance) and total expenses (operating and debt service costs) – will expand from a projected \$170 million in FY2016 to a projected \$427 million in FY2020.

The growth rate of MBTA operating expenses far exceeds that of revenues.

Ridership and Revenue Were Flat While Operating Expenses Grew 6.5% Over Past Two Fiscal Years

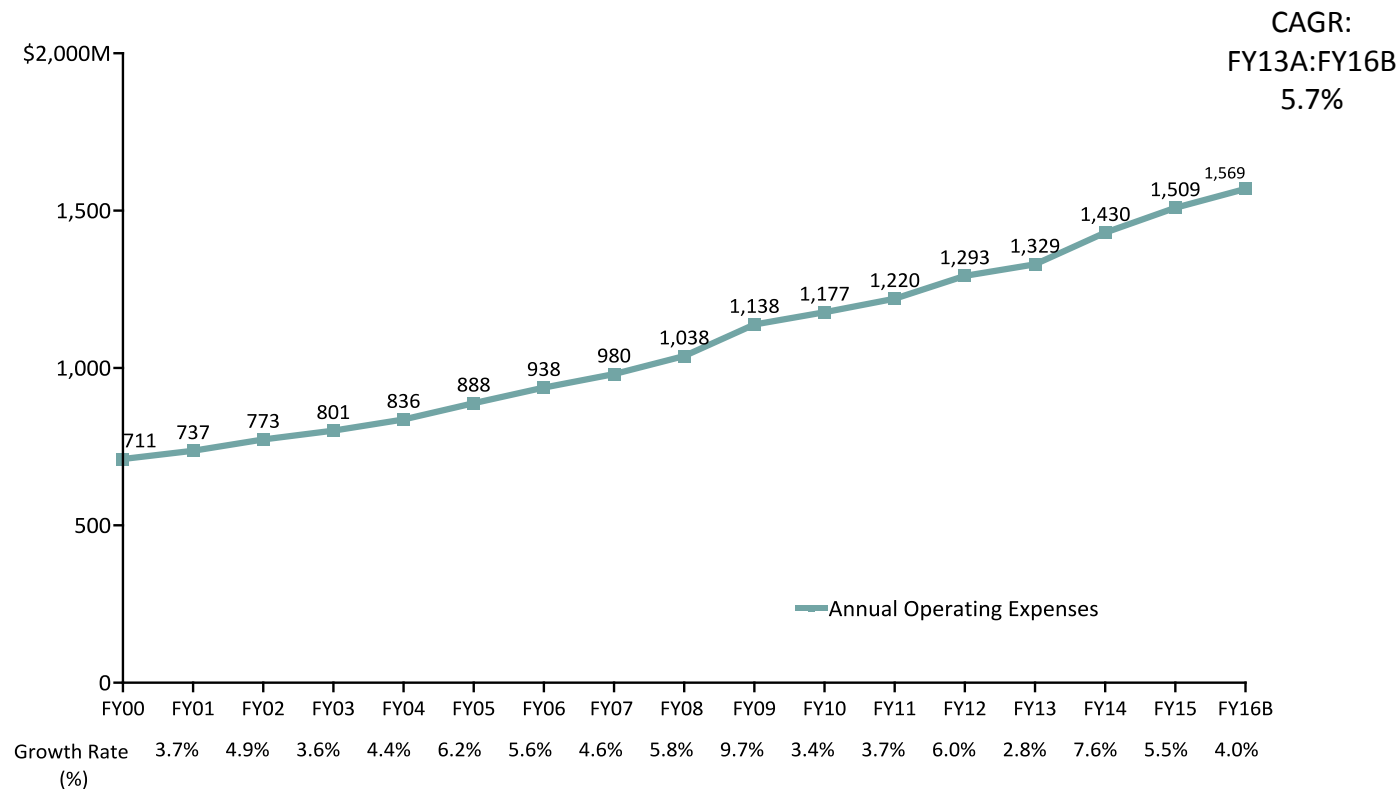
FY13-15 RIDERSHIP, REVENUE AND OPEX GROWTH RATES

Compound Annual Growth Rate (CAGR)
FY13A - FY15A



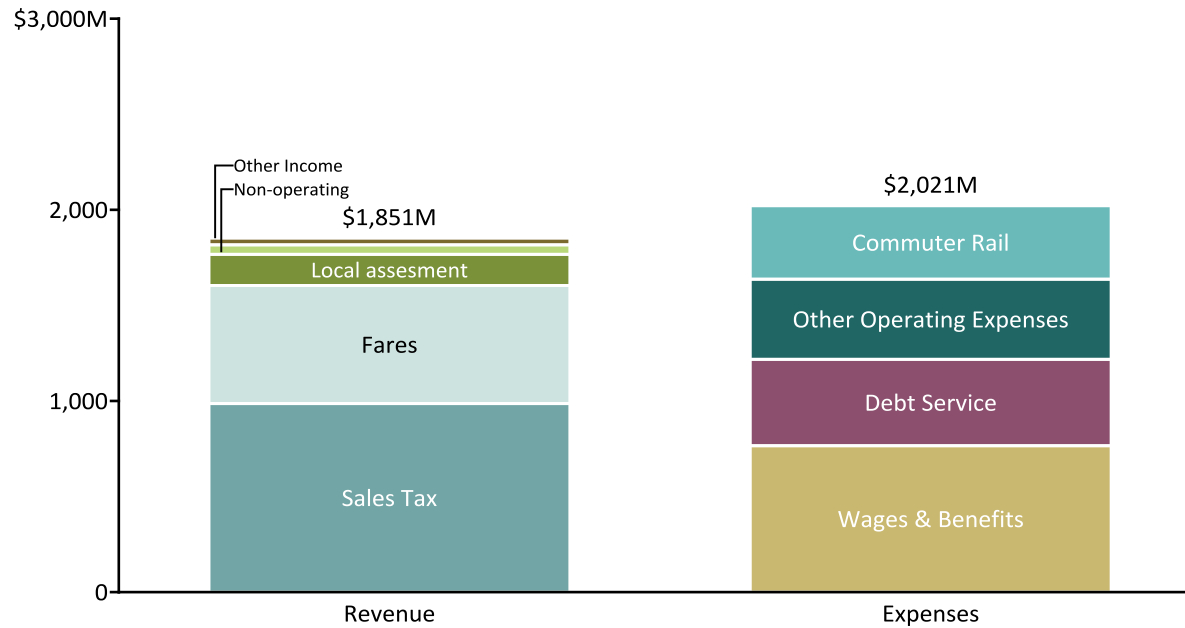
Fast-paced growth in operating costs over the past 10 years has driven operating expenses from under \$1 billion in FY2007 to nearly \$1.6 billion in the FY2016 budget. (Note: In this and subsequent graphics, “A” refers to actual financial results, “B” refers to budgeted financial figures, and “P” refers to projected financial figures).

Annual Operating Expenses (Not Including Debt Service) Will Grow to \$1.6B in FY16B



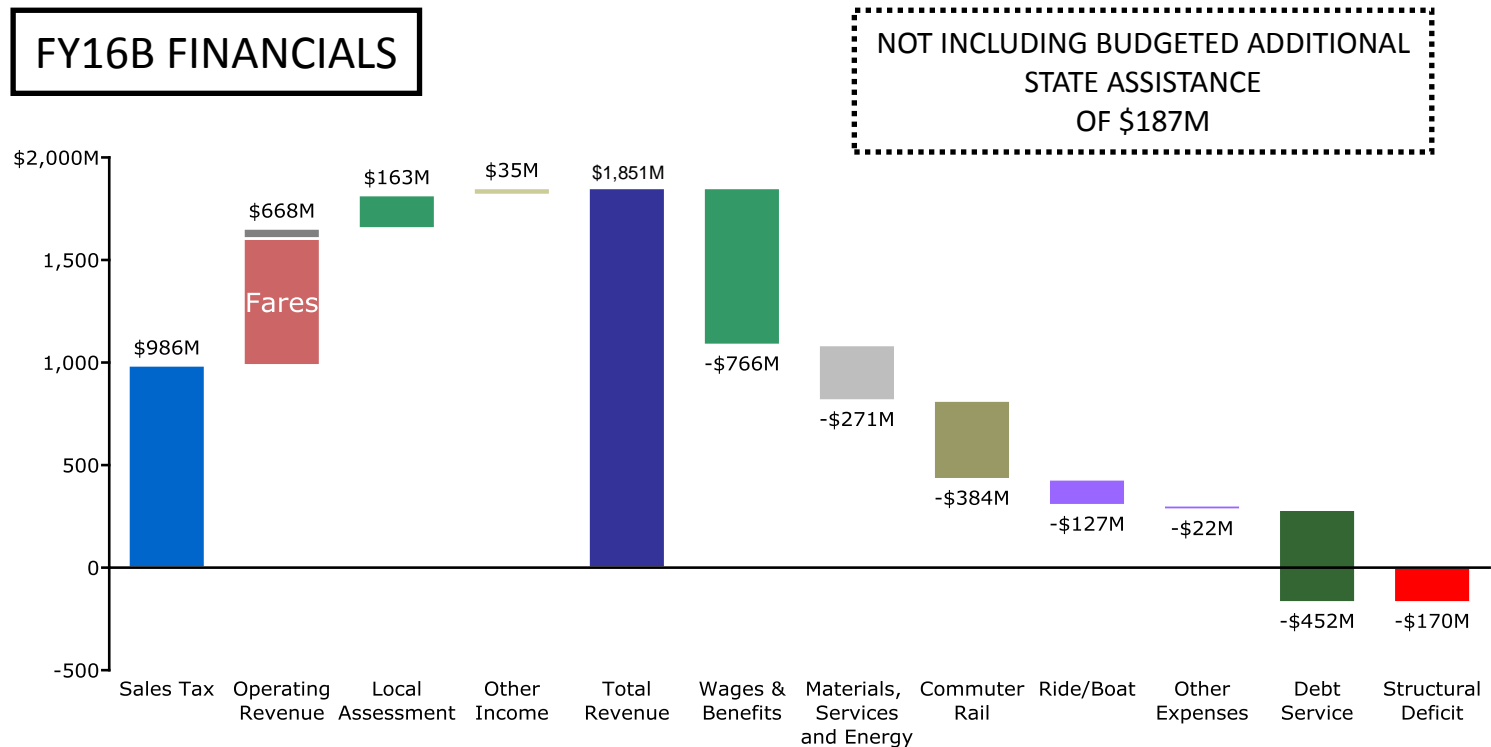
The FY2016 MBTA budget is forecast to generate \$1.85 billion in total revenues (not including additional assistance from the Commonwealth) and to spend \$2.02 billion in order to cover costs (including debt service), resulting in a structural deficit of \$170 million.

