

# INTRODUCTION



The MBTA's enabling legislation requires the Authority to develop a 25-year "master plan," which must be updated every five years. This plan, the Program for Mass Transportation (PMT), establishes the long-term vision for transit in the region. As a vision document, the PMT is fiscally unconstrained and outlines the universe of potential transit projects that could be built over the next 25 years to achieve the plan's defined goals.

In addition to mandating that the PMT be updated regularly, the MBTA's enabling legislation also requires the Authority to develop an annual Capital Investment Program (CIP). The CIP is a rolling five-year document that programs projects for implementation and identifies funding sources. Unlike the PMT, the CIP is financially constrained: only capital projects the MBTA can afford are included. The PMT and the CIP are complementary planning and programming tools; the PMT planning document defines the capital investment projects that could be implemented to meet the long-range system vision, and the CIP budgetary program document funds the immediate, near-term investment priorities.

At the time of this updated PMT, we find ourselves in a period of deepening economic anxiety, with U.S. and global financial markets in crisis and government at all levels—federal, state, and local—anticipating prolonged recession and consequent budget cutbacks. All public transit agencies are currently facing budget challenges due to price volatility in fuel and energy markets. The fiscal challenges at the MBTA are intensified by projected revenue shortfalls, increased labor costs, and a financial structure that includes a debt burden that is the largest of any at a major transit agency in the country. Tables 1 and 2 below show the MBTA's operating budget since the beginning of Forward Funding in 2001 and a pro forma projection for the next five years, respectively. As can be seen in Table I-a,

**TABLE I-a**  
**MBTA Statement of Revenue and Expenses, FY 2001 to FY 2009**

<b>REVENUE</b>					
<b>OPERATING REVENUES</b>	<b>FY2001</b>	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>	<b>FY2005</b>
Revenue from Transportation	280,982,907	283,287,567	274,205,790	295,496,104	319,271,166
Other Operating Revenue	37,721,851	37,831,187	43,361,074	49,440,154	47,751,508
<b>Total Operating Revenues:</b>	<b>318,704,758</b>	<b>321,118,754</b>	<b>317,566,864</b>	<b>344,936,258</b>	<b>367,022,674</b>
<b>NON-OPERATING REVENUES</b>					
Dedicated Local Assessment Revenue	144,553,734	142,872,642	141,142,768	139,437,832	137,732,280
Dedicated Sales Tax Revenue	590,772,447	664,350,000	682,094,554	686,976,316	704,620,528
Other Income	27,739,969	15,007,513	12,686,250	12,813,202	16,705,530
<b>Total Non-Operating Revenues</b>	<b>763,066,150</b>	<b>822,230,155</b>	<b>835,923,572</b>	<b>839,227,349</b>	<b>859,058,339</b>
<b>TOTAL REVENUES</b>	<b>1,081,770,908</b>	<b>1,143,348,909</b>	<b>1,153,490,436</b>	<b>1,184,163,607</b>	<b>1,226,081,013</b>