In FY 2016B, Revenue is Budgeted at \$1.85B While Expenses will Cross the \$2.0B Threshold



FY 2016B

In FY16, the MBTA Forecasts A Structural Deficit of \$170M



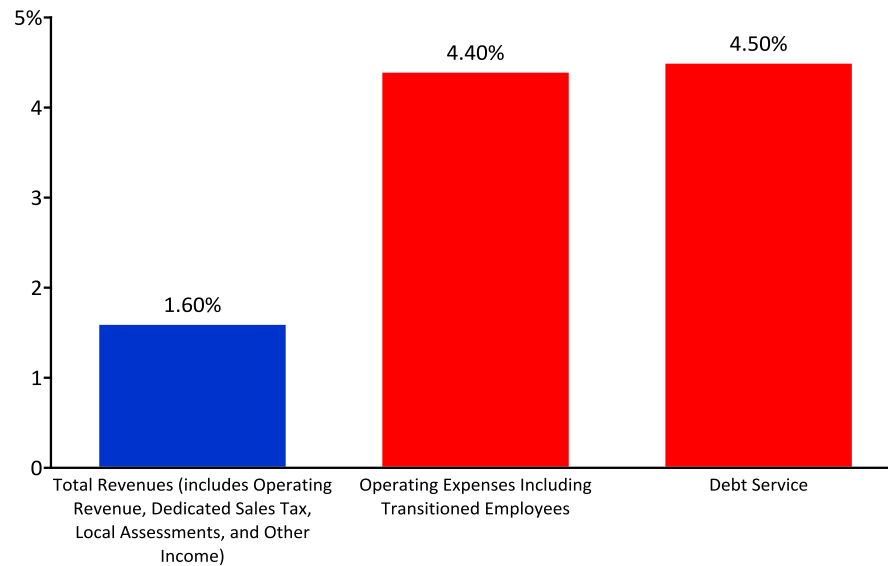
Unless MBTA management takes quick action to control operating cost growth, the pattern of increasingly divergent costs and revenues will continue in future years.

Based on current internal forecasting assumptions, revenues are projected to grow by 1.6 percent between FY2016 and FY2020, while operating expenses are projected to increase by 4.4 percent over the same period and debt service by 4.5 percent. As per the direction laid out by the Legislature and consistent with best financial practices, the FMCB is now proposing to transition 532 employees from the capital budget to the operating budget.

Structural Deficit Will Expand as Long as Expenses Grow Faster than Revenues

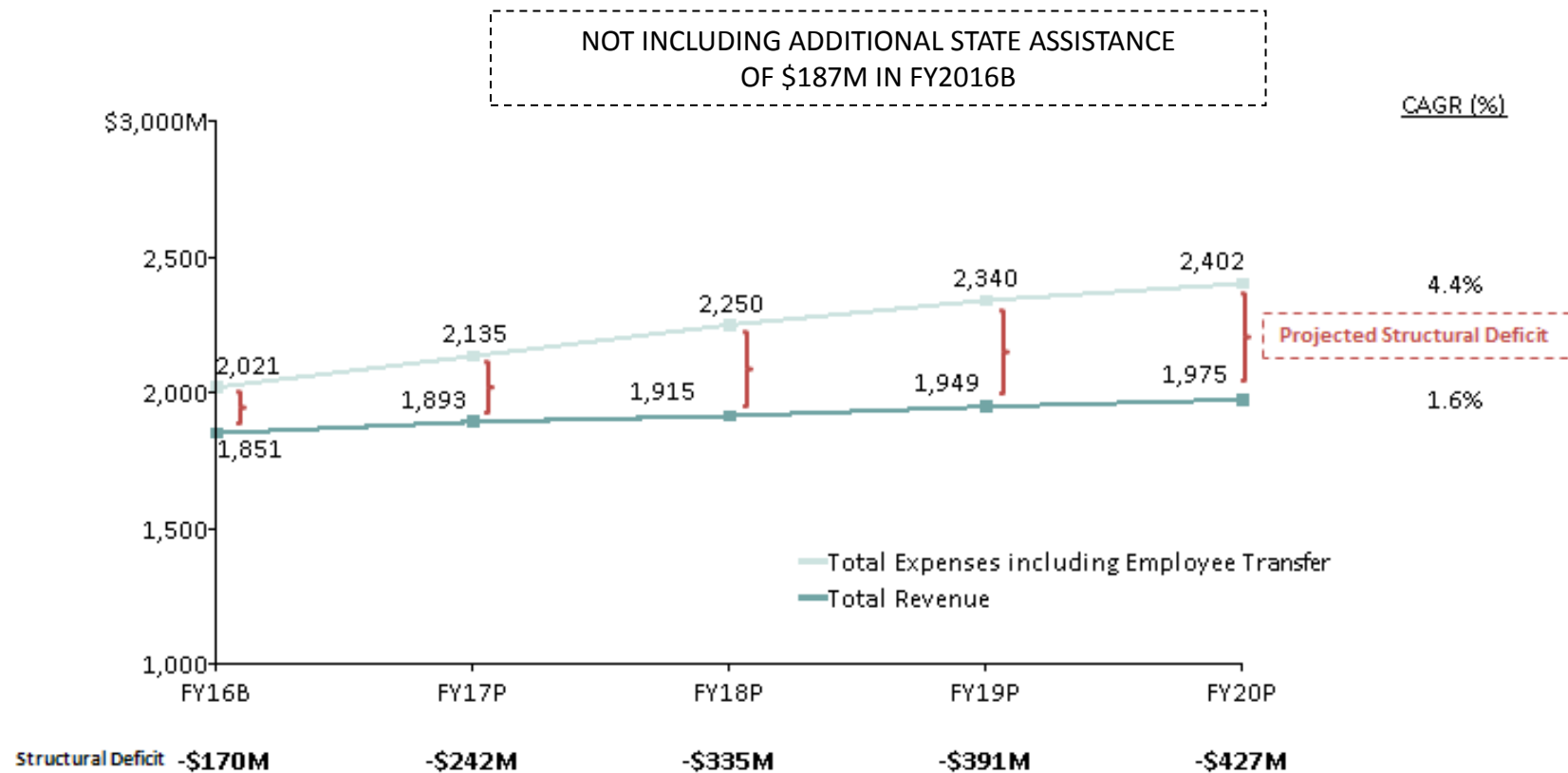
FY16B – FY20P PRO-FORMA ANNUAL GROWTH RATE

Compound Annual Growth Rate (CAGR)
FY16B - FY20P



Based on these internal assumptions on revenue and operating expense growth, the structural deficit increases from \$170 million in FY2016 to more than \$427 million projected for FY2020.

Annual Projected Revenues, Expenses and Structural Deficits FY16B – FY20P



The baseline revenue and expense assumptions that underlie projected future MBTA operating budget deficits from FY2016 to FY2020 are:

- Total revenue will grow by 1.6 percent over the FY2016 to FY2020 period, compared to 0.2 percent annual growth from FY2013 to FY2015.
- Operating expenses will grow by 4.4 percent over the same period and 3.1 percent if capital employee and project transfer is excluded (compared to 6.5 percent a year from FY 2013-FY2015) and debt service will rise by 4.5 percent (compared to -2.7 percent from FY2013-FY2015).

Operating Budget Assumptions

Revenue

FY 16B	Assumption
\$50M	<u>Other operating revenue</u> (advertising, parking, real estate) grows by 13.8% (FY17), 3.5% (FY18), 2.3% (FY19) and 2.4% (FY20)
\$618M	<u>Fare revenue</u> increases by 4.0% (FY17), 1.0% (FY18), 3.0% (FY19), and 1.0% (FY20) due to FY17 and FY19 fare increases of 5.0% and 1.0% ridership growth in off years
\$986M	<u>Base revenue amount</u> increases at 1.6% in FY17 forward (based on inflation formula)
\$163M	<u>Local assessment</u> increases by 2.0% post FY2015 (based on inflation formula)

Operating Budget Assumptions (continued)

Non-debt operating cost

FY 16B	Assumption
\$0M	<u>Capital employee and project transition</u> expense is \$52M (FY17), \$62M (FY18), and \$88M (FY19)
\$511M	<u>Wage Expense</u> increases by 2.5% in FY17 and FY18; no increase assumed in FY19 and FY20
\$109M	<u>Total Net GIC Healthcare</u> decreases by 4.7% (FY17), and increases by 6.5% in FY18 and 5.5% FY19 forward
\$79M	<u>Energy costs</u> increases by 3.5% from FY17 – FY20
	<u>Head count</u> remains at current budget level of 6,677 through the projection period

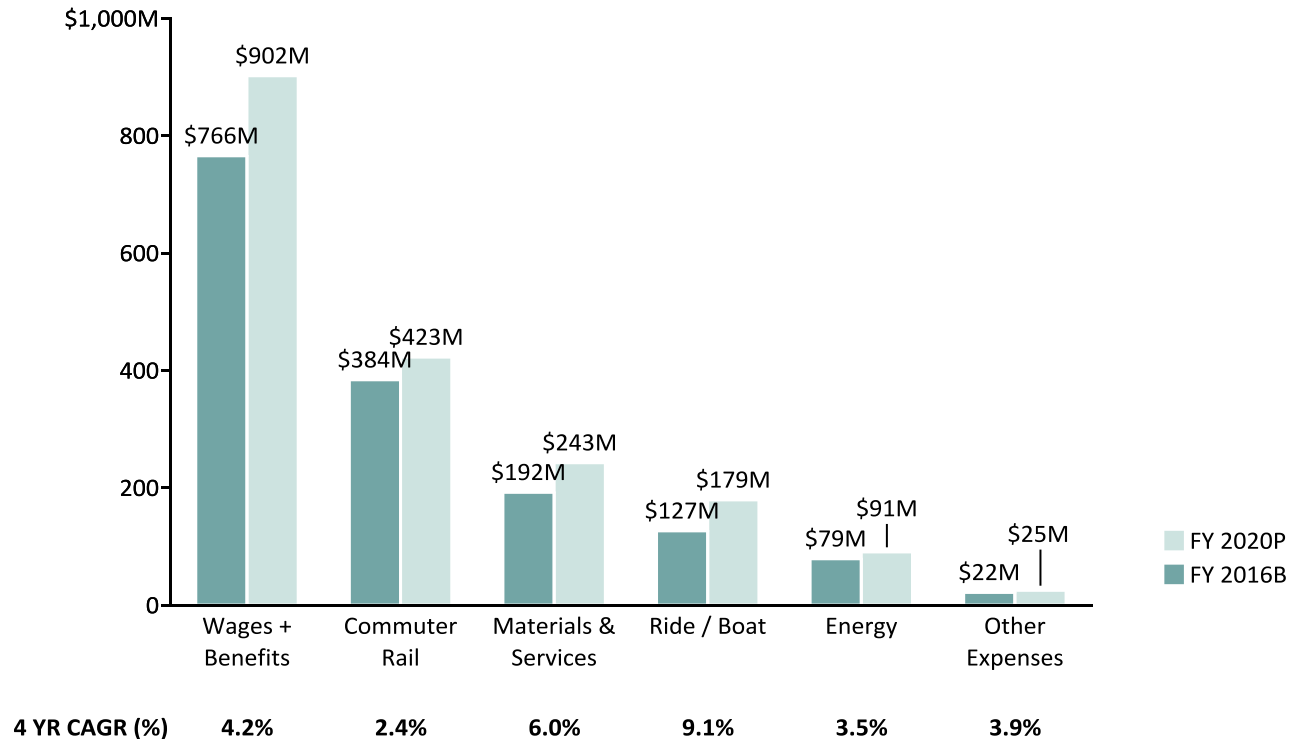
Debt service

FY 16B	Assumption
\$34M	<u>Legacy debt service</u> grows or declines by -23.0% (FY17), 18.2% (FY18), -0.4% (FY19), and -2.3% (FY20)
\$109M	<u>Central Artery debt service</u> stays flat at 0.0% growth for the projected period
\$305M	<u>Capital plan debt service</u> grows at 5.9% (FY17), 11.8% (FY18), 5.3% (FY19), and 4.3% (FY20)
	<u>New bond issuances</u> include \$200M offerings in FY16, FY18, and FY19

The key drivers of these escalating operating costs projected from FY2016B to FY2020 include wages and benefits, materials and services, the Ride, and Commuter Rail services, all of which are increasing more quickly than are MBTA revenues.

Wages, Commuter Rail and Materials/Services are Biggest Drivers of Operating Cost Increase through FY20

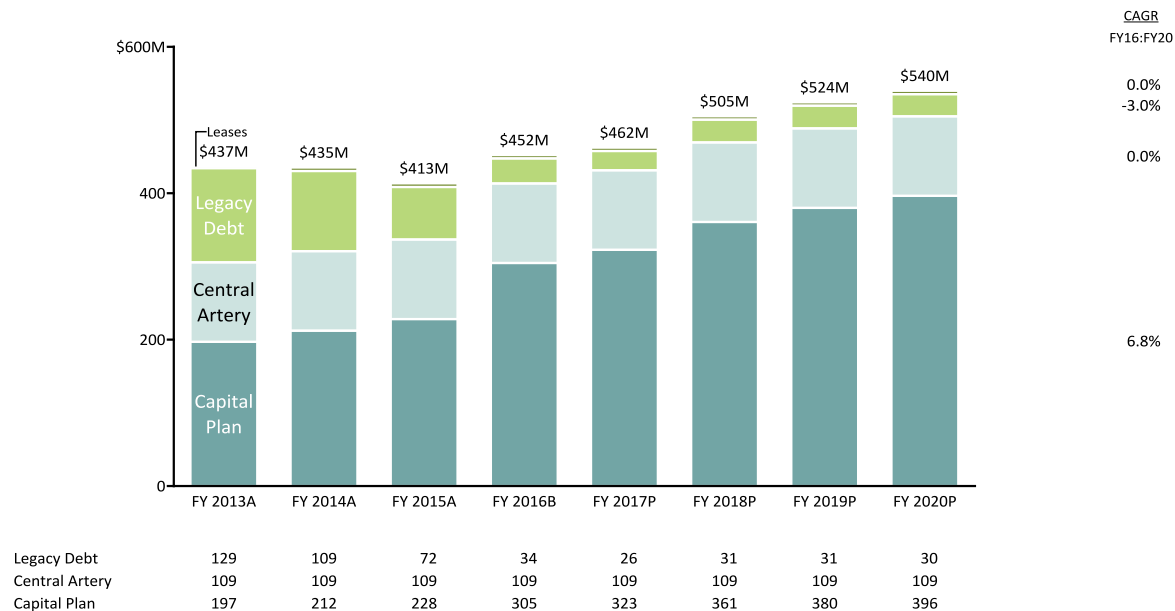
ANALYSIS ON FY16B - FY20P GROWTH RATES OF KEY OPERATING COSTS



Note: Wages + Benefits include costs associated with capital employee and project transfer.

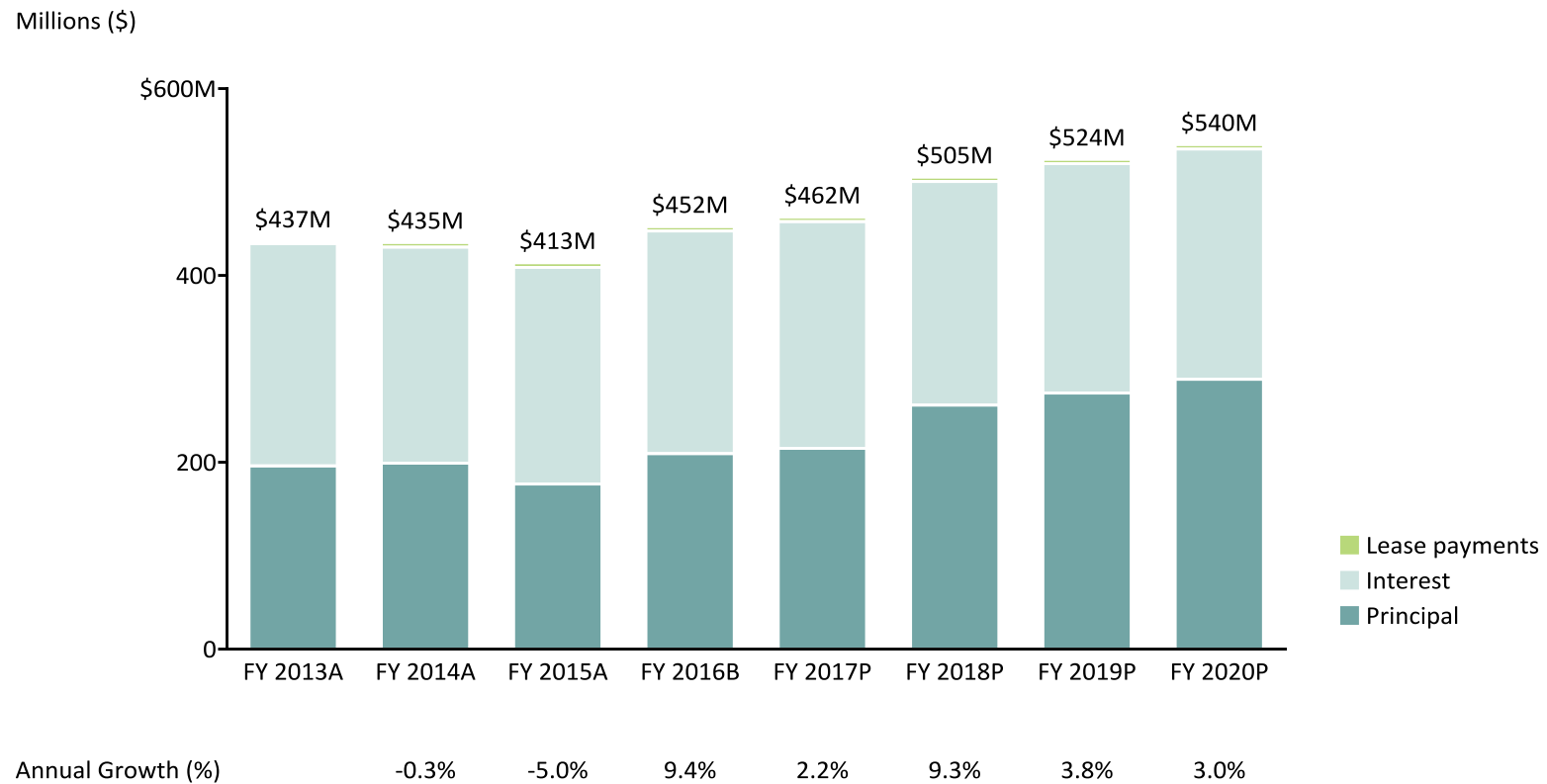
The costs of servicing debt are a major and growing part of the MBTA budget. MBTA debt falls into three categories: so-called legacy debt (MBTA-related debt that predates the introduction of the Forward Funding financing structure in 2000); debt associated with the transit mitigation projects required by the Central Artery/Tunnel projects; and debt issued by the MBTA since 2000 for its own state of good repair and other investments. While legacy and Central Artery debt are no longer growing, the cost of debt issued to support MBTA capital investments – now the largest single source of debt service expense – has risen.