<b>EXPENSES</b>					
<b>OPERATING EXPENSES</b>	<b>FY2001</b>	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>	<b>FY2005</b>
Wages	291,092,991	307,843,432	311,714,068	319,328,460	337,189,978
Fringe Benefits	99,401,191	97,520,302	103,997,754	114,468,705	125,336,543
Payroll Taxes	22,387,234	23,190,933	23,552,709	24,406,912	26,900,012
Materials, Supplies & Services	110,677,687	111,318,591	118,917,517	108,786,619	121,716,973
Casualty & Liability	10,239,156	13,361,808	13,281,755	15,411,442	14,672,240
Purchased Commuter Rail Expenses	172,540,450	185,824,276	192,605,170	213,691,188	216,403,861
Purchased Local Service Expenses	28,996,629	32,131,530	35,172,502	38,327,589	43,985,446
Financial Service Charges	1,504,828	1,544,492	1,546,016	1,834,522	1,801,021
<b>Total Operating Expenses</b>	<b>736,840,166</b>	<b>772,735,364</b>	<b>800,787,491</b>	<b>836,255,438</b>	<b>888,006,076</b>
<b>DEBT SERVICE EXPENSES</b>					
Interest	164,976,429	193,845,930	216,966,041	204,783,748	223,291,802
Principal Payments	111,645,667	131,959,750	110,349,327	117,798,529	95,651,923
Lease Payments	14,918,033	15,261,176	15,908,155	16,423,708	17,577,942
<b>Total Debt Service Expenses</b>	<b>291,540,129</b>	<b>341,066,856</b>	<b>343,223,523</b>	<b>339,005,985</b>	<b>336,521,667</b>
<b>TOTAL EXPENSES</b>	<b>1,028,380,295</b>	<b>1,113,802,220</b>	<b>1,144,011,014</b>	<b>1,175,261,423</b>	<b>1,224,527,743</b>
Surplus/(Deficit)	53,390,613	29,546,689	9,479,422	8,902,185	1,553,270
Deficiency Fund	(13,130,183)	(1,075,047)	(5,363,232)	(4,770,114)	(1,553,270)
Capital Maintenance Fund	(36,583,800)	(24,116,436)			
<b>NET SURPLUS/(DEFICIT)</b>	<b>3,676,630</b>	<b>4,355,206</b>	<b>4,116,190</b>	<b>4,132,071</b>	<b>0</b>

**TABLE I-a (cont.)**  
**MBTA Statement of Revenue and Expenses, FY 2001 to FY 2009**

<b>REVENUE</b>				
<b>OPERATING REVENUES</b>	<b>FY2006</b>	<b>FY2007</b>	<b>FY2008</b>	<b>FY2009</b>
Revenue from Transportation	333,095,971	386,487,953	440,961,963	448,751,949
Other Operating Revenue	47,213,995	45,133,618	48,835,439	58,002,689
<b>Total Operating Revenues:</b>	<b>380,309,966</b>	<b>431,621,571</b>	<b>489,797,402</b>	<b>506,754,638</b>
<b>NON-OPERATING REVENUES</b>				
Dedicated Local Assessment Revenue	136,026,829	139,427,540	142,913,229	146,486,060
Dedicated Sales Tax Revenue	711,086,005	733,963,311	755,982,210	767,056,684
Other Income	39,615,533	34,166,997	19,061,077	26,167,562
<b>Total Non-Operating Revenues</b>	<b>886,728,367</b>	<b>907,557,848</b>	<b>917,956,516</b>	<b>939,710,306</b>
<b>TOTAL REVENUES</b>	<b>1,267,038,333</b>	<b>1,339,179,419</b>	<b>1,407,753,918</b>	<b>1,446,464,944</b>
<b>EXPENSES</b>				
<b>OPERATING EXPENSES</b>	<b>FY2006</b>	<b>FY2007</b>	<b>FY2008</b>	<b>FY2009</b>
Wages	347,845,647	353,664,245	361,508,444	402,881,584
Fringe Benefits	146,386,155	158,339,840	160,040,569	168,893,408
Payroll Taxes	27,455,974	27,479,403	27,336,436	32,816,240
Materials, Supplies & Services	134,304,402	145,355,389	162,826,552	172,911,307
Casualty & Liability	14,191,661	15,605,917	16,231,200	14,923,435
Purchased Commuter Rail Expenses	216,249,789	223,729,831	247,434,243	273,461,652
Purchased Local Service Expenses	49,520,600	54,572,067	60,614,114	67,737,669
Financial Service Charges	1,623,857	1,728,409	1,728,946	4,368,625
<b>Total Operating Expenses</b>	<b>937,578,085</b>	<b>980,475,100</b>	<b>1,037,720,504</b>	<b>1,137,993,920</b>
<b>DEBT SERVICE EXPENSES</b>				
Interest	205,292,656	229,571,436	234,235,624	238,051,078
Principal Payments	113,104,925	112,722,401	116,476,024	84,634,312
Lease Payments	18,270,012	21,110,882	18,621,977	19,093,168
<b>Total Debt Service Expenses</b>	<b>336,667,593</b>	<b>363,404,719</b>	<b>369,333,625</b>	<b>341,778,558</b>
<b>TOTAL EXPENSES</b>	<b>1,274,245,678</b>	<b>1,343,879,819</b>	<b>1,407,054,129</b>	<b>1,479,772,479</b>
Surplus/(Deficit)	(7,207,345)	(4,700,400)	699,789	(33,307,535)
Deficiency Fund	7,207,345	4,700,400	0	16,000,000
Capital Maintenance Fund				17,307,535
<b>NET SURPLUS/(DEFICIT)</b>	<b>0</b>	<b>0</b>	<b>699,789</b>	<b>0</b>