Debt Service Payments are Split Between Debt Incurred to Fund Capital Plan, Legacy Debt and Big Dig Debt



Note: Central Artery Debt refers to Financing Related to the Big Dig Project. Legacy Debt refers to debt inherited at the start of Forward Funding.
Source: MBTA Internal Data

Debt Service Payments are Split Roughly Evenly Between Principal and Interest

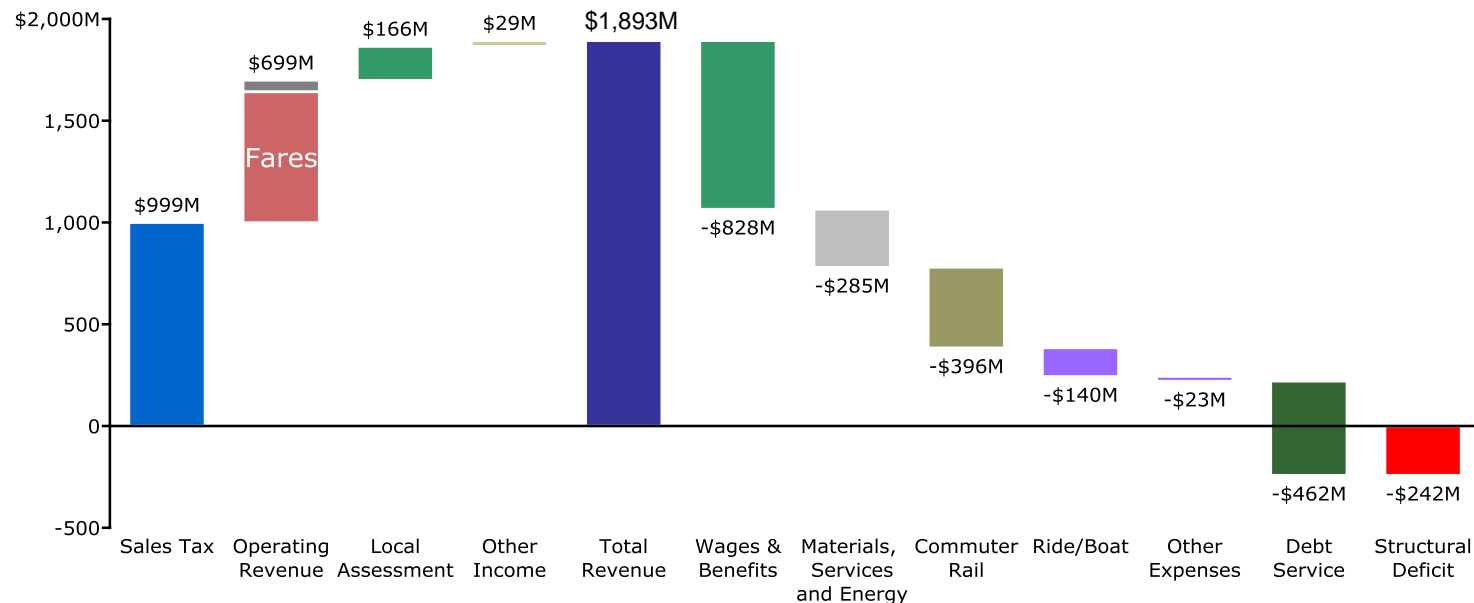


The FMCB has been charged with proposing a plan that balances the structural deficit in FY2017 and beyond, primarily through a combination of cost control and maximization of own-source revenues. As it develops a new budget plan, the FMCB is reviewing FY2016 actual financial performance on a monthly basis. It will also meet with various stakeholders, including MBTA unions, industry, and transit advocates, as it explores cost control and revenue enhancement measures. In addition, it is reviewing MBTA services to identify subsidy levels across the system and present options for future service planning that creates a sustainable system going forward and to highlight areas of unsustainable subsidy.

In FY17, the MBTA Structural Deficit is forecast at \$242M on \$1.9B of Revenues and \$2.1B in Expenses

FY17P FINANCIALS

NOT INCLUDING ANY ASSUMPTION ON
ADDITIONAL STATE ASSISTANCE



Next steps – Operating Budget

- The FMCB will develop a set of proposals to address the financial challenges laid out in the baseline pro-forma assumptions presented
- Next steps include exploring cost-control and revenue enhancement measures, working with multiple stakeholders (including MBTA staff, unions, private sector, and advocates)
- **The FMCB will develop**
 - Comprehensive scenario development
 - Peer comparables to benchmark cost and revenue
 - Opportunities to reduce operating expenses
 - Opportunities to increase own-source revenue (advertising, real estate leases and transactions, parking and public-private partnerships)
 - Costs not included in the baseline, such as any operating costs associated with positive train control operating and maintenance
 - Alternative strategies for managing debt

Capital Budget: State of good repair just one category facing challenges

In addition to its work with the MBTA operating budget, the FMCB has identified significant issues in every area of the capital budget, as described below:

- ***State of Good Repair:*** The MBTA asset base – much of it old and much of it beyond its expected life, with attendant impacts on customer service – is in critical condition and requires intensive focus and increased investment. The FMCB and the management team are working to establish criteria to prioritize state of good repair investments.
- ***Safety and security:*** The MBTA is behind schedule in implementing a series of important and costly safety initiatives.
- ***System wide accessibility:*** To meet its legal obligations and provide better service to customers of all abilities, the MBTA should continue to invest in accessibility of its facilities.
- ***Expansion:*** As seen recently with the Green Line extension project, major expansion projects expose the MBTA to significant financial and operational risks; such projects thus require special management and FMCB attention.
- ***Capacity and modernization:*** The existing MBTA system would benefit from modernization and additional capacity would help address areas of the system that are projected to have continued ridership growth.

State of Good Repair investment: Keeping pace with a growing backlog

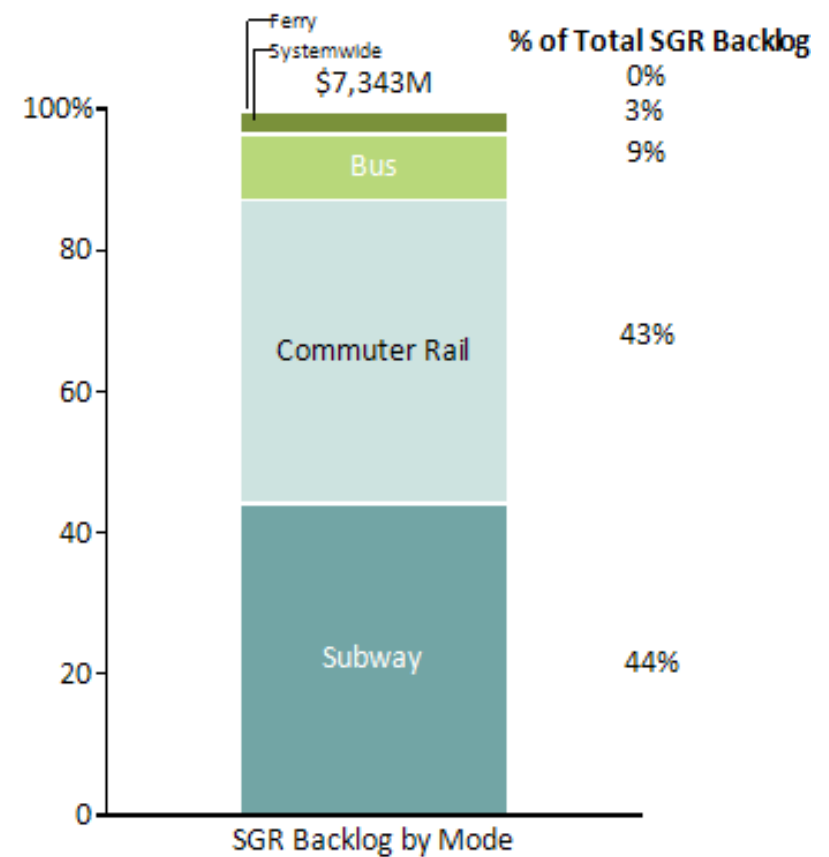
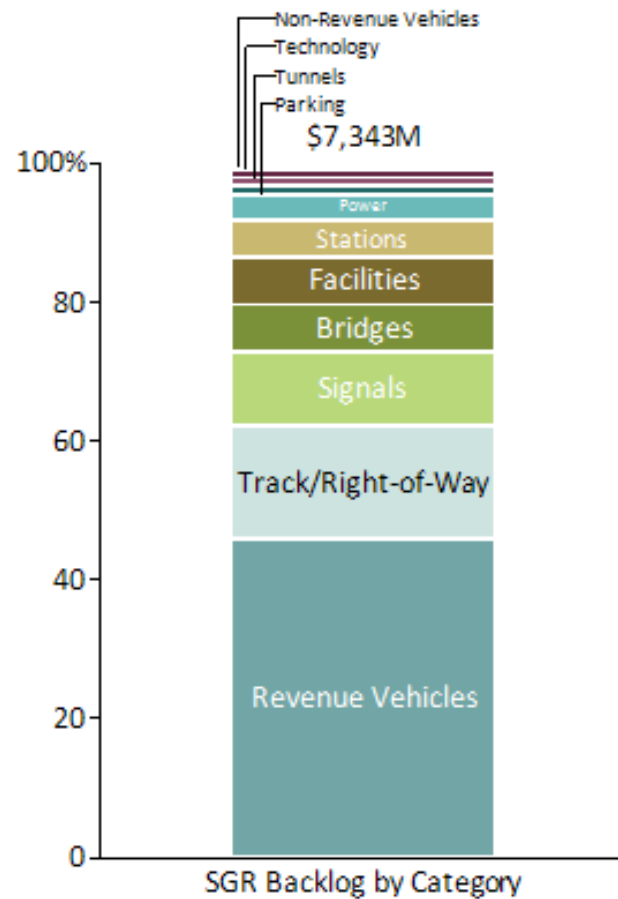
Achieving a “state of good repair” means making sure all MBTA assets are in sufficient condition to meet their intended purpose. Achieving a state of good repair makes the entire system perform better, which will mean direct and positive improvement to the rider experience.

SGR already represents the largest single category of the MBTA’s capital budget. At its August 31 meeting, however, the FMCB learned that the preliminarily estimated backlog of \$6.7 billion in outstanding maintenance needs (February 2015) is now an estimated \$7.3 billion in current dollars, as the SGR database does not include a forecast for inflation. The current SGR database is also still being populated with further data on commuter rail assets. While the SGR backlog has grown due to a history of underinvestment in SGR, this recent increase also reflects improvements in the MBTA SGR database; in 2009, the SGR database included 95,316 individual assets while the 2015 report includes more than 250,000 assets. Consistent with guidelines from the Federal Transit Administration, calculations about asset conditions and performance ratings have been updated. The backlog will likely continue to grow as the database is further populated and refined. Implementing such improvements to the database is consistent with the FMCB’s focus on the need for rigorous and accurate data as a tool for good management and decision-making.

While all categories of MBTA assets, from power systems and signals to buses and rail cars, require improvements to reach a full state of good repair, the largest category is subway cars, which represents 44 percent, or \$3.2 billion, of the system’s total backlog. However, this figure will decline with the delivery of new Orange and Red Line cars.

SGR backlog by category and mode

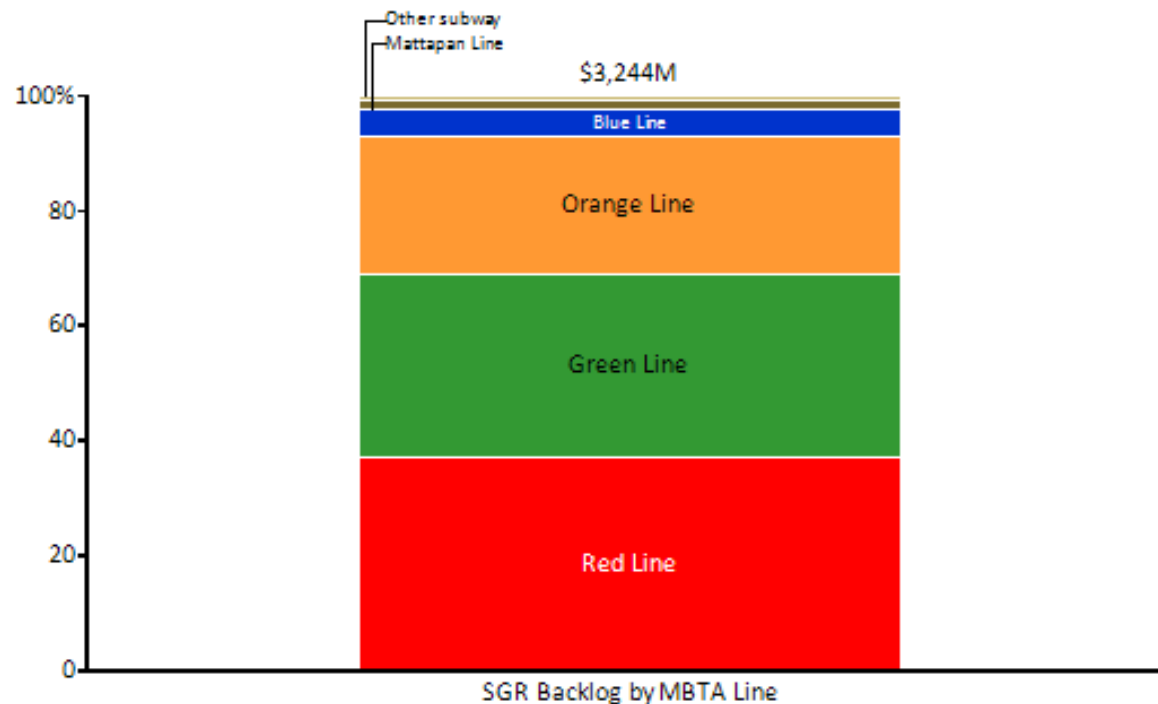
Current state (\$7.3B)



Subway backlog detail

MBTA spending \$3.2B of \$7.3B

THE SUBWAY SGR BACKLOG of \$3.2B REPRESENTS 44% OF THE TOTAL SGR BACKLOG

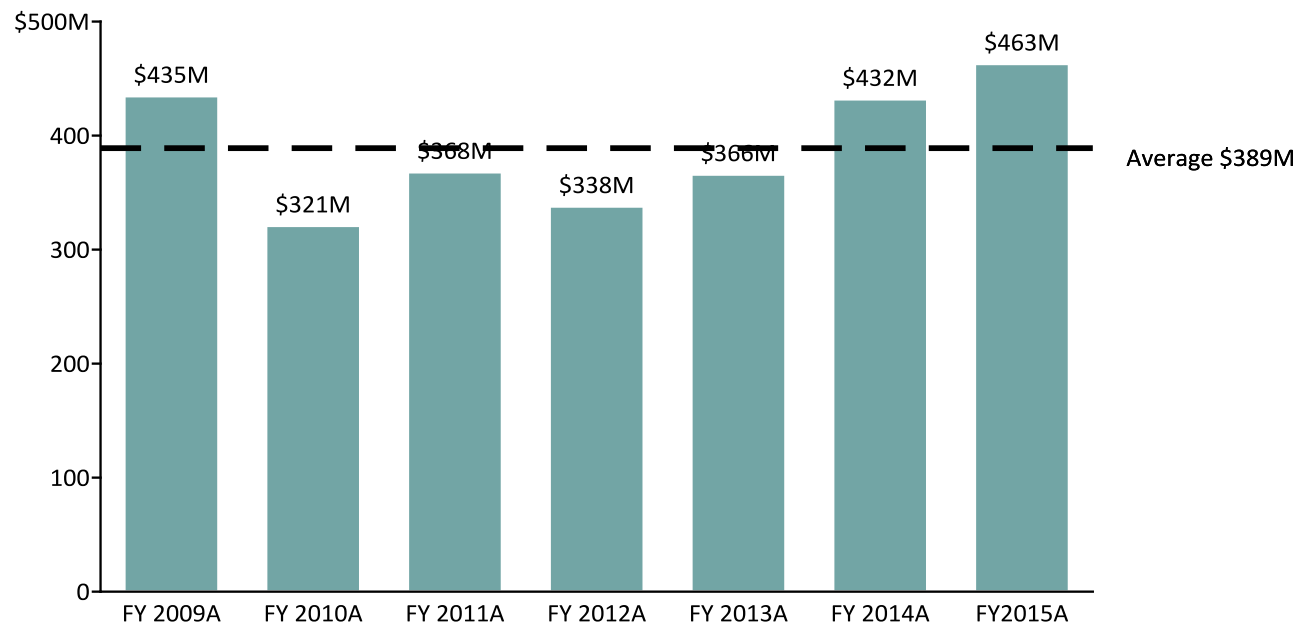


Note: The subway SGR figure includes subway vehicles as well as other subway infrastructure, such as power and signal systems

Annual capital spending has historically been substantially below the \$472 million a year needed to prevent the state of good repair backlog from continuing to grow.

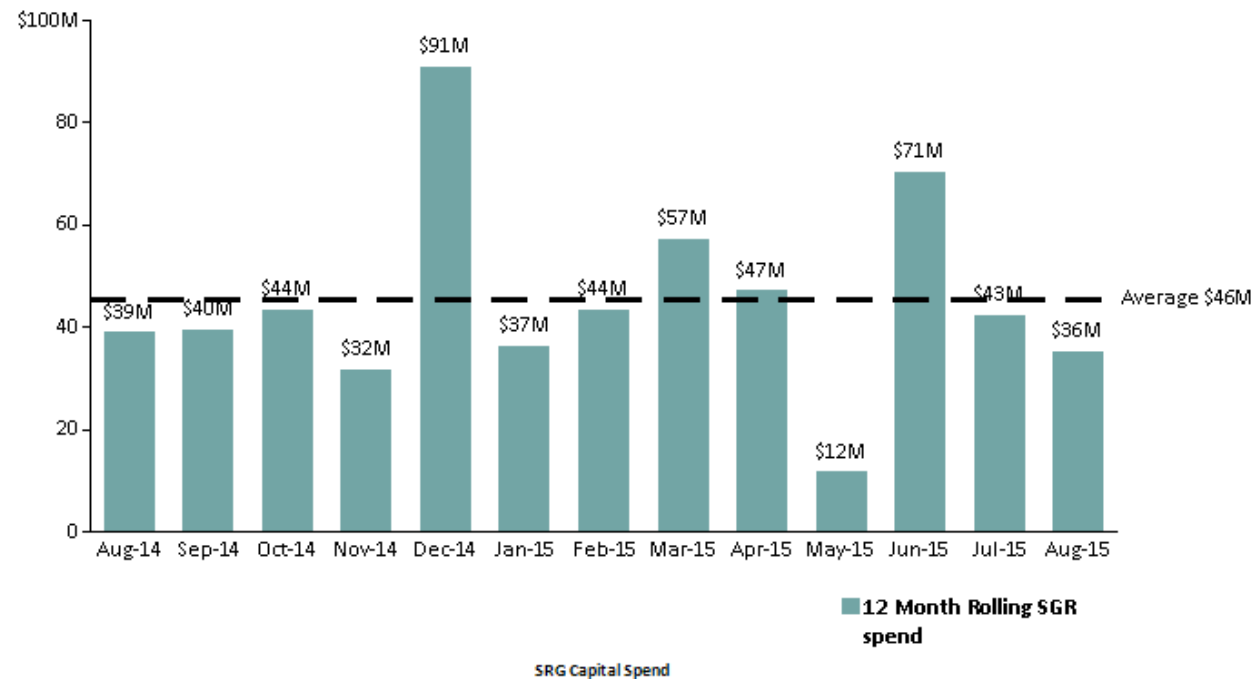
SGR Spending Has Averaged \$389M Over the Past 7 Years

Annual SGR Spending



Over the past 13 months, the MBTA has spent an average of \$46 million a month on SGR, which equals \$552 million a year. That is above the \$472 million a year (\$39 million a month) necessary to prevent the SGR backlog from increasing in size. The FMCB and MBTA management are monitoring efforts to maintain SGR spending to insure that spending plans can be executed according to plan and to assure the backlog begins to decline.