**TABLE I-b**  
**MBTA Revenue and Expenses. Pro Forma FY 2010 to FY 2015**  
**No Assumed Fare Increases or Other Additional Relief**

<b>REVENUE</b>						
<b>OPERATING REVENUES</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY2014</b>	<b>FY2015</b>
Revenue from Transportation	453,447,330	457,981,803	462,561,621	467,187,237	471,859,109	476,577,701
Other Operating Revenue	72,874,489	73,603,234	74,339,266	75,082,659	75,833,485	76,591,820
<b>Total Operating Revenue</b>	<b>526,321,819</b>	<b>531,585,037</b>	<b>536,900,887</b>	<b>542,269,896</b>	<b>547,692,595</b>	<b>553,169,521</b>
<b>NON-OPERATING REVENUES</b>						
Dedicated Local Assessments	150,148,212	153,901,918	157,749,466	161,693,202	165,735,532	169,878,921
Dedicated Sales Tax	767,019,551	774,689,747	790,183,541	813,889,048	838,305,719	863,454,891
Other Income	23,261,170	23,493,782	23,728,720	23,966,007	24,205,667	24,447,724
<b>Total Non-Operating Revenues</b>	<b>940,428,934</b>	<b>952,085,446</b>	<b>971,661,727</b>	<b>999,548,257</b>	<b>1,028,246,918</b>	<b>1,057,781,535</b>
<b>TOTAL REVENUES</b>	<b>1,466,750,752</b>	<b>1,483,670,483</b>	<b>1,508,562,614</b>	<b>1,541,818,153</b>	<b>1,575,939,513</b>	<b>1,610,951,056</b>
<b>EXPENSES</b>						
<b>OPERATING EXPENSES</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY2014</b>	<b>FY2015</b>
Wages	400,613,524	404,619,660	412,712,053	425,093,414	437,846,217	450,981,603
Fringe Benefits	182,281,170	190,800,549	202,503,169	215,595,500	229,633,849	244,690,451
Payroll Taxes	31,584,961	31,892,016	32,539,242	33,515,419	34,520,882	35,556,509
Materials, Supplies & Services	183,805,352	192,995,620	202,645,401	212,777,671	223,416,554	234,587,382
Casualty and Liability	15,535,693	15,846,407	16,163,335	16,486,602	16,816,334	17,152,660
Purchased Commuter Rail Service	280,956,341	295,004,158	309,754,366	325,242,084	341,504,188	358,579,398
Purchased Local Service Subsidy	81,525,339	93,754,140	107,817,261	123,989,850	142,588,327	163,976,576
Financial Service Charges	5,157,569	5,317,272	5,425,514	5,635,515	5,752,311	5,912,438
<b>Total Operating Expenses</b>	<b>1,181,459,949</b>	<b>1,230,229,821</b>	<b>1,289,560,340</b>	<b>1,358,336,055</b>	<b>1,432,078,663</b>	<b>1,511,437,018</b>
<b>DEBT SERVICE EXPENSES</b>						
Interest	266,965,765	257,611,857	258,826,164	261,733,043	261,022,124	259,482,515
Principal Payments	157,325,038	204,913,860	186,562,412	241,218,392	255,192,170	254,394,637
Lease Payments	21,000,000	20,000,000	19,000,000	15,000,000	9,000,000	9,000,000
<b>Total Debt Service Expenses</b>	<b>445,290,803</b>	<b>482,525,718</b>	<b>464,388,576</b>	<b>517,951,435</b>	<b>525,214,294</b>	<b>522,877,153</b>
<b>TOTAL EXPENSES</b>	<b>1,626,750,752</b>	<b>1,712,755,538</b>	<b>1,753,948,917</b>	<b>1,876,287,490</b>	<b>1,957,292,957</b>	<b>2,034,314,170</b>
Surplus/(Deficit)	(160,000,000)	(229,085,055)	(245,386,303)	(334,469,337)	(381,353,443)	(423,363,114)
Deficiency Fund	0	0	0	0	0	0
Capital Maintenance Fund	0	0	0	0	0	0
<b>NET SURPLUS/(DEFICIT)</b>	<b>(160,000,000)</b>	<b>(229,085,055)</b>	<b>(245,386,303)</b>	<b>(334,469,337)</b>	<b>(381,353,443)</b>	<b>(423,363,114)</b>
<b>Additional Tax Revenue from State</b>	<b>160,394,142</b>	<b>160,394,142</b>	<b>160,394,142</b>	<b>160,394,142</b>	<b>160,394,142</b>	<b>160,394,142</b>
<b>NET SURPLUS/(DEFICIT) AFTER RELIEF</b>	<b>394,142</b>	<b>(68,690,913)</b>	<b>(84,992,161)</b>	<b>(174,075,195)</b>	<b>(220,959,301)</b>	<b>(262,968,972)</b>