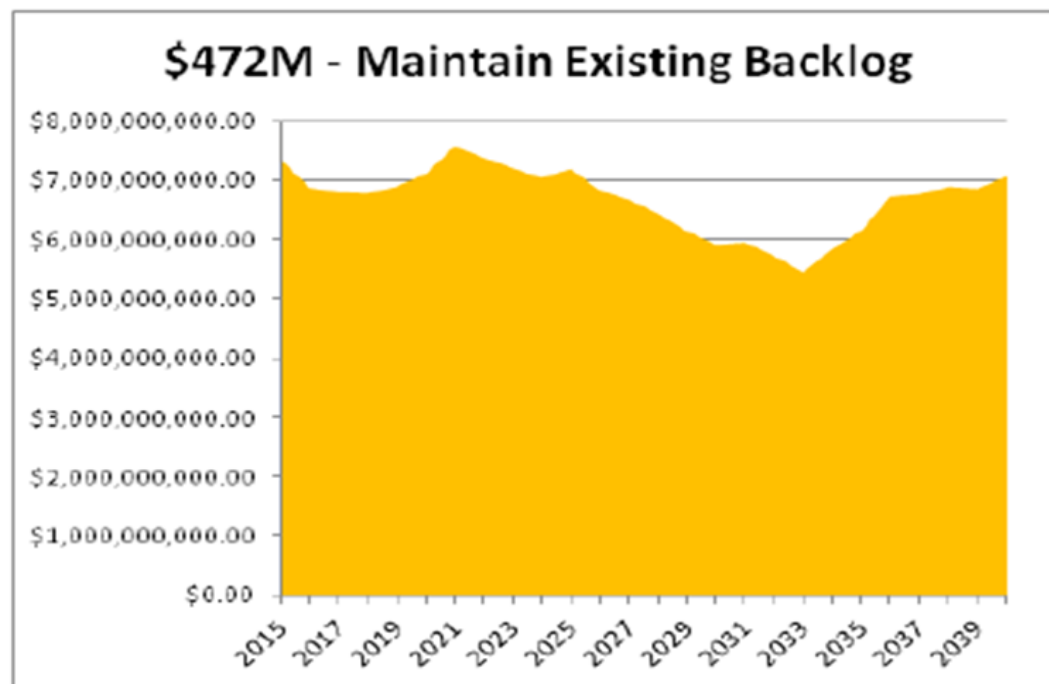
Over the past 13 months, the average monthly spend on SGR has been \$46M



While annual spending of \$472 million will keep the SGR backlog from growing beyond its current level, it will not reduce it. Because the chart below does not account for the impact of inflation on SGR costs, the inflation-adjusted annual “breakeven” spending level will grow over time.

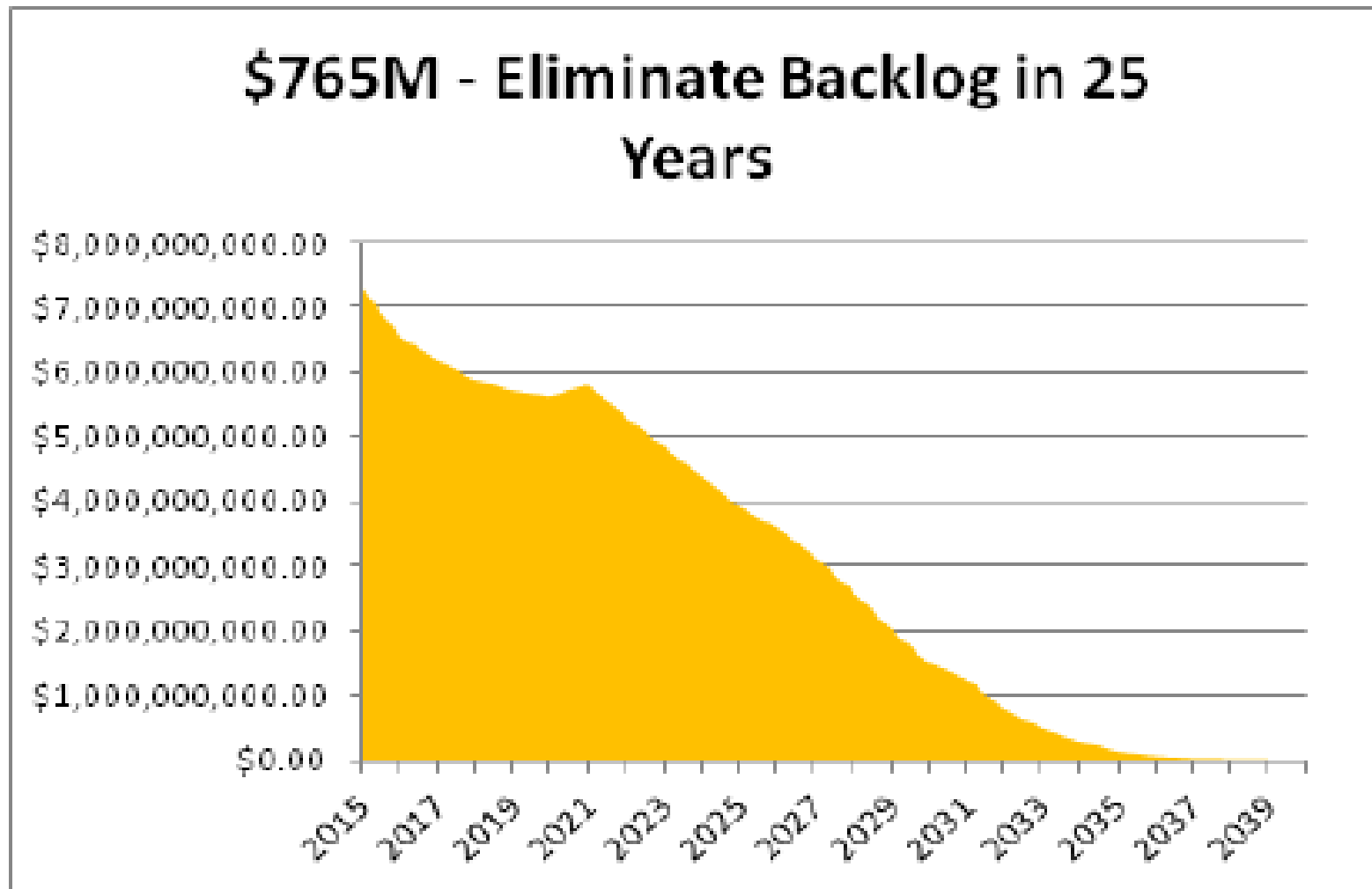
SGR Backlog burn down rate:

\$472M spending level / Maintain \$7B Backlog



SGR Backlog Burn Down Rate:

\$765M spending level / Eliminate Backlog in 25 years



Looking ahead, the FMCB will engage in deeper analysis of the state of good repair, including developing ways to further refine the database. This includes improving the level of information on commuter rail assets in the database. The FMCB is also focusing on developing consensus on project prioritization processes as part of the drafting of the next five-year MassDOT/MBTA multi-modal capital investment plan. Further, it will seek to expand the discussion on SGR from a planned spending number to innovative approaches that will allow spending to be more efficient and effective.

Expansion and other capital needs

The FMCB is developing a five-year capital portfolio for FY2017 to FY2021, organizing projects into these categories:

- **State of Good Repair:** Returning assets to their intended purpose and use (example: Green Line signal systems, Harvard Station busway tunnel).
- **Safety and Security:** This category is distinct from SGR and includes new assets needed for safety and security improvements (example: Positive Train Control and Green Line collision avoidance).
- **System-wide Accessibility:** Also distinct from SGR, this category involves upgrading stations and other assets to make them more fully accessible (example: Hynes Station improvement).
- **Expansion:** Addition of new stations and services funded primarily by the Commonwealth. (Examples: South Coast Rail, Green Line Extension, and Silver Line to Chelsea).
- **Capacity and Modernization:** Additional capacity to carry more riders. (Example: Orange Line purchases in excess of current fleet size).

As it develops its capital priorities, the FMCB has been paying special attention to potentially high-risk, high-dollar areas of exposure in the current capital plan. Seeking lessons that can be applied to other expansion concepts, the FMCB is examining the causes of escalating Green Line Extension (GLX) costs. At its August 21 meeting, MBTA management informed the FMCB of a major increase in projected final GLX costs to between \$2.7 billion and \$3 billion. Federal funding is capped at \$996 million, leaving the Commonwealth responsible to fund the rest of the project through borrowing. While the new information properly triggered major stakeholder concerns, the disclosure is consistent with the FMCB's mandate to develop and disclose to the public as much accurate information as possible about challenges facing the system. Further, it dovetails with the FMCB's charge to examine procurement practices, organizational/management structure, expansion planning, and budgeting practice. As it seeks an independent audit of GLX costs, the FMCB will consider a range of options in view of the project's new cost.

The FCMB has aggressively stepped in to the Green Line Expansion Program's reported problems. The FCMB has launched a "lessons learned" review to better understand the root causes of the Project's challenges and costs. In addition it has asked MBTA staff to report back on possible options going forward, including value engineering, possible reprocurement of construction services, possible claw back or changed commercial conditions for the project's professional service providers, and a review of MBTA project management operations.

The MBTA faces capital spending needs in additional areas, including safety and security enhancements and improvements to assure greater system-wide accessibility. These are separate from SGR investments. As it develops its capital priorities, the FMCB is also considering ways to modernize and expand the system to more effectively and efficiently meet demand for all users.

The FMCB is currently reviewing a number of important and costly safety investments in the system. These projects include new assets needed for safety and security needs, such as Positive Train Control (PTC). The federal Rail Safety Improvement Act of 2008 requires installation of PTC on all commuter railroads by December 2015 (like other transit systems across the country, the MBTA will be unable to meet that deadline.). PTC, which among other things is intended to prevent train-to-train collisions and derailments due to excessive speed, applies to all MBTA commuter routes, covering more than 400 track-miles. An independent preliminary estimate put costs for design, testing materials, construction and management for PTC on the MBTA system at \$489.6 million.

As is the case with safety improvements, capital spending on system wide accessibility is separate from SGR investments. The FMCB will review and seek to prioritize projects designed to upgrade stations and other facilities for the purpose of making them more fully accessible to all system users. Progress has been made in improving accessibility. For example, all active buses are now "low-floor," making them much easier for people of all abilities to use. All bus operators are also receiving refresher training on accessibility. Further work is needed in both the subway and commuter rail systems to achieve greater accessibility.

IV. Operations and Management

Progress in some areas, stage set for additional action

Winter Resiliency Plan in place

The MBTA conducted multiple assessments of last winter's system failures in order to identify shortcomings and take corrective actions. Using a budget of \$82.7 million, the MBTA Winter Resiliency Plan has implemented significant operational and infrastructure improvements across the system, including on the subway, bus, and light and heavy rail lines. Third-rail and third-rail heater replacement work has been done on both the Orange and Red Lines, for example, and additional traction motors – a shortage of which contributed to last winter's problems – are now in stock.

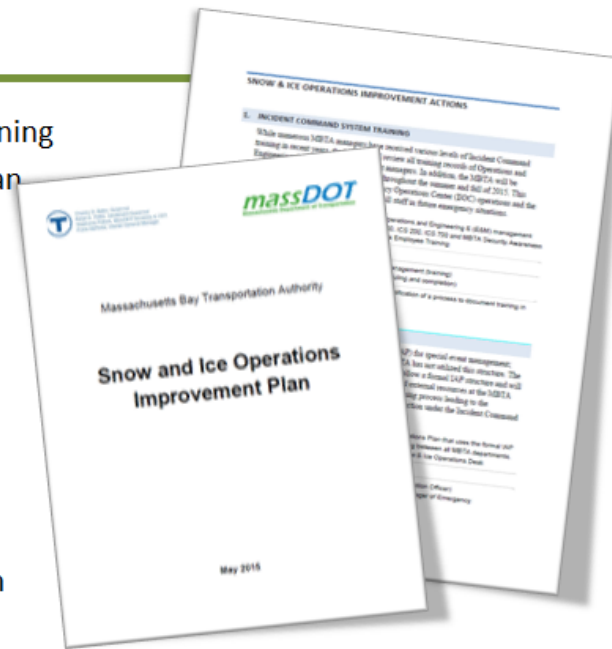
Other steps include:

- New snow-fighting equipment for the Commuter Rail system is being delivered
- Snow-clearing priorities have been set
- The stock of critical maintenance components for winter operation of the bus fleet has been increased
- Vehicle staging has been revised to facilitate snow removal from facilities

In addition to making important infrastructure improvements, the FMCB and MBTA staff have reviewed and made changes in winter operations. Both the MBTA itself and its customers will benefit from better internal and external communications systems that are now in place.

Winter Operations Improvement

1. Incident Command System Training
2. New Snow & Ice Operations Plan
3. Storm Desk
4. Snow & Ice Management System (SIMS)
5. ROW-Based Weather Station Sensors
6. Snow & Ice Vendor Contract
7. State and Municipal Snow & Ice Coordination
8. Winter Drill & Exercise Program



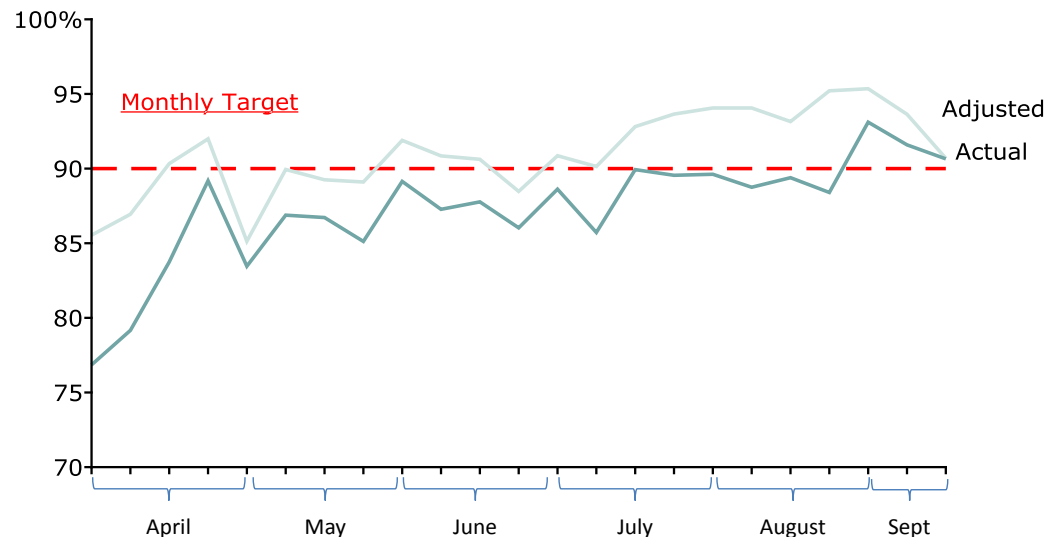
Field testing and other efforts are underway to ensure that all the improvements and planning will translate into performance. Storm response and recovery exercises involving all MBTA departments and Keolis will begin next month.

Commuter Rail Improvement Plan underway

Both the FMCB and MBTA staff are closely monitoring a plan prepared for the MBTA Commuter Rail operator, Keolis Commuter Services, to improve the recent performance of the commuter rail system. Progress can already be reported. For example, on-time performance – defined as the number of trains that arrive within five minutes of the scheduled time – is improving. And in response to reports of inconsistent fare collection, Keolis is training 30 new passenger assistants to collect fares on crowded trains; 15 of these personnel will finish training next month.

Commuter Rail On-Time-Performance Has Improved Since April

Commuter Rail
Overall On-Time Performance %



Note: Adjusted figures include remove the impact of events outside MBTA control (i.e. Amtrak, CSX, PanAm); Actual represents the customer experience

Keolis improvement plan

- 92 % OTP requirement average; no month below 90%. Peak & Off-Peak disaggregated
- 65 locomotives daily
- Fines based on daily, not monthly performance
- Mystery shoppers to check fare collection
- 64 new assistant conductors by 12/31/15 focused on revenue collection



Additional measures have also been taken. The position of Assistant General Manager for Commuter Rail has been filled by Jody Ray and key Keolis management personnel are now in place. A new commuter rail schedule will be implemented in November to maintain existing levels of service while making service more reliable.

Procurement and contracting improvements

The FMCB is developing a strategy to utilize flexible contracting to expand service delivery, improve the rider experience, and explore creative public-private partnerships. Among other things, such efforts could improve the MBTA's ability to react to winter emergencies, expand service in core bus areas, achieve cost savings, and avoid unnecessary investment in additional vehicle types.

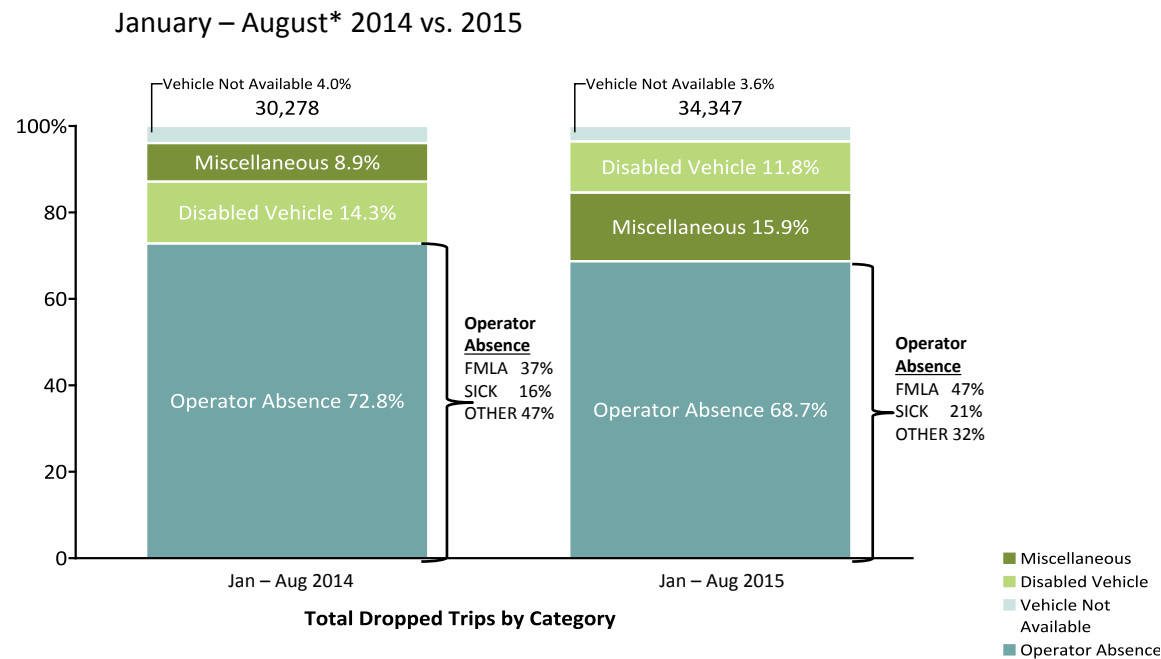
In a first step, the MBTA issued a Request for Information on August 28 to provide certain types of bus service. The goal of this effort is to expand service through partnerships with regional transit authorities, private firms, and transportation management associations. The RFI focuses on 32 low- and moderate-ridership routes, certain express bus routes, and late-night bus service. Customer-facing service parameters, such as fares and the use of CharlieCards, will remain unchanged. About 65 MBTA drivers and 93 MBTA buses will be redeployed into the existing system to improve service on a select set of core city routes that are currently overcrowded. That redeployment will help offset the system's current shortage of buses and vehicle storage facilities.