the MBTA began to struggle with budget deficits in 2006. In the years since then, the MBTA has restructured its debt and used what reserve funds were available to help achieve a balanced operating budget; however, as Table I-b shows, in the current fiscal year (FY), 2010, balancing the budget required an additional allocation from the Legislature of \$160 million in state funds over and above the dedicated revenues the MBTA normally receives.

Looking forward, the MBTA's fiscal problems will continue: sizable deficits, driven by growth in debt service costs, will limit the MBTA's ability to make capital investments. Table I-c shows the capital cost projections found in the MBTA's FYs 2010–14 CIP. This table highlights the critical need to invest in buses and trains, the revenue vehicles that the MBTA's customers use every day. Without serious reform in the way that the MBTA is funded, the Authority will need to spend more than it can currently afford simply to maintain and operate the existing system.

While policy makers grapple with reform options aimed at building a sustainable financial model for the MBTA, one issue is certain: over the next 25 years, regional population, employment, and economic growth will place ever greater demands on the Commonwealth's roadway and public transportation systems. Maintaining and expanding a robust and reliable transit network will be critical not only to sustaining the economic well-being of eastern Massachusetts, but also to improving the region's environmental health. The MBTA will be called upon to play a central role in fulfilling public policy goals for energy conservation and greenhouse gas emission reductions. Accomplishing these goals will require that the Commonwealth have in place a reliable, accessible, safe, and convenient transit system with sufficient capacity to accommodate increased regional travel demand and expanded transit mode share.

The PMT planning process provides the decision-making framework for a long-term capital investment strategy that will meet future challenges, and is a unique public forum in which the

MBTA outlines its vision for Boston area transit and lays out the options and trade-offs for creating and supporting a world-class transit system. For the MBTA, its first priority is clear: it must fix the existing system and ensure that the backlog inventory of unaddressed infrastructure-preservation needs does not lengthen over the next two decades.

However, as this PMT shows, action toward attaining a full range of goals for 2030 in the areas of regional economic competitiveness, energy independence, and sustainable land use patterns will necessarily entail a more ambitious transit investment agenda, one that greatly expands the system's capacity to move more people—and to move them more frequently and more efficiently—than was forecast in the 20th century. Our age is characterized by a globalized economy in which innovation and mobility of information and people are keys to success.

As stewards of the regional public transit infrastructure that our forefathers presciently began building more than a century ago, we at the MBTA have an obligation to make wise decisions about how the system we have inherited can best be shaped and retooled to meet the needs of a region that is constantly changing and is competing in an interconnected global marketplace. Making those capital investment decisions—allocating scarce transportation resources among many interests and priorities—will require foresight, civic engagement, and planning. It is our hope that the PMT process can set a path toward building a transit system that is responsive to the needs of the generations that come after us, while honoring and respecting the accomplishments of those who came before.