Workforce issues: Improving productivity, reducing absenteeism

The legislation establishing the FMCB calls on it to address workforce issues facing the MBTA, including productivity improvements and reductions in employee absenteeism, which significantly degrade both the MBTA's operational and financial performance and the experience of the system's users.

The absence of operators is the leading cause of dropped trips on both buses and the subway, causing inconvenience and delay for MBTA customers.

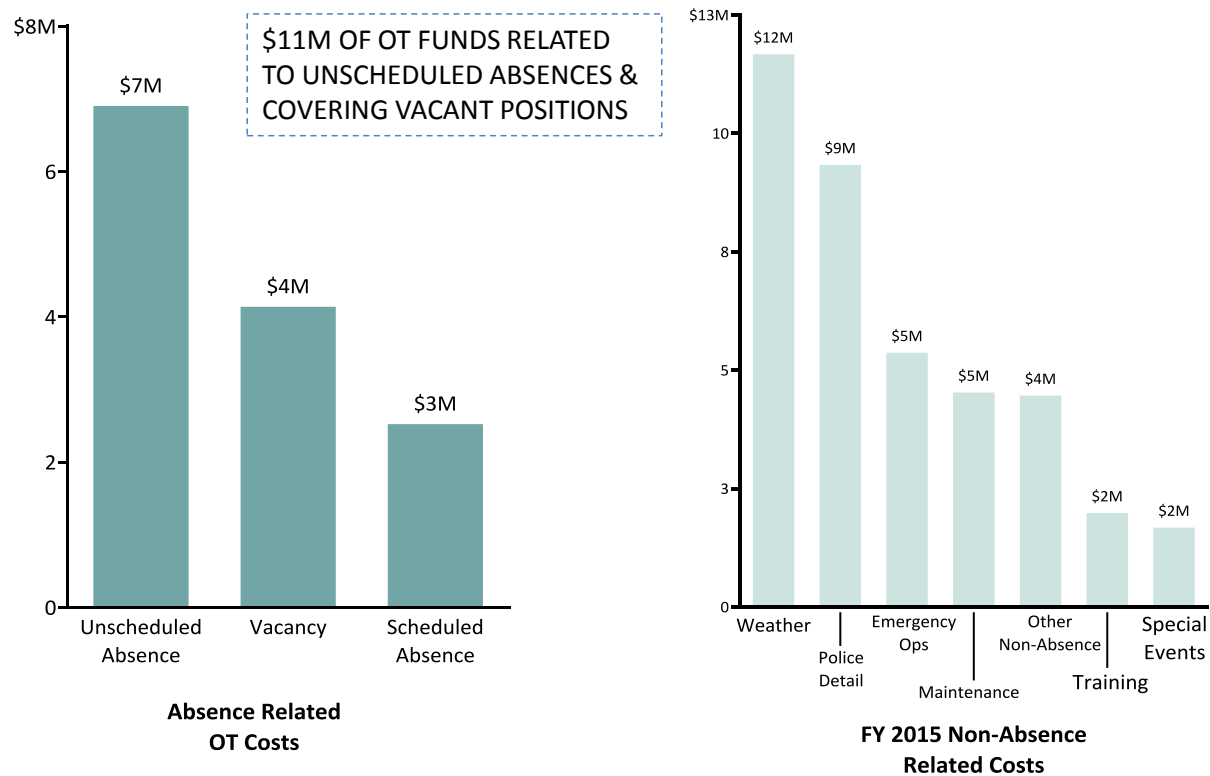
Operator Absence is the Leading Driver of Lost Trips for Bus, Heavy and Light Rail



** Data for Jul-Dec 2013 not available for comparison*

Of \$53 million spent on overtime by the MBTA in FY2015, \$11 million was caused by the need to cover vacant positions and unscheduled absences.

\$14M of the Total \$53M FY15 Overtime Spend is Driven By Absences

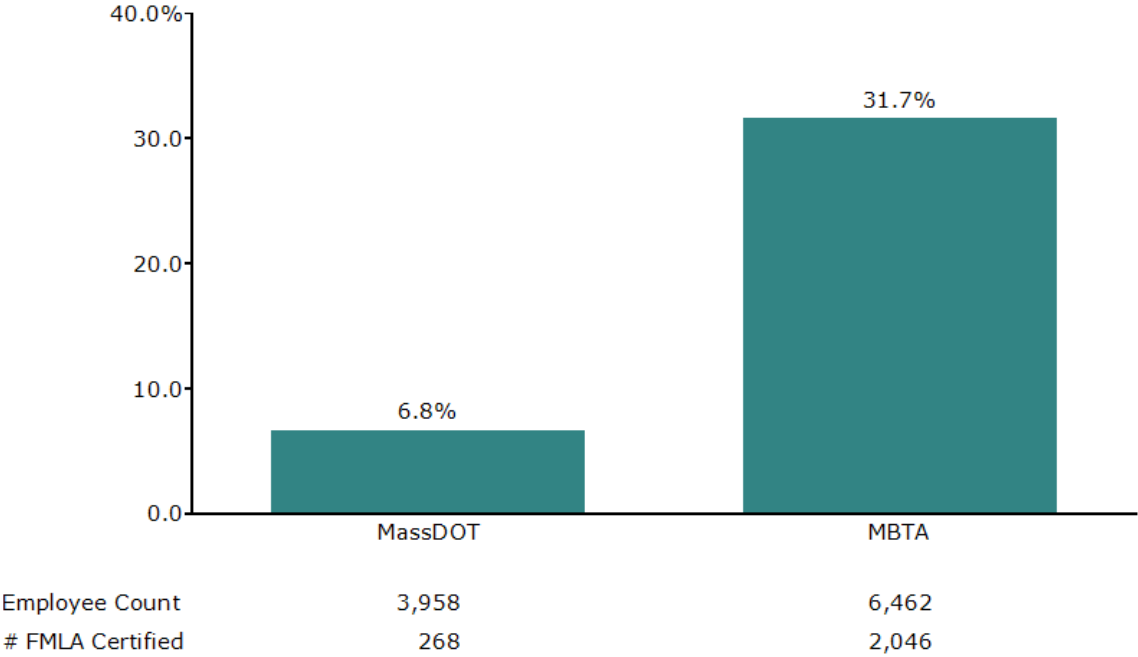


The FMCB's workforce committee has undertaken a series of diagnostic and operational steps that will continue into next year. By the time of the next FMCB report in December, additional steps taken will include executing the absenteeism plan currently under development; developing policies to quantify the trade-off between hiring fulltime employees versus the use of overtime; and creation of a plan to address current vacancies and future workforce needs, especially in view of the aging/retirement-potential of the current MBTA workforce.

In addition, interviews are underway to hire a Leave Manager for the MBTA. One of the manager's initial tasks is a full audit of the 2000 MBTA employees – nearly one-third of all MBTA employees – who are currently FMLA eligible.

31.7% of the MBTA Work-Force Is Actively Certified for FMLA

% of Employees with Active FMLA Certification



Source: Internal MBTA data

The FMCB’s efforts regarding workforce are not limited to productivity alone. The FMCB will also seek to explore issues related to potential volume and gravity of future vacancy forecasts, the efficacy of compensation systems, and the efficiency of current human resources and hiring practices.

V. Conclusion: Baseline set, action to follow

The FMCB has developed an understanding of the fiscal, operational, and organizational issues facing the MBTA. With a new management team and governance structure in place, the MBTA has made headway in such areas as winter preparedness and commuter rail performance. Customer-oriented performance measurement systems are ready for launch, which should further improve both public accountability and operational performance. The FMCB is now focused on fundamental problems, including the expanding gap in the operating budget and the growing backlog of deferred maintenance.

In its next report, the FMCB will provide a greater level of detail on the key issues facing the MBTA, including the MBTA operating budget and capital planning. The FMCB knows the daunting challenges it faces; it also knows that they can and must be met.

VI. Appendix: More information and data

This report contains a number of slides containing data and other information about the topics discussed in this document. These slides were drawn from more detailed presentations made to the FMCB. The complete presentations are available at MBTA.com as follows:

Fiscal and Management Control Board Meetings

FMC Board Meeting Date	Agenda	Approved Minutes of Meeting
July 21, 2015	<u>Agenda FMCB July 21, 2015</u>	<u>Minutes FMCB July 21, 2015</u>
July 30, 2015	<u>Agenda FMCB July 30, 2015</u>	<u>Minutes FMCB July 30, 2015</u>
August 4, 2015	<u>Agenda FMCB August 4, 2015</u>	<u>Minutes FMCB August 4, 2015</u>
August 14, 2015	<u>Agenda FMCB August 14, 2015</u>	<u>Minutes FMCB August 14, 2015</u>
August 24, 2015	<u>Agenda FMCB August 24, 2015</u>	<u>Minutes FMCB August 24, 2015</u>
August 31, 2015	<u>Agenda FMCB August 31, 2015</u>	<u>Minutes FMCB August 31, 2015</u>
September 9, 2015	<u>Agenda FMCB September 9, 2015</u>	<u>Minutes FMCB September 9, 2015</u>
September 14, 2015	<u>Agenda FMCB September 14, 2015</u>	
September 21, 2015	<u>Agenda FMCB September 21, 2015</u>	

Presentations

Commuter Rail Service Improvement Plan	PDF
GLX Contract Presentation for FMCB 08-21-2015	PDF
Commuter Rail Diesel Fuel Contract Award 08-31-2015	PDF
Operations Budget Stability Committee Update to FMCB 08-31-2015	PDF
SGR & Capital Working Group Initial Review 08-31-2015	PDF
Electricity Procurement Options	PDF
FMCB Chief Administrator Overview 08-12-2015	PDF
MBTA Customer Opinion Panel 08-14-2015	PDF
Bus Service Analysis 08-14-2015	PDF
MBTA Snow and Ice Operations Improvement Plan	PDF
Pro Forma Overview 09-09-2015	PDF
Ridership Trends	PDF
TIFIA vs. RRIF 09-09-2015	PDF
Merrimack River Bridge Rehabilitation Project B64CN02	PDF
Workforce Productivity Team Phase 1 Update 09-14-2015	PDF
Contracts Thread Readout 09-20-2015	PDF