In Chapter 1 of this document we discuss the challenges and opportunities that present themselves as the MBTA looks ahead over the 25-year period addressed by this PMT, while in Chapter 2 we look back at the progress that the MBTA has made toward implementing projects envisioned in the 2003 PMT. In Chapter 3, we explain the PMT planning process and how it fits into the larger planning processes of the region

**TABLE 3**  
**MBTA Capital Investment Program FY 2010 to FY 2014 (\$ in millions)**

PROGRAM	AUTHORIZED BUDGET	SPENDING THROUGH FY09	FY2010	FY2011	FY2012	FY2013	FY2014	TOTAL FY2010-2014	BEYOND FY2014
Revenue Vehicles	\$2,020.0	\$917.0	\$176.9	\$169.9	\$233.9	\$265.2	\$254.3	\$1,100.3	\$0.0
Non-Revenue Vehicles	\$21.3	\$3.8	\$1.0	\$0.5	\$4.1	\$5.1	\$6.9	\$17.5	\$0.0
Track & Right-of-Way	\$236.7	\$129.2	\$14.7	\$17.9	\$22.3	\$21.4	\$31.2	\$107.5	\$0.0
Signals	\$297.8	\$147.7	\$32.0	\$22.4	\$38.1	\$39.3	\$21.4	\$150.1	\$0.0
Communications	\$84.8	\$75.2	\$9.6	\$0.0	\$0.0	\$0.0	\$0.0	\$9.6	\$0.0
Power	\$112.7	\$31.7	\$22.8	\$11.0	\$15.4	\$10.0	\$21.8	\$81.0	\$0.0
Maintenance	\$243.7	\$193.1	\$21.1	\$15.0	\$10.0	\$4.2	\$0.3	\$50.5	\$0.0
Stations	\$694.9	\$317.9	\$93.6	\$68.4	\$71.4	\$68.8	\$74.9	\$376.9	\$0.0
Facilities	\$58.1	\$26.6	\$10.2	\$8.9	\$8.3	\$4.1	\$0.0	\$31.5	\$0.0
Bridges	\$127.8	\$21.5	\$31.0	\$26.1	\$28.6	\$15.5	\$5.0	\$106.3	\$0.0
Station Management Program	\$235.7	\$193.6	\$5.1	\$12.0	\$18.0	\$7.0	\$0.0	\$42.1	\$0.0
Technology/Other	\$224.7	\$129.6	\$24.9	\$24.4	\$23.0	\$12.3	\$10.5	\$95.1	\$0.0
Accessibility	\$340.1	\$188.9	\$53.1	\$43.6	\$31.0	\$22.0	\$1.4	\$151.2	\$0.0
Enhancement	\$632.9	\$453.3	\$71.2	\$58.1	\$31.7	\$11.3	\$7.4	\$179.6	\$0.0
Expansion	\$1,388.6	\$1,314.3	\$44.8	\$17.5	\$8.0	\$4.0	\$0.0	\$74.3	\$0.0
Statewide Transportation Projects	\$1,013.5	\$30.4	\$41.3	\$156.2	\$259.3	\$229.3	\$177.0	\$863.1	\$120.0
Stimulus Projects	\$230.0	\$0.0	\$99.4	\$115.0	\$15.7	\$0.0	\$0.0	\$230.0	\$0.0
<b>Total</b>	<b>\$7,963.1</b>	<b>\$4,173.7</b>	<b>\$752.7</b>	<b>\$766.8</b>	<b>\$818.7</b>	<b>\$719.5</b>	<b>\$612.0</b>	<b>\$3,666.6</b>	<b>\$120.0</b>

and the state. In this chapter we also outline the vision, goals, and objectives of this PMT, as well as the process by which potential projects were evaluated. To lay out the context in which the development of this PMT occurred, in Chapter 4 we discuss the existing conditions of the transit system and describe demographic, commuting, and congestion trends. In Chapters 5 and 6 we introduce the universe of projects that have been considered in this PMT, with Chapter 5 focusing on system preservation needs and Chapter 6 summarizing enhancement and expansion options. Finally, in Chapter 7 we offer and compare modeling scenarios that illustrate varying levels of investment and the associated benefits of three different approaches to improving transit in the region during the coming 25 years